ADDENDUM TO THE TIJUANA RIVER VALLEY REGIONAL PARK CAMPGROUND AND NATURE EDUCATION CENTER PROJECT

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION (SCH NO. 2018101023)

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Acronyms and Abbreviations

ALUCP	Airport Land Use Compatibility Plan
BMPs	Best Management Practices
BRR	Biological Resources Report
CAP	Climate Action Plan
CCC	California Coastal Commission
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
DPR	Department of Parks and Recreation
EIR	Environmental Impact Report
FAA	Federal Aviation Administration
FGC	California Fish and Game Code
FMMP	Farmland Mapping and Monitoring Program
GHG	greenhouse gas
IS	Initial Study
MBTA	Migratory Bird Treaty Act
MHPA	Multi-Habitat Planning Area
MND	Mitigated Negative Declaration
MSCP	Multiple Species Conservation Program
NOLF	Naval Outlying Landing Field
OSWS	onsite wastewater systems
PRC	California Public Resources Code
project	Tijuana River Valley Regional Park Campground and Nature Education Center Project
RAQS	Regional Air Quality Strategy
RWQCB	Regional Water Quality Control Board
SANDAG	San Diego Association of Government's
SCIC	South Coastal Information Center
SDAPCD	San Diego Air Pollution Control District
SEP	Site Evacuation Plan
SIP	State Implementation Plan
TIA	Transportation Impact Analysis
TRVRP	Tijuana River Valley Regional Park

Chapter 1
Introduction

1.1 Introduction

This document comprises an Addendum to the Tijuana River Valley Regional Park (TRVRP) Campground and Nature Education Center Project (project) Initial Study (IS)/Mitigated Negative Declaration (MND) (State Clearinghouse No. 2018101023), adopted on January 30, 2019, by the County of San Diego Board of Supervisors. Since the adoption of the IS/MND, changes to the location of the sewage septic tank, pump chamber, and leach field have been proposed. Consequently, further environmental analysis is required to address this change. The revised project is addressed in this Addendum.

The project proposes to install a sewage tank, pump chamber, and associated piping and electrical conduit in the area of Monument Road and Spooner's Mesa, located immediately south of the TRVRP campground site. This Addendum was prepared per Section 15162 and 15164 of the California Environmental Quality Act (CEQA) Guidelines to analyze whether the changes to the approved project would result in any new or more significant environmental impacts or new mitigation measures, as compared to what was analyzed and proposed in the IS/MND.

The individual analysis of each CEQA impact is discussed in Section 3.0, *Environmental Analysis*, of this Addendum. This analysis concludes that the revised project would not alter the conclusions reached in the impact analysis in the IS/MND. In sum, the project, with the proposed changes, would result in the following impacts, which are the same as those that would occur under the approved project analyzed in the IS/MND:

- No impacts on energy, population and housing, public services, and wildfire;
- Less-than-significant impacts on aesthetics, agriculture and forestry resources, air quality, greenhouse gas (GHG) emissions, hydrology and water quality, land use and planning, mineral resources, noise, recreation, and utilities and services systems; and
- Less-than-significant impacts, with mitigation incorporated, on biological resources, cultural resources, geology and soils, hazards and hazardous materials, transportation, and tribal cultural resources.

The revised project would not result in any significant and unavoidable impacts under CEQA.

1.2 Background

The County of San Diego Department of Parks and Recreation (DPR) prepared an IS/MND for the TRVRP Campground and Nature Education Center Project (SCH 2018101023) (referred throughout this Addendum as the "approved project"), which was circulated for a 30-day public review period pursuant to the requirements of Section 15105 of CEQA. The review period gave agencies, organizations, and members of the public the opportunity to review the Draft IS/MND and provide comments on the document and the environmental analysis presented therein. The 30-day review

period commenced on October 8, 2018, and ended on November 7, 2018. The County considered all relevant comments in preparation of the Final MND, and the Final MND includes responses to the Draft MND comments and, where necessary, revisions pursuant to comments.

The Final MND for the approved project was prepared in accordance with the requirements of CEQA (California Public Resources Code [PRC] Section 21000, et seq.) and the State CEQA Guidelines (California Administrative Code, Title 14, Section 15000, et seq.). The purpose of the Final MND was to provide the decision-making body (County Board of Supervisors), responsible agencies, and the public with information regarding the environmental impacts of the project. The Board of Supervisors certified the Final MND on January 30, 2019, and a Notice of Determination (NOD) was filed with the County Clerk's Office and the State Clearinghouse on the same day.

Since adoption of the 2019 Final MND, changes to the location of the sewage septic tank, pump chamber, and leach field have been proposed in the area of Monument Road and Spooner's Mesa, located immediately south of the campground site.

This Addendum analyzes the Spooner's Mesa leach field sewage disposal revision, which is fully detailed in Section 2.3, *Project Description*, below.

1.3 Purpose of Addendum to the IS/MND

When a proposed project is changed or there are changes in the environmental setting, a determination must be made by the Lead Agency as to whether and Addendum or Subsequent/Supplemental Environmental Impact Report (EIR) or MND is needed. CEQA Guidelines Section 15162 and 15164 set forth criteria to assess which environmental document is sufficient and appropriate. The criteria for determining whether an Addendum or Subsequent/Supplemental MND should be prepared are outlined in this section. If the following statements are true, then preparation of an Addendum is appropriate:

- There are no substantial changes proposed in the project that will require major revisions of the previous environmental document due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
- Substantial changes have not occurred with respect to the circumstances under which the project is undertaken that will require major revisions of the previous environmental document due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
- There is no new information of substantial importance that was not known and could not have been known with the exercise of reasonable diligence at the time the previous environmental document was certified as complete or was adopted, shows any of the following:
    - The project will have one or more significant effects not discussed in the previous environmental document;
    - Significant effects previously examined will be substantially more severe than shown in the previous environmental document;
    - Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measures or alternatives; or

- Mitigation measures or alternatives that are considerably different from those analyzed in the previous environmental document would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

- An addendum to an adopted MND may be prepared if only minor technical changes or additions are necessary or none of the conditions described in Section 15162 calling for preparation of a subsequent environmental document have occurred.

Based upon the analysis in Section 3.0, *Environmental Analysis*, of this document, the changes to the project analyzed in the IS/MND would not result in new significant impacts or substantially increase the severity of impacts previously identified in the IS/MND. Additionally, the mitigation measures set forth in the IS/MND are still applicable, and no new mitigation measures are required to mitigate the changes to the previously approved project. Therefore, the Lead Agency has determined that an Addendum to the IS/MND is sufficient and appropriate, and this environmental document has been prepared to analyze the environmental effects of the revised projects. Public review of this Addendum is not required per CEQA.

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Chapter 2
Project Description

2.1 Project Location and Setting

The Tijuana River Valley is in southwestern San Diego County, east of Border Field State Park, and just north of the United States–Mexico border. The Tijuana River, which bisects the Tijuana River Valley Regional Park, flows from Mexico and drains into the Pacific Ocean. The park encompasses approximately 1,800 acres, of which the County owns 1,552 acres.

The approved project site is located along the north side of Monument Road in the Tijuana River Valley, approximately 1.3 miles east of the Pacific Ocean (Figure 1, to follow, shows the regional vicinity, and Figure 2 shows the project location). Access to the project would be provided by two private driveways: one off of Saturn Boulevard, to access the equestrian area in the eastern portion of the project; and one off of Monument Road, to access the main campground and outdoor nature education area in the western portion of the project.

The revised project would be located immediately south of the campground site and consists of a paved access road that runs up the north side of Spooner's Mesa and crosses three parcels (APNs 662-020-12-00, 663-010-49-00, 663-010-48-00). The septic leach field is located in the northwestern section of a single parcel at the top of Spooner's Mesa (APN 663-010-51-00).

2.2 Project Modifications Since IS/MND Adoption

The revised project would serve as an option for disposing of sewage from the campground and would include a pumping system and piping to carry sewage from the campground to the proposed septic leach field on Spooner's Mesa. The sewer advanced treatment system would be located in the western portion of the campground area, adjacent to the bathroom building. The treatment system would consist of a completely integrated, fully plumbed, engineered textile filter treatment. The textile filter treatment system includes the treatment, recirculation, and discharge stages of the treatment process entirely within an insulated fiberglass tank that measures approximately 7.6 feet high and 7 feet wide and could range from 14 feet to 42 feet long. The tank would be buried underground at a depth of approximately 7 feet below surface level, with the top of the tank approximately 6 inches above ground. Approximately 27.6 cubic yards to 82.8 cubic yards of soil would be excavated, based upon the size of the tank that is determined to be necessary as per the final project design. The pump chamber would be located inside the fiberglass tank that would be buried underground. The effluent would be transported through approximately 3,300 feet of piping and electrical conduit installed approximately 2 to 3 feet below the ground surface from Monument Road up to Spooner's Mesa, within the shoulder of an existing County-owned access road. The effluent would be discharged to an advanced treatment 32,000-square-foot leach field, which would be a subsurface drip irrigation located on Spooner's Mesa. The leach field would be composed of an approximately 15,876-square-foot primary drip tube system and 15,876 square feet set aside for a reserve system. The drip tube will be buried 1 foot below ground surface. The ground above the leach field would be landscaped with natural communities and would be fenced to prevent visitors

from assessing the area. The associated aboveground improvements associated with the sewage treatment system would be a manhole and cleanout at the ground surface level.

The environmental impacts associated with this change from the previously approved project are discussed in Section 3.0, *Environmental Analysis*.

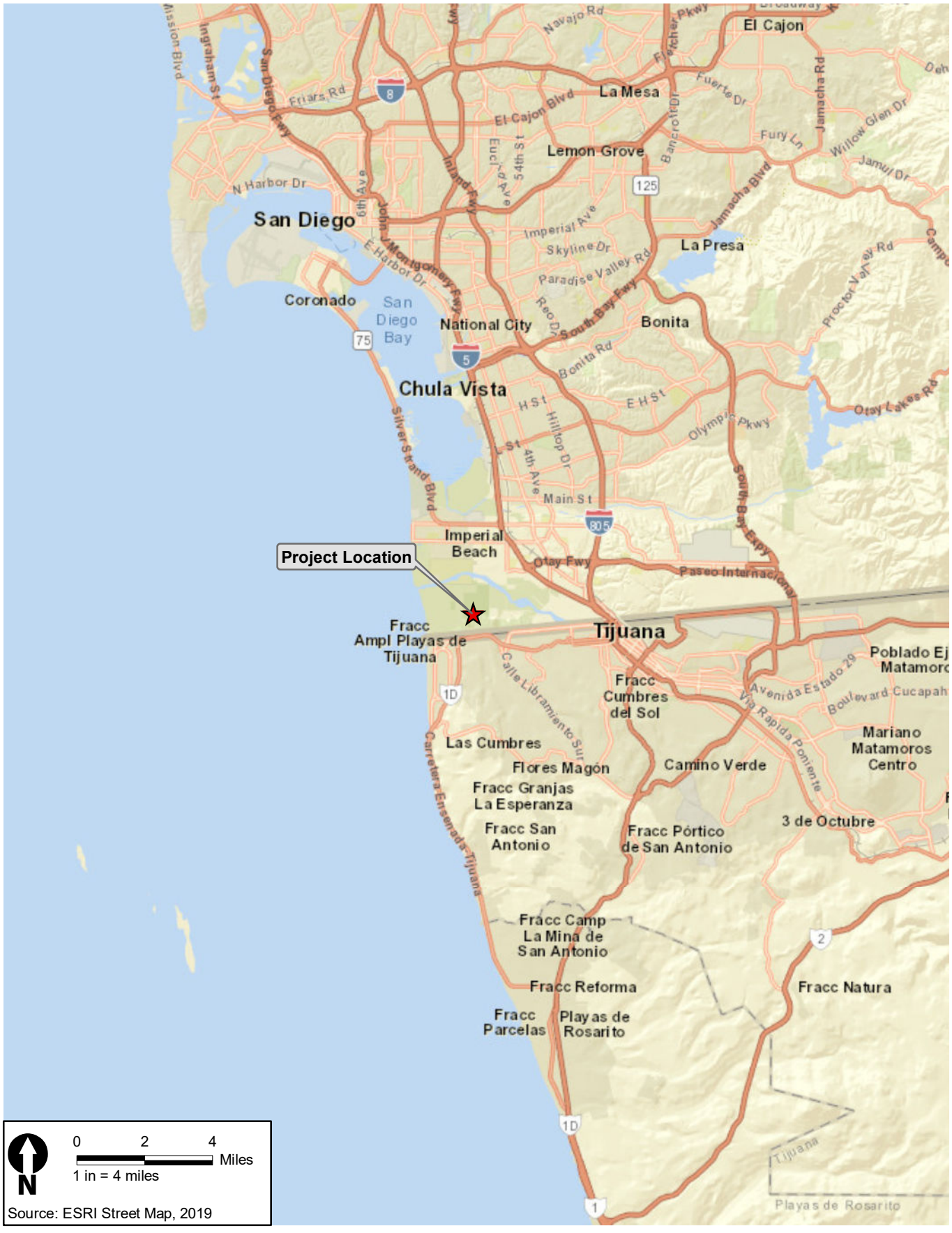

Figure 1
Regional Vicinity
Addendum to the Tijuana River Valley Regional Park Campground and Nature Education Center Project

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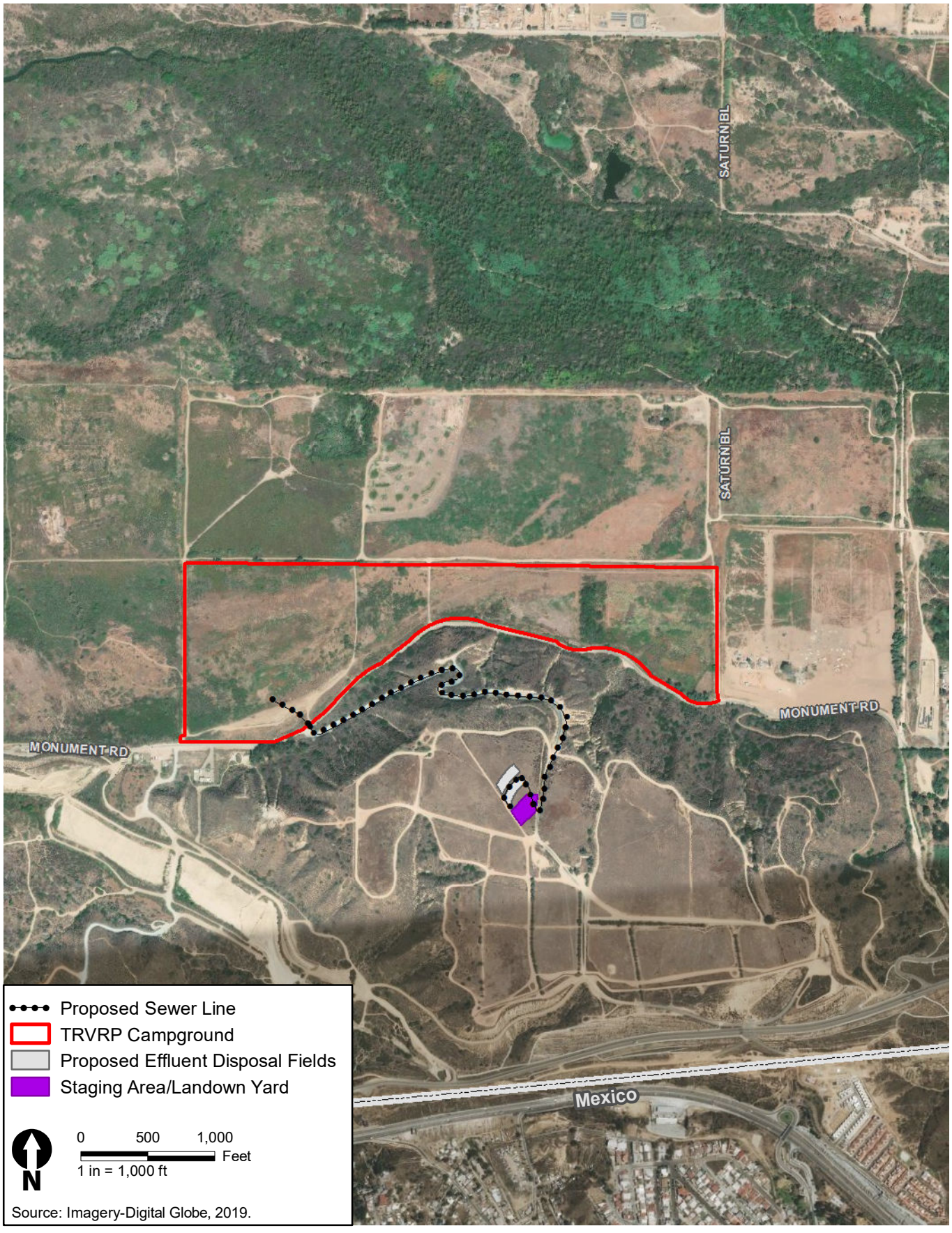

Figure 2
Project Location
Addendum to the Tijuana River Valley Regional Park Campground and Nature Education Center Project

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Chapter 3
Environmental Impact Analysis

As described in Section 2.0, *Project Description*, a change to the previously approved project has been proposed since preparation of the IS/MND. As such, the following comparative analysis has been undertaken pursuant to the provisions of CEQA Sections 15162 and 15164 to provide the factual basis for determining whether any changes in the project, change in circumstances, or new information since adoption of the IS/MND would require additional environmental review or preparation of a Subsequent IS/MND. This analysis focuses on whether the impact conclusions identified in the IS/MND would change under the revised project. The environmental analysis provided in the IS/MND remains current and applicable to the approved project in areas unaffected by the revised project for the environmental topics detailed in this section. An overview of the approved project impacts in relation to the previously adopted MND is provided in Table 1, Impact Assessment Summary.

Table 1. Impact Assessment Summary

Environmental Issues	Approved MND	Revised Project	New Mitigation?	Project Resultant Impact
3.1 Aesthetics	Less than significant	No new impacts	No	Less than significant
3.2 Agriculture and Forestry Resources	Less than significant	No new impacts	No	Less than significant
3.3 Air Quality	Less than significant	No new impacts	No	Less than significant
3.4 Biological Resources	Less than significant with mitigation	No new impacts	No	Less than significant with mitigation
3.5 Cultural Resources	Less than significant with mitigation	No new impacts	No	Less than significant with mitigation
3.6 Energy	No Impact	No new impacts	No	No Impact
3.7 Geology & Soils	Less than significant with mitigation	No new impacts	No	Less than significant with mitigation
3.8 Greenhouse Gas Emissions	Less than significant	No new impacts	No	Less than significant
3.9 Hazards & Hazardous Materials	Less than significant with mitigation	No new impacts	No	Less than significant with mitigation
3.10 Hydrology & Water Quality	Less than significant	No new impacts	No	Less than significant
3.11 Land Use & Planning	Less than significant	No new impacts	No	Less than significant
3.12 Mineral Resources	Less than significant	No new impacts	No	Less than significant
3.13 Noise	Less than significant	No new impacts	No	Less than significant
3.14 Population & Housing	No Impact	No new impacts	No	No Impact
3.15 Public Services	No Impact	No new impacts	No	No Impact
3.16 Recreation	Less than significant	No new impacts	No	Less than significant
3.17 Transportation	Less than significant with mitigation	No new impacts	No	Less than significant
3.18 Tribal Cultural Resources	Less than significant with mitigation	No new impacts	No	Less than significant with mitigation

Environmental Issues	Approved MND	Revised Project	New Mitigation?	Project Resultant Impact
3.19 Utilities & Service Systems	Less than significant	No new impacts	No	Less than significant
3.20 Wildfire	Less than significant	No new impacts	No	Less than significant

3.1 Aesthetics

IS/MND Conclusions

As discussed in the IS/MND, the approved project would consist of a multiuse campground and equestrian facility with accompanying paddocks, restroom and shower facilities, and a nature education center, which would not include structures over one story that would block views of the river valley. The approved project structures would be smaller than the size and scale of other structures visible along Monument Road, as consistent with other features in the project vicinity, and would not represent a significant impact on visual resources. Therefore, the approved project would have a less-than-significant impact on the visual composition of the landscape and would not result in a permanent impact on scenic vistas. Additionally, the approved project would not result in any impact on trees, rock outcroppings, or historic buildings and is not designated as a state scenic highway. The nearest state scenic highway, Interstate 5 (I-5), is located 1.8 miles to the northeast; State Route (SR)-905 is approximately 1.5 miles to the northeast. Furthermore, the approved project would not degrade the existing visual character or quality of the site and its surroundings, as the campground would not dominate the viewshed or strongly influence the pattern character of the surrounding environment. The low profile of the structures and the use of natural materials would be compatible with the natural condition of the surrounding scene. Finally, the approved project would not result in a new source of light or glare that would affect day or nighttime views and would include lighting mounted on the side of the restroom and at the volunteer pad. The lighting fixtures would be downturned to limit the reach of the lighting. There would not be any other outdoor lighting at the campground.

Revised Project Conclusion

The proposed change involves an option for disposing of sewage from the campground and would include a pumping system and piping to carry sewage from the campground to the proposed septic leach field on Spooner's Mesa. This change would result in temporary impacts during construction and less-than-significant impacts on the visual composition of the landscape. The sewer option is an underground utility improvement primarily located within the access road and disturbed land on Spooner's Mesa. Therefore, the revised project would not result in additional impacts on aesthetics beyond those identified in the IS/MND. As such, the revised project would not change any of the IS/MND's findings with respect to aesthetics impacts. There is no new information, such as new regulations, a change of circumstances, or changes to the project, that would give rise to new significant environmental effects or a substantial increase in the severity of previously identified effects. This analysis does not result in any different conclusions than those reached in the IS/MND related to aesthetics, either on a project-related or cumulative basis. No new mitigation measures are required for the proposed change.

3.2 Agricultural and Forestry Resources

IS/MND Conclusions

As discussed in the IS/MND, the approved project would consist of a multiuse campground and equestrian facility with accompanying paddocks, restroom and shower facilities, and a nature education center, and no potentially significant project or cumulative level conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide or Local Importance to non-agricultural use would occur as a result of the approved project. The approved project would not result in a conflict in zoning for agricultural use, because active recreation is a permitted use in Open Space – Floodplain (OF) and Agriculture – Residential (AR) zones, and is consistent with the activities that currently occur onsite (hiking and equestrian trails), and thus would not create a conflict with existing zoning for agricultural use. Additionally, the approved project does not contain forestlands or timberland and would not conflict with existing zoning or cause rezoning of forestland, timberland, or timberland-production zones. Finally, since the approved project would consist of a multiuse campground and equestrian facilities, there would be less-than-significant impacts on the existing environment that would result in the conversion of farmland to non-agricultural use or conversion of forestland to non-forest use.

Revised Project Conclusion

The proposed change involves an option for disposing of sewage from the campground and would include a pumping system and piping to carry sewage from the campground to the proposed septic leach field on Spooner's Mesa, within the shoulder of an existing County access road. Spooner's Mesa is designated as Farmland of Local Importance according to the State Farmland Mapping and Monitoring Program (FMMP) (Department of Conservation 2016). However, based on a review of historic aerial photography, there is no evidence of agricultural use on the site since 2009, a date at least 7 years prior to the last FMMP mapping date (2016). In order to qualify for Prime Farmland, Unique Farmland, Farmland of Statewide or Local Importance designations, land must have been cropped at some time during the 4 years prior to the last FMMP mapping date. Given the lack of agricultural use on the site within at least the past 9 years, the Farmland of Local Importance designation of this area does not meet statewide criteria. Therefore, the site does not meet the definition of an agricultural resource and no potentially significant project or cumulative level conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide or Local Importance to a non-agricultural use would occur as a result of the proposed project. The site is not under a Williamson Act contract, and there would be no conflict with existing zoning for agricultural use or Williamson Act contract. This change would not result in additional impacts on agricultural resources beyond those identified in the IS/MND. As such, the revised project would not change any of the IS/MND's findings with respect to agricultural and forestry impacts. There is no new information, such as new regulations, a change of circumstances, or changes to the project that would give rise to new significant environmental effects or a substantial increase in the severity of previously identified effects. This analysis does not result in any different conclusions related to agricultural and forestry resources than those reached in the IS/MND, either on a project-related or cumulative basis. No new mitigation measures are required for the proposed change.

3.3 Air Quality

IS/MND Conclusions

The approved project is located within the San Diego Air Pollution Control District (SDAPCD). The proposed project was anticipated in the San Diego Association of Government's (SANDAG) growth projections used in development of the San Diego Regional Air Quality Strategy (RAQS) and State Implementation Plan (SIP). Operation of the project would result in emissions of ozone precursors that were considered as part of the RAQS based on growth projections. The operational emissions from the project would be below the screening levels and subsequently would not violate ambient air quality standards. The approved project proposes grading of not more than 3,000 cubic yards of soil per day and/or not more than 5 acres of area per day. The project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. The approved project includes air quality emissions of PM_{10}, NO_X, and VOCs from construction/grading activities, as well as VOCs as the result of increase of traffic from operations at the facility. The vehicle trips generated from the project are below the screening-level criteria. The approved project does not propose uses or activities that would result in exposure of identified sensitive receptors to significant pollutant concentrations and would not place sensitive receptors near carbon monoxide hotspots. The approved project could produce objectionable odors as a result of equestrian uses; however, given the location of the project and nature of the odors, any impacts are not expected to affect a substantial number of people, due to the distance to the closest receptor and the lack of other sensitive receptors in the area.

Revised Project Conclusion

The proposed change involves an option for disposing of sewage from the campground and would include a pumping system and piping to carry sewage from the campground to the proposed septic leach field on Spooner's Mesa. This change is an additional sewage treatment option and would not result in a substantial increase in emissions associated with either project construction or operation. The project would generate 2,000 annual daily trips (ADT) and is below the screening-level criteria established by the guidelines for criteria pollutants. The proposed change would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. The project change could produce objectionable odors as a result of sewage treatment and leach fields. However, given the location of the project, any impacts are not expected to affect a substantial number of people due to the distance to the closest sensitive receptor (a residence approximately 500 feet east) and the lack of other sensitive receptors in the area.

Therefore, the revised project would not change any of the IS/MND's findings with respect to air quality impacts. There is no new information, such as new regulations, a change of circumstances, or changes to the project, that would give rise to new significant environmental effects or a substantial increase in the severity of previously identified effects. This analysis does not result in any different conclusions than those reached in the IS/MND related to air quality, either on a project-related or cumulative basis. No new mitigation measures are required for the proposed change.

3.4 Biological Resources

IS/MND Conclusions

As described in the IS/MND, a Biological Resources Report (BRR) dated October 2018 was prepared for the approved project. Construction of the approved project would have the potential to impact species, due to temporary noise level increases that could exceed the 60-decibel (dB) standard. Mitigation measure **MM-BIO-01** includes clearing restrictions and establishment of avoidance buffers to reduce the significance of potential impacts that could result from construction of the proposed project. Implementation of **MM-BIO-01** through **MM-BIO 04** would reduce the potential impacts on federal and state-listed endangered species, species of concern, and County Group I animal species to less than significant.

MM-BIO-01: Clearing Restrictions. To mitigate for potentially significant impacts on sensitive nesting birds and raptors, the County will avoid vegetation removal or ground-disturbing activities during the bird-breeding season to keep the project in compliance with state and federal regulations regarding nesting birds (i.e., the federal Migratory Bird Treaty Act [MBTA] and California FGC). The bird-breeding season is defined as January 15 to September 1, which includes the tree-nesting raptor breeding season of January 15 to July 15, the ground-nesting raptor breeding season of February 1 to July 15, and the general avian breeding season of February 1 to September 1. If removal cannot be avoided during this time period, a nesting bird survey will be conducted no more than 72 hours prior to ground-disturbing activities by a qualified avian biologist through the entirety of the project site, as well as a 900-foot buffer inspecting for northern harrier, a 500-foot buffer for raptors, and a 300-foot buffer inspecting for other nesting birds. This is necessary to definitively ascertain whether raptors or other migratory birds are actively nesting in the project site, or in a vicinity that could be indirectly impacted by work activities (i.e., through noise or visual disturbances). If the survey results are positive, the location of active raptor or migratory bird nests will be mapped by a qualified avian biologist. All construction activities in proximity to active nests will be delayed or otherwise modified as necessary to prevent nest failure (e.g., nest abandonment). Nesting northern harriers will be given a 900-foot avoidance buffer (per the Multiple Species Conservation Program [MSCP]), raptors will be afforded a 500-foot no-disturbance buffer, nesting special-status birds will be afforded at least a 300-foot buffer, and common birds protected by the MBTA and CFGC will be afforded a 50- to 100-foot buffer. Buffers may be adjusted based on the observations by the biological monitor(s) of the response of the nesting birds to human activity and will be conducted in coordination with the resource agencies (United States Fish and Wildlife Services and California Department of Fish and Wildlife [CDFW].).

MM-BIO-02: Biological Monitoring. The County will retain a qualified biologist to conduct biological monitoring during project construction. After the surveyor has flagged the limits of disturbance (but prior to brushing, clearing, or other ground-disturbing activities or other construction activities or staging) the biological monitor will conduct a review of the limits of disturbance, to ensure that the project does not cause errant impacts on surrounding sensitive vegetation communities and to inspect the project area for sensitive species. The biological monitor will be onsite during all vegetation, brushing, clearing, or initial grading that could disturb topsoil. The biological monitor will conduct weekly monitoring visits after initial grading to ensure that perimeter controls are in place and that errant biological impacts do not occur.

The biological monitor will also monitor any and all avian nest avoidance buffers established during nesting bird surveys (see **MM BIO-01**) during the breeding season. Monitors will work with construction personnel to minimize and avoid disruption to breeding birds and other special-status wildlife potentially present within or adjacent to construction areas.

MM-BIO-03: Best Management Practices. To reduce and avoid indirect impacts from the project construction, the following Best Management Practices (BMPs) will be implemented:

- Appropriate construction scheduling and sequencing will be established to reduce the amount and duration of soil exposed to vehicle tracking.
- Vehicle speeds will be limited to 15 miles per hour in the project area.
- Regular watering of roadways will be conducted to prevent and alleviate dust generation, but will not be applied in quantities with allow for water ponding.
- Limits of construction areas will be fenced or flagged and maintained throughout the construction activities.
- Appropriate stormwater BMPs will be established during the rainy season (October 1 to April 30) to reduce erosion and control siltation. BMPs may include silt fences, fiber rolls, and application of organic soil tackifiers (e.g., guar gum).

MM-BIO-04: Manure Management. To reduce indirect impacts from increased equestrian use of the project area, the County will implement a manure-management program for the project. Manure will be periodically removed from the corral and pasture areas and composted onsite following the CalRecycle regulation for pathogen reduction (14 CCR S17868.3), and raw manure will not be spread onsite. Onsite composting will be situated to avoid runoff into wetlands.

The approved project would avoid sensitive habitat and would not result in significant impacts to riparian or natural communities. Project impacts on any riparian habitat or sensitive natural community identified in the County of San Diego MSCP, County of San Diego Resource Protection Ordinance, Natural Community Conservation Plan, Fish and Wildlife Code, Endangered Species Act, Clean Water Act, or any other local or regional plans, policies, or regulations, are considered less than significant.

The approved project does not contain any wetlands as defined by Section 404 of the Clean Water Act and would avoid CDFW jurisdictional habitat, as well as County/California Coastal Commission (CCC)/City jurisdictional wetlands. Wetland buffers have been incorporated into the project design to protect functions and values of wetlands.

The approved project would not result in cumulative impacts on wildlife movement or nursery sites.

No sensitive habitat within the City of San Diego's Multi-Habitat Planning Area (MHPA) would be impacted by the approved project. All development is contained within areas currently composed of disturbed habitat. While the County is not subject to the City of San Diego MSCP Subarea Plan, it has designed the project to be consistent with the guidelines from the City of San Diego MSCP Subarea Plan. The approved project was designed to conform with the Land Use Adjacency Guidelines.

Revised Project Conclusion

A BRR was prepared for the approved project, Spooner's Mesa Septic Project, dated September 2019 (Appendix A). The proposed change involves an option for disposing of sewage from the campground and would include the 39.51-acre area within a 500-foot buffer of the project features on top of Spooner's Mesa, and a 100-foot buffer from the sewer line.

The study area supports five vegetation communities/land coverage types: disturbed habitat (including bare ground); Diegan coastal sage scrub (including disturbed); Diegan coastal sage scrub (*Baccharis*-dominated); maritime succulent scrub (including disturbed); and urban/developed. The sewage system would occur within lands mapped as developed and disturbed habitat. The sewer line would be within the developed gravel road that climbs Spooner's Mesa from the campground site. The leach field would be located within the disturbed habitat on the top of the mesa. No direct temporary or permanent impacts would occur to sensitive vegetation communities, and no habitat mitigation would be required under the MSCP. Clearing restrictions, biological monitoring, and BMPs, as outlined in **MM-BIO-01** through **MM-BIO-03**, would ensure that no errant impacts occur for sensitive vegetation communities or sensitive species.

Six sensitive plant species were observed within the study area: San Diego sunflower (*Bahiopsis laciniata*); western dichondra (*Dichondra occidentalis*); cliff spurge (*Euphorbia misera*); San Diego barrel cactus (*Ferocactus viridescens*); sea dahlia (*Leptosyne maritima*); and ashy spike moss (*Selaginella cinerascens*). No other plant species were identified as having a high potential to occur in the study area after focused rare plant surveys were conducted in 2019. No sensitive plant species were observed within the proposed project footprint, but sensitive plant species are common in the maritime succulent scrub along the access road/proposed sewer line alignment. No sensitive plant species would be directly impacted by the proposed Project. Construction dust deposited on adjacent sensitive plants could have a potentially significant temporary indirect impact. Construction BMPs described in **MM-BIO-03** would ensure that temporary indirect impacts to sensitive plant species is kept below a level of significance.

Eight sensitive animal species were observed in or adjacent to the study area in 2019: California horned lark (*Eremophila alpestris actia*); coastal California gnatcatcher (*Polioptila californica californica*); Cooper's hawk (*Accipiter cooperii*); least Bell's vireo (*Vireo bellii pusillus*); Quino checkerspot butterfly (*Euphydryas editha quino*); northern harrier (*Circus cyaneus*); San Diego black-tailed jackrabbit (*Lepus californicus bennettii*); and Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*). Seven sensitive animal species were determined to have a high potential to occur within the study area: Belding's orange-throated whiptail (*Aspidoscelis hyperythra beldingi*); Blainville's horned lizard (*Phrynosoma blainvillii*); coastal tiger whiptail (*Aspidoscelis tigris stejnegeri*); Coronado skink (*Plestiodon skiltonianus interparietalis*); red diamond rattlesnake (*Crotalus ruber*); turkey vulture (*Cathartes aura*); and white-tailed kite (*Elanus leucurus*).

Restrictions on vegetation clearing during the avian breeding season (**MM-BIO-01**) and biological monitoring (**MM-BIO-02**) would be implemented to ensure that there are no direct impacts on avian species, including raptors, and that no violations would occur pursuant to the MBT or California Fish and Game Code (FGC) bird-protection provisions.

The project was designed to avoid impacts on jurisdictional wetland and water resources regulated by the City, the County, and the CCC. Biological monitoring, as outlined in **MM-BIO-02**, and BMPs, as outlined in **MM-BIO-03**, would ensure that no impacts occur on jurisdictional wetland and water

resources. No wetland resources occur onsite that fall under the jurisdiction of U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), or CDFW.

The project would not result in significant unmitigated impacts on sensitive biological resources under CEQA. The sewage treatment system would be located within disturbed habitat and within the shoulder of an existing County access road and would comply with **MM-BIO-01**, **MM-BIO-02**, and **MM-BIO-03**, and thus would not contribute to additional impacts on sensitive species and biological resources as compared to the approved project. As with the approved project, impacts associated with the project change would be less than significant with implementation of **MM-BIO-01**, **MM-BIO-02**, and **MM-BIO-03**. Therefore, the proposed change would not result in additional impacts on biological resources beyond those identified in the IS/MND. The revised project would not change any of the IS/MND's findings with respect to biological resources impacts. There is no new information, such as new regulations, a change of circumstances, or changes to the project, that would give rise to new significant environmental effects or a substantial increase in the severity of previously identified effects. This analysis does not result in any different conclusions than those reached in the IS/MND related to biological resources, either on a project-related or cumulative basis. No new mitigation measures are required for the proposed change.

3.5 Cultural Resources

IS/MND Conclusions

As described in the IS/MND, a cultural resources file search and field survey were conducted for the approved project to determine the presence or potential presence of archaeological resources within the project site. A records search for the project area, including a 1-mile area surrounding the site, was conducted at the South Coastal Information Center (SCIC) on November 3, 2017. Due to the number of archaeological resources recorded in the surrounding area, there is a potential for unidentified, subsurface archaeological resources to be present within the project site. If present below the surface, these archaeological resources could be damaged by ground disturbing activities associated with the project. **MM-CUL-01** would reduce impacts to a level less than significant.

MM-CUL-01: Archaeological Monitoring. The County DPR will retain a qualified archaeologist to monitor all proposed ground-disturbing activities related to the implementation of the proposed project in order to minimize disturbance of subsurface archaeological deposits. Specifically, the following measures will be implemented to reduce impacts:

- All proposed ground disturbance, including grading and excavation for the project, will be monitored by a qualified archaeologist(s) who meets the Secretary of the Interior's Professional Qualifications Standards, as promulgated in Code of Federal Regulations (CFR), Title 36, Section 61, or in the City's Land Development Code.
- Prior to the start of construction, a monitoring plan will be prepared that describes the nature of the archaeological monitoring work, procedures to follow in the event of an unanticipated discovery, and reporting requirements.
- The archaeologist will be invited to the preconstruction meeting to inform all personnel of the high probability of archaeological materials being encountered during construction.

- If intact subsurface deposits are identified during construction, the archaeologist will be empowered to divert construction activities away from the find and will be given sufficient time and compensation to investigate the find and determine its significance. No soil will be exported offsite until a determination can be made regarding the significance of the resource, especially if Native American resources are encountered.
- Recovered items will be treated in accordance with current professional standards by being properly provenienced, cleaned, analyzed, researched, reported, and curated in a collection facility meeting the Secretary of the Interior's Standards, as promulgated in 36 CFR 79, such as the San Diego Archaeological Center. The costs for curation will be included in the budget for recovery of the archaeological remains.
- A final Cultural Resources Monitoring report will be produced, which will discuss the monitoring program and its results and will provide interpretations of any recovered cultural materials.

No previously recorded sites with human remains were identified within the project site. However, due to the number of archaeological resources recorded in the surrounding area, there is a potential for unidentified human remains to be present within the project site. If present, the human remains could be damaged by ground-disturbing activities associated with the project. **MM-CUL-02** would reduce impacts to less than significant.

MM-CUL-02: Protection of Human Remains. Any ground-disturbing activities on the project site must be considered as having the potential to encounter Native American human remains. Human remains require special handling and must be treated with appropriate dignity. Specific actions must take place pursuant to State CEQA Guidelines Section 15064.5e, PRC Section 5097.98, and Section 87.429 of the County of San Diego Grading, Clearing, and Watercourses Ordinance.

Should human remains be identified during ground-disturbing activities related to the project, whether during construction, maintenance, or any other activity, state- and county-mandated procedures will be followed for the treatment and disposition of those remains, as follows.

1. In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, DPR will ensure that the following procedures are followed:
    a. There will be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:
        i. A County (DPR) official is contacted; and
        ii. The County Coroner is contacted to determine that no investigation of the cause of death is required.
    b. If the Coroner determines the remains are Native American, then:
        i. The coroner will contact the Native American Heritage Commission (NAHC) within 24 hours;
        ii. The NAHC will identify the person or persons it believes to be most likely descended from the deceased Native American; and

iii. The Most Likely Descendent (MLD) may make recommendations to the landowner (DPR), or the person responsible for the excavation work, for the treatment of human remains and any associated grave goods as provided in PRC Section 5097.98.

c. Under the following conditions, the landowner or its authorized representative will rebury the Native American human remains and associated grave goods on the property in a location not subject to further disturbance:

i. The NAHC is unable to identify a MLD, or the MLD fails to make a recommendation within 24 hours after being notified by the NAHC;

ii. The MLD fails to make a recommendation; or

iii. The landowner or his authorized representative rejects the recommendation of the MLD, and mediation by the NAHC fails to provide measures acceptable to the landowner.

2. Any time human remains are encountered or suspected and soil conditions are appropriate for the technique, ground-penetrating radar (GPR) will be used as part of the survey methodology. In addition, the use of canine forensics will be considered when searching for human remains. The decision to use GPR or canine forensics will be made on a case-by-case basis through consultation among the County Archaeologist, the project archaeologist, and the Native American monitor (see **MM-TCR-01**).

3. Because human remains require special consideration and handling, they must be defined in a broad sense. For the purposes of this document, human remains are defined as:

a. Fragmented or disarticulated human bone with no associated artifacts or grave goods;

b. Cremations, including the soil surrounding the deposit;

c. Interments, including the soils surrounding the deposit; or

d. Associated grave goods.

4. In consultation among the County archaeologist, project archaeologist, and Native American monitor (see **MM-TCR-01**), additional measures (e.g., wet-screening of soils onsite or adjacent to the deposit) may be required to determine the extent of the burial.

Revised Project Conclusion

A Phase I Cultural Resources Report was prepared for the TRVRP Campground, Spooner's Mesa Septic Project dated May 2019 (Appendix B). The record search indicated that no cultural resources have been previously recorded within the cultural resources survey area; however, nine prehistoric sites have been previously identified on Spooner's Mesa. One prehistoric lithic scatter and four isolated lithics were newly identified within the survey area, but outside of the project site. Highly fragmented historic debris also was identified within the survey area, extending as far as 500 feet north of previously recorded site P-37-011095. These fragments appear to have been dragged to their current locations as a result of road maintenance and do not comprise a culturally sensitive resource. ICF revisited P-37-011095 and noted its presence, but did not update the resources as it was outside the survey area.

No direct impacts would occur to any of the archaeological sites; however, given the large number of archaeological resources previously recorded on Spooner's Mesa, there is a potential for unidentified subsurface archaeological resources to be present within the Spooner's Mesa site. If so, these archaeological resources could be damaged by ground-disturbing activities associated with the project. **MM-CUL-01** would reduce impacts to a level less than significant. Due to the number of archaeological resources recorded in the surrounding area, there is a potential for unidentified human remains to be present within the project site. If present, the human remains could be damaged by ground disturbing activities associated with the project. **MM-CUL-02** would reduce impacts to a level less than significant. The proposed change would not result in additional impacts on cultural resources beyond those identified in the IS/MND. The revised project would not change any of the IS/MND's findings with respect to cultural resources impacts. There is no new information, such as new regulations, a change of circumstances, or changes to the project, that would give rise to new significant environmental effects or a substantial increase in the severity of previously identified effects. This analysis does not result in any different conclusions than those reached in the IS/MND related to cultural resources, either on a project-related or cumulative basis. No new mitigation measures are required for the proposed change.

3.6 Energy

IS/MND Conclusions

In December 2018, the California Natural Resources Agency adopted a comprehensive update to the state's CEQA Guidelines that incorporates a new category, energy impacts, into the Initial Study Checklist. Energy impacts were assessed in the GHG Emissions evaluation in the IS/MND analysis. The approved project would have a less-than-significant impact on energy because the construction and operation of the approved project would not exceed San Diego County's Screening Level Thresholds. Because the project is consistent with the County's screening level thresholds and demonstrates consistency with the CAP, the approved project would have a less-than-significant effect on the environment.

Revised Project Conclusion

The proposed change involves an option for disposing of sewage from the campground and would include a pumping system and piping to carry sewage from the campground to the proposed septic leach field on Spooner's Mesa. This revision does not result in a significant energy demand; therefore the project would not result in a wasteful, inefficient, or unnecessary usage of direct or indirect energy. This analysis does not result in any different conclusions than those reached in the IS/MND related to energy, either on a project-related or cumulative basis. No new mitigation measures are required for the proposed change. Therefore, the revised project would not change any of the IS/MND's findings with respect to energy impacts. There is no new information, such as new regulations, a change of circumstances, or changes to the project, that would give rise to new significant environmental effects or a substantial increase in the severity of previously identified effects. This analysis does not result in any different conclusions than those reached in the IS/MND related to energy, either on a project-related or cumulative basis. No new mitigation measures are required for the proposed change.

3.7 Geology and Soils

IS/MND Conclusions

The approved project site is not located within a fault-rupture hazard zone, as identified by the Alquist-Priolo Earthquake Fault Zoning Act, Special Publication 42 (SP 42). The nearest active fault system is the Rose Canyon fault zone, approximately 3 miles from the project site. There are two concealed faults mapped on the site, one along the eastern boundary of the equestrian facility, and one in the center of the western campground area. These are mapped as Quaternary faults and are not considered active. The project site is located within a Potential Liquefaction Area, as identified in the County Guidelines for Determining Significance for Geologic Hazards. The approved project recommended remedial grading be performed within the structural building areas, which is further described in **MM-GEO-01**:

> **MM-GEO-01: Comply with Recommendations of Geotechnical Evaluation.** The project will comply with the recommendations of the Geotechnical Evaluation. Remedial grading will be performed within structural building areas and include the following:
>
> - Removal of the existing site soils within the building pad, including fill and alluvium, to a depth of 2 feet below the bottom of the foundation system for structural buildings;
> - Subsequent to the removal, a low ground pressure bulldozer or excavator should be used to fill in ruts and dress the surface at the removal bottom elevation;
> - A layer of geosynthetic woven fabric (Mirafi® HP 570 or an equivalent) should then be rolled out over the dressed excavation bottom. The geosynthetic woven fabric material should overlap approximately 2 feet. Heavy equipment traffic, including trucks, should not be allowed on the geosynthetic woven fabric;
> - An initial 12 inches of aggregate base materials should be pushed out over the geosynthetic woven fabric with low-pressure construction equipment. Compaction effort should then be made to this aggregate base layer using smaller, low-pressure construction equipment. Again, heavy equipment traffic, including trucks, should not be allowed on the initial lift of aggregate;
> - Then a layer of TriAx® TX7 Geogrid (or equivalent) should be placed over the initial layer of aggregate base materials, and the geogrid should overlap approximately 2 feet. Heavy equipment traffic, including trucks should not be allowed on the geogrid; and
> - After placement of the geogrid, another 12 inches of aggregate base materials should be pushed out over the geosynthetic woven fabric with low-pressure construction equipment. Compaction effort should then be made to this aggregate base layer using smaller, low-pressure equipment. This layer of aggregate base materials should be compacted to a relative compaction of 90 percent as evaluated by ASTM International (ASTM) D 1557.

The proposed mitigation would reduce soils and geology impacts to a level less than significant.

Revised Project Conclusion

The proposed change involves an option for disposing of sewage from the campground and would include a pumping system and piping to carry sewage from the campground to the proposed septic

leach field on Spooner's Mesa. Carlsbad gravelly loamy sand is located on the Spooner's Mesa site (USDA 2018). Carlsbad gravelly loamy sands are formed in marine terraces that parallel the coast. They are well or moderately well drained and have medium to rapid runoff. This proposed change would not result in a substantial increase in ground disturbance that could result in new or more significant impacts on geology and soils, as compared to the approved project. As with the approved project, geology and soils impacts associated with the project change would be avoided with implementation of BMPs related to erosion and stormwater.

Spooner's Mesa is located in the San Diego Formation, a high paleontological resource sensitivity geologic unit. The San Diego Formation is a marine sedimentary rock of the late Pliocene (1.5 to 3 million years old) and is considered to have high paleontological sensitivity because of the abundance and diversity of fossil localities and their fossil assemblages. The San Diego Formation is a marine sedimentary deposit that typically consists of yellowish-gray, fine-grained sandstones with well-sorted, rounded pebble conglomerate lenses (Demere and Walsh 1993). The rock unit has yielded rich fossil beds of marine invertebrates, such as clams, scallops, snails, crabs, and barnacles, and marine vertebrates, including sharks, rays, bony fishes, dolphins, and baleen whales (Demere and Walsh 1993). The County of San Diego Paleontological Guidelines indicate that projects within High Paleontological Resources potential that propose to excavate equal to or greater than 2,500 cubic yards (CY) are required to mitigate potential paleontological impacts by using a project Paleontologist/Monitor during construction. The project change proposes to excavate 2,283 CY for the leach fields on Spooner's Mesa, which amounts to less than 2,500 CY. Therefore, the proposed change would not require a paleontological monitor during construction and results in a less-than-significant impact to paleontological resources.

The proposed change would not result in additional impacts on geology and soils or paleontological resources beyond those identified in the IS/MND. The revised project would not change any of the IS/MND's findings with respect to geology and soils or paleontological impacts. There is no new information, such as new regulations, a change of circumstances, or changes to the project, that would give rise to new significant environmental effects or a substantial increase in the severity of previously identified effects. This analysis does not result in any different conclusions than those reached in the IS/MND related to geology and soils or paleontological, either on a project-related or cumulative basis. No new mitigation measures are required for the proposed change.

3.8 Greenhouse Gas Emissions

IS/MND Conclusion

The approved project would not result in a significant impact on climate change. Construction and operation of the project would not exceed San Diego County's Screening-Level Thresholds for air contaminants, including respirable particulate matter, fine particle matter, nitrogen oxides, sulfur oxides, carbon monoxide, lead, and volatile organic compounds. Because the project is consistent with the County's screening-level thresholds and demonstrates consistency with the County of San Diego Climate Action Plan (CAP), the project would have a less-than-significant effect on the environment. However, because of the small scale of work and the intermittent and minimal use of heavy equipment, no significant amounts of GHGs are expected to be emitted during the short duration of the project. No new sources of GHG emissions would be created, and there would be no operational emissions.

The approved project would not conflict with any applicable plan, policy, or regulation adopted to reduce the emissions of greenhouse gases. The approved project is consistent with the zoning and land use projections for the project site. Thus, the project's greenhouse gas emissions have been accounted for in the CAPs projections. None of the CAP reduction measures are applicable to the proposed project, and the project's incremental contribution to cumulative GHG emissions is determined to not be cumulatively considerable because it is consistent with the CAP.

Revised Project Conclusion

The proposed change involves an option for disposing of sewage from the campground and would include a pumping system and piping to carry sewage from the campground to the proposed septic leach field on Spooner's Mesa. This change would not result in additional impacts on GHG emissions beyond those identified in the IS/MND. The revised project would not change any of the IS/MND's findings with respect to GHG emissions impacts. There is no new information, such as new regulations, a change of circumstances, or changes to the project, that would give rise to new significant environmental effects or a substantial increase in the severity of previously identified effects. This analysis does not result in any different conclusions than those reached in the IS/MND related to GHG emissions, either on a project-related or cumulative basis. No new mitigation measures are required for the proposed change.

3.9 Hazards and Hazardous Materials

IS/MND Conclusions

Based on a regulatory database search conducted by Ninyo & Moore as part of the Phase I Environmental Site Assessment, Proposed TRVRP Campground, the approved campground/ equestrian site, including the location of the onsite advanced sewage treatment system, has not been subject to a release of hazardous substances that would create a significant hazard to the public or the environment. The project site is not included on any of the hazardous lists or databases. Based on the results of the database searches and the conclusions made by Ninyo & Moore based on their onsite investigations, soil sampling, and Human Health Screening Evaluation, the approved site does not contain hazardous materials that would create a significant hazard to the public or the environment, and the project would not create a significant hazard to the public or the environment. Finally, the approved site is located approximately 1 mile southeast of Naval Outlying Landing Field (NOLF) – Imperial Beach, and is within the Airport Influence Area, Review Area 2. The approved project would be required to undergo review by the San Diego County Regional Airport Authority. Compliance with **MM-HAZ-01** and **MM-HAZ-02** means the project would not conflict with the airport land use plan for the NOLF-Imperial Beach.

> **MM-HAZ-01: FAA Height Notification.** The County will complete and submit the Federal Aviation Administration (FAA) Form 7360-1 Notice of Proposed Construction or Alteration application to the FAA for review. If the FAA concludes the project would not be an airspace obstruction or hazard, no further action would be required. If the FAA determines there would be a potential airspace obstruction or hazard, the project component(s) that has/have been identified as an obstruction or hazard will be modified to the satisfaction of the FAA.

MM-HAZ-02: Review by the San Diego County Regional Airport Authority. The project site will be submitted to the San Diego County Regional Airport Authority. If the San Diego County Regional Airport Authority does not find the proposed project to be compatible with the NOLF-Imperial Beach Airport Land Use Compatibility Plan (ALUCP), the project component(s) found to be incompatible with the NOLF-Imperial Beach ALUCP will be modified to the satisfaction of the San Diego County Regional Airport Authority. If the San Diego County Regional Airport Authority finds the proposed project to be compatible, nothing further is required.

Lastly, the project does not propose any artificial bird attractors, including, but not limited to, reservoir, golf courses with water hazards, large detention and retention basins, wetlands, landscaping with water features, wildlife refuges, or agriculture. The project does not propose a safety hazard in the project area.

Revised Project Conclusion

The proposed change involves an option for disposing of sewage from the campground and would include a pumping system and piping to carry sewage from the campground to the proposed septic leach field on Spooner's Mesa. The effluent would be discharged to an advanced treatment leach field, which would be a subsurface drip irrigation. The ground above the leach field would be landscaped with natural communities and would be fenced to prevent visitors from assessing the area.

This change would not result in additional impacts on hazards and hazardous materials beyond those identified in the IS/MND. The revised project would not change any of the IS/MND's findings with respect to hazards and hazardous materials impacts. There is no new information, such as new regulations, a change of circumstances, or changes to the project, that would give rise to new significant environmental effects or a substantial increase in the severity of previously identified effects. This analysis does not result in any different conclusions than those reached in the IS/MND related to hazards and hazardous materials, either on a project-related or cumulative basis. No new mitigation measures are required for the proposed change.

3.10 Hydrology and Water Quality

IS/MND Conclusions

As described in the IS/MND, the approved project would disturb over 1 acre of land and would be required to obtain a National Pollution Discharge Elimination System (NPDES) General Construction Permit. Compliance with the General Construction Permit would require the preparation of a Stormwater Pollution Prevention Plan (SWPPP) for the project site and would identify potential pollutants and outline the BMPs that would be implemented during construction activities to prevent those pollutants from entering nearby water bodies. The approved project would be covered under the County existing regional Waste Discharge Requirement Permit. The stormwater runoff would be consistent with the County of San Diego Jurisdictional Runoff Management Plan (JRMP) and the BMP Design Manual. The approved project's conformance to the waste discharge requirements ensures the project would not create cumulatively considerable water quality impacts related to waste discharge because, through the permit, the project would conform to countywide watershed standards in the JRMP and BMP Design Manual.

Revised Project Conclusion

The proposed change involves an option for disposing of sewage from the campground and would include a pumping system and piping to carry sewage from the campground to the proposed septic leach field on Spooner's Mesa. This change would not result in additional impacts on hydrology and water quality beyond those identified in the IS/MND. The revised project would not change any of the IS/MND's findings with respect to hydrology and water quality impacts. There is no new information, such as new regulations, a change of circumstances, or changes to the project, that would give rise to new significant environmental effects or a substantial increase in the severity of previously identified effects. This analysis does not result in any different conclusions than those reached in the IS/MND related to hydrology and water quality, either on a project-related or cumulative basis. No new mitigation measures are required for the proposed change.

3.11 Land Use and Planning

IS/MND Conclusions

As described in the IS/MND, the approved project would be consistent with the surrounding communities in the regional parks. The approved project would not divide any the established residential communities, nor conflict with the goals and policies of the County of San Diego General Plan, Conservation and Open Spec Element. Finally, the approved project would be consistent with the TRVRP Public Use Feasibility Study, which analyzes the feasibility of developing several campground options in the TRVRP, including the approved project.

Revised Project Conclusion

The proposed change involves an option for disposing of sewage from the campground and would include a pumping system and piping to carry sewage from the campground to the proposed septic leach field on Spooner's Mesa. The leach field would be located within the TRVRP, which is owned and operated by the County of San Diego as a regional park open to the public for hiking, biking, horseback riding, birdwatching, and other passive recreational activities. Although the City of San Diego General Plan land use designation for the site is Open Space Parks and the zoning for the site is Agricultural-Residential (AR-1-1), it would be subject to the County of San Diego land use plans and regulations. The project change would not conflict with the goals and policies of the County of San Diego General Plan, Conservation and Open Space Element.

This revised project would not change any of the IS/MND's findings with respect to land use and planning impacts. There is no new information, such as new regulations, a change of circumstances, or changes to the project, that would give rise to new significant environmental effects or a substantial increase in the severity of previously identified effects. This analysis does not result in any different conclusions than those reached in the IS/MND related to land use and planning, either on a project-related or cumulative basis. No new mitigation measures are required for the proposed change.

3.12 Mineral Resources

IS/MND Conclusions

The IS/MND indicates that the approved project is located as an area of identified Mineral Resource Significance (MRA-2). However, the approved project is within the TRVRP, for which goals have been proposed that are incompatible to future extraction of mineral resources on the project site. A future mining operation at the project site would likely create a significant impact on biological and cultural resources as a result of construction and operational activities of an active mine. Implementation of the approved project would not result in the loss of availability of a known mineral resource that would be of value because the mineral resource has already been lost due to incompatible land uses.

Revised Project Conclusion

The proposed change involves an option for disposing of sewage from the campground and would include a pumping system and piping to carry sewage from the campground to the proposed septic leach field on Spooner's Mesa. This revised project would not change any of the IS/MND's findings with respect to mineral resources impacts. There is no new information, such as new regulations, a change of circumstances, or changes to the project, that would give rise to new significant environmental effects or a substantial increase in the severity of previously identified effects. This analysis does not result in any different conclusions than those reached in the IS/MND related to mineral resources, either on a project-related or cumulative basis. No new mitigation measures are required for the proposed change.

3.13 Noise

IS/MND Conclusions

The IS/MND stated that the approved project would not expose people to potentially significant noise levels that exceed the allowable limits of the General Plan, Noise Ordinance, and other applicable standards, as discussed in the Noise Analysis dated October 4, 2018. The approved project would not generate construction noise that would exceed the standards and would only occur during permitted hours of operation. The project's conformance to the County standards ensures the approved project would not create cumulatively considerable noise impacts because the project would not exceed the local noise standards for noise-sensitive areas. The campsites would have low ambient vibration because the facilities are set back 200 feet from any public road or transit right-of-way. The 200-foot setback ensures the operations do not have any chance of being impacted by groundborne vibration or groundborne noise levels. The approved project would result in increased traffic on local roads and low-intensity onsite activities (e.g., vehicles, camping, equestrian activities, hiking, etc.). Operation of the project would increase the ambient noise level by up to 5.5 decibels (dB) CNEL (Community Noise Equivalent Level and does not involve any uses that may create substantial temporary or periodic increases in ambient noise levels in the project vicinity. The approved project is located in an Airport Land Use Consistency Plan for the NOLF – Imperial Beach. Project implementation is not expected to expose people residing or working in the project area to excessive noise levels in excess of CNEL

60 dBA. The approved project would not expose people residing or working in the project area to excessive airport-related noise on a project or cumulative level.

Revised Project Conclusion

The proposed change involves an option for disposing of sewage from the campground and would include a pumping system and piping to carry sewage from the campground to the proposed septic leach field on Spooner's Mesa. The sewage treatment method would consist of a completely integrated, fully plumbed, engineered textile filter treatment system within an insulated fiberglass tank buried underground at a depth of approximately 7 feet below surface level, with the top of the tank approximately 6 inches above ground. The pump system would be located within the fiberglass tank and buried underground. Because the pump will be fully submerged and located within the tank, it will not create any noise once it is installed and operational. After the sewage is treated on the campground site, the effluent would be piped to an advanced treatment leach field (a subsurface drip irrigation system) located on Spooner's Mesa.

There would be some construction noise associated with work at this site; however, noise generated from these activities would not be greater than what was described in the IS/MND for the approved project. As such, the proposed change would not result in additional impacts on noise beyond those identified in the IS/MND, and the revised project would not change any of the IS/MND's findings with respect to noise impacts. There is no new information, such as new regulations, a change of circumstances, or changes to the project, that would give rise to new significant environmental effects or a substantial increase in the severity of previously identified effects. This analysis does not result in any different conclusions than those reached in the IS/MND related to noise, either on a project-related or cumulative basis. No new mitigation measures are required for the proposed change.

3.14 Population and Housing

IS/MND Conclusions

The approved project would not create any direct or indirect population growth, as the project does not propose any physical or regulatory change that would remove a restriction to or encourage population growth. Therefore, the project would have no impact on population and housing growth either directly or indirectly. The approved project would provide additional camping and equestrian facilities in order to accommodate the existing and planned population. Finally, the approved project would not displace any existing housing because the site is used for open space and recreational purposes. No existing housing is located on the project site.

Revised Project Conclusion

The proposed change would not result in additional impacts on population and housing beyond those identified in the IS/MND. The revised project would not change any of the IS/MND's findings with respect to population and housing impacts. There is no new information, such as new regulations, a change of circumstances, or changes to the project, that would give rise to new significant environmental effects or a substantial increase in the severity of previously identified

effects. This analysis does not result in any different conclusions than those reached in the IS/MND related to population and housing, either on a project-related or cumulative basis. No new mitigation measures are required for the proposed change.

3.15 Public Services

IS/MND Conclusions

The approved project would be used as a campground and educational facility, and its construction is not necessary to maintain acceptable service ratios, response times, or other performance service ratios or objectives for any public services. The approved project would not have an adverse physical effect on the environment because it does not require new or significantly altered services or facilities to be constructed.

Revised Project Conclusion

The proposed change involves an option for disposing of sewage from the campground and would include a pumping system and piping to carry sewage from the campground to the proposed septic leach field on Spooner's Mesa. This project would not result in additional impacts on public services beyond those identified in the IS/MND. The revised project would not change any of the IS/MND's findings with respect to public services impacts. There is no new information, such as new regulations, a change of circumstances, or changes to the project, that would give rise to new significant environmental effects or a substantial increase in the severity of previously identified effects. This analysis does not result in any different conclusions than those reached in the IS/MND related to public services, either on a project-related or cumulative basis. No new mitigation measures are required for the proposed change.

3.16 Recreation

IS/MND Conclusions

The IS/MND for the approved project included a discussion that the project does not propose any residential use that would increase the use of existing or neighborhood and regional parks in the vicinity. The approved project would expand recreational facilities and may include a ropes course, amphitheater, and nature play areas. The expanded facilities would not result in an adverse physical effect on the environment because all related impacts have been mitigated to a level below significance.

Revised Project Conclusion

The proposed change would not result in additional impacts on recreation beyond those identified in the IS/MND. The revised project would not change any of the IS/MND's findings with respect to recreation impacts. There is no new information, such as new regulations, a change of circumstances, or changes to the project, that would give rise to new significant environmental effects or a substantial increase in the severity of previously identified effects. This analysis does not

result in any different conclusions than those reached in the IS/MND related to recreation, either on a project-related or cumulative basis. No new mitigation measures are required for the proposed change.

3.17 Transportation

IS/MND Conclusions

A Transportation Impact Analysis (TIA) was prepared by Chen Ryan to identify vehicular impacts associated with the approved project. The IS/MND concluded that construction of the approved project would require a maximum of approximately 18 vehicles per day. In addition, construction of the water pipeline along Monument Road would require temporary closure of one lane. Due to the low traffic volume, it is not anticipated that the lane closure will result in substandard operations/delays. However, mitigation measures would be implemented to ensure operations and safety are maintained during the closure. Operation of the approved project would not have a significant impact related to a conflict with any performance measures establishing measures of effectiveness of the circulation system. The approved project trips would not result in a substantial increase in the number of vehicle trips, volume of capacity ratio on roads, or congestion at intersections in relation to existing conditions. The approved project would not conflict with travel demand measures or other standards of the congestion management agency. Regarding the protection of airport airspace, the main compatibility concerns are related to airspace obstructions (e.g., building height, antennas, etc.) and hazards to flight. The approved project is located within the NOLF-Imperial Beach Airport Influence Area (AIA) Review Area 2 and requires FAA notification. The approved project would not have a significant impact on air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks. Finally the lack of adequate site distance could substantially increase hazards due to a design feature (i.e., dangerous intersection). The mitigation measure would reduce impacts to a level less than significant.

Revised Project Conclusion

As with the approved project, the revised project would result in no permanent changes that would affect transportation, and no new temporary construction related impacts would occur as compared to the approved project. Therefore, the proposed change would not result in additional impacts on transportation beyond those identified in the IS/MND. The revised project would not change any of the IS/MND's findings with respect to transportation impacts. There is no new information, such as new regulations, a change of circumstances, or changes to the project, that would give rise to new significant environmental effects or a substantial increase in the severity of previously identified effects. This analysis does not result in any different conclusions than those reached in the IS/MND related to transportation, either on a project-related or cumulative basis. No new mitigation measures are required for the proposed change.

3.18 Tribal Cultural Resources

IS/MND Conclusions

Pursuant to AB 52, consultation was initiated with culturally affiliated tribes. Barona Band of Mission Indians, Iipay Nation of Santa Ysabel, Jamul Indian Village, and Viejas Band of Kumeyaay Indians indicated that the project area has cultural significance to their tribes. **MM-TCR-01** would reduce impacts to less than significant.

> **MM-TCR-01: Native American Monitoring.** DPR will retain a Kumeyaay tribal member to monitor all project-related ground disturbance.

Revised Project Conclusion

The proposed change would not result in additional impacts on tribal cultural resources beyond those identified in the IS/MND. The revised project would not change any of the IS/MND's findings with respect to tribal cultural resources impacts. There is no new information, such as new regulations, a change of circumstances, or changes to the project, that would give rise to new significant environmental effects or a substantial increase in the severity of previously identified effects. This analysis does not result in any different conclusions than those reached in the IS/MND related to tribal cultural resources, either on a project-related or cumulative basis. No new mitigation measures are required for the proposed change.

3.19 Utilities and Service Systems

IS/MND Conclusions

The IS/MND for the approved project included a discussion of temporary and operational utilities and service-system impacts. Portable restroom facilities would be provided for construction workers during construction of the approved project. The approved project included an option to treat sewage through an onsite sewer advanced treatment system located adjacent to the restroom and shower facility in the southwestern portion of the campground site. The County of San Diego Department of Environmental Health (DEH) can issue certain onsite wastewater systems (OSWS) permits "to ensure that systems are adequately designed, located, sized, spaced, constructed and maintained." The approved project would comply with the San Diego County Code of Regulatory Ordinances, Title 6, Div. 8, Chapter 3, *Septic Tanks and Seepage Pits*. The approved project would not include new or expanded water or wastewater treatment facilities because the existing facilities have the capacity to support the project.

Revised Project Conclusion

The proposed change involves an option for disposing of sewage from the campground and would include a pumping system and piping to carry sewage from the campground to the proposed septic leach field on Spooner's Mesa. The proposed sewage treatment system would need to comply with the County of San Diego DEH OSWS permits "to ensure that systems are adequately designed, located, sized, spaced, constructed, and maintained." The sewage treatment system would comply with the San Diego County Code of Regulatory Ordinances, Title 6, Div. 8, Chapter 3, *Septic Tanks and*

Seepage Pits. This proposed change would not generate impacts related to demand for increased utilities and service systems and would not result in additional impacts on utilities and service systems beyond those identified in the IS/MND. The revised project would not change any of the IS/MND's findings with respect to utilities and service systems impacts. There is no new information, such as new regulations, a change of circumstances, or changes to the project, that would give rise to new significant environmental effects or a substantial increase in the severity of previously identified effects. This analysis does not result in any different conclusions than those reached in the IS/MND related to utilities and service systems, either on a project-related or cumulative basis. No new mitigation measures are required for the proposed change.

3.20 Wildfire

IS/MND Conclusions

In December 2018, the California Natural Resources Agency adopted a comprehensive update to the state's CEQA Guidelines that incorporates a new category, wildfire impacts, into the Initial Study Checklist. Although the update to the CEQA Guidelines became effective after the approved project's public review period, the hazards section of the IS/MND discusses how the approved project is located within a Very High Fire Hazard Severity Zone (VHFHSZ) and would implement an Operational Area Emergency Plan and Site Evacuation Plan (SEP) for the campground and equestrian facilities to ensure the County staff, visitors, and customers can safely and quickly evacuate in an emergency. The SEP includes plans for fire vehicle access routes and water tank locations. The approved project is also required to comply with the County of San Diego Fire Service Conditions stipulated by the County Fire Services staff. Therefore, based on compliance with the County Uniform Fire Code, the approved project is not anticipated to expose people or structures to significant risk of loss, injury, or death involving hazardous wildland fires.

Revised Project Conclusion

The proposed change involves the option for disposing of sewage and would not impair or interfere with the Operational Area Emergency Plan or the SEP because it would not prohibit subsequent plans from being established or prevent the goals and objectives of the existing plan from being carried out. The sewage facilities would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. The revised project would not change any of the IS/MND's findings with respect to wildfire impacts. There is no new information, such as new regulations, a change of circumstances, or changes to the project, that would give rise to new significant environmental effects or a substantial increase in the severity of previously identified effects. This analysis does not result in any different conclusions than those reached in the IS/MND related to wildfire, either on a project-related or cumulative basis. No new mitigation measures are required for the proposed change.

Chapter 4
Conclusions

The purpose of this Addendum was to address and analyze the environmental effects associated with the change to the approved project that occurred since the adoption of the IS/MND. Based on the foregoing analysis, it is concluded that the analysis conducted, and the conclusions reached in the IS/MND adopted January 30, 2019, remain valid. The proposed change to the project would not cause new significant impacts not identified in the IS/MND, and no new mitigation measures would be necessary to reduce said environmental impacts.

Therefore, no further environmental documentation or review beyond this Addendum is required.

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Chapter 5
References Used in the Completion of the Addendum

All references to federal, state, and local regulation are available on the Internet. For federal regulation refer to http://www4.law.cornell.edu/uscode/. For state regulation refer to www.leginfo.ca.gov. For County regulation refer to www.amlegal.com. All other references are available upon request.

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Appendix A

Spooner's Mesa Septic Project
Biological Resources Report

TIJUANA RIVER VALLEY REGIONAL PARK CAMPGROUND
SPOONER'S MESA SEPTIC PROJECT

BIOLOGICAL RESOURCES REPORT

PREPARED FOR:

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PREPARED BY:

ICF
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San Diego, California 92101

May 2020

ICF. 2020. Tijuana River Valley Regional Park Campground Spooner's Mesa Septic Project Biological Resources Report. Prepared for the County of San Diego, Department of Parks and Recreation. San Diego, CA. May.

Contents

List of Tables

Acronyms and Abbreviations

BMO	Biological Mitigation Ordinance
BRCA	Biological Resource Core Area
CCC	California Coastal Commission
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
City	City of San Diego
CNDDB	California Natural Diversity Data Base
CNPS	California Native Plant Society's
County	County of San Diego
CRPR	California Rare Plant Rank
CSWRCB	California State Water Resources Control Board
CWA	Clean Water Act
DPR	Department of Parks and Recreation
ESL	Environmentally Sensitive Lands
FAC	facultative
FACW	facultative wetland
FESA	Federal Endangered Species Act
FGC	Fish and Game Code
FR	Federal Register
GPS	Global Positioning System
LSA	Lake and Streambed Alteration Program
MBTA	Migratory Bird Treaty Act
MHPA	Multi-Habitat Preservation Area
MSCP	Multiple Species Conservation Program
NCCP	Natural Community Conservation Planning
NHD	national hydrography dataset
NI	no indicator
NO	no occurrence
NPPA	Native Plant Protection Act
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
OBL	obligate
OHWM	ordinary high water mark
Porter-Cologne	Porter-Cologne Water Quality Control Act
proposed project	Monument Road and Spooner's Mesa
RPO	Resource Protection Ordinance

RWQCB	Regional Water Quality Control Board
TRVRP	Tijuana River Valley Regional Park
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WOUS	waters of the U.S.

Executive Summary

The County of San Diego (County) Department of Parks and Recreation (DPR) is proposing the Tijuana River Valley Regional Park (TRVRP) Campground and Education Center Project, Spooner's Mesa Septic project. DPR proposes to develop a portion of the TRVRP, one of the largest parks in the County system, into a campground and education center. As part of this development, DPR proposes to install a sewage tank, pump chamber, and associated piping and electrical conduit in the area of Monument Road and Spooner's Mesa (proposed project).

The phrase *project site* is used in this study to refer to the physical space encompassed by the proposed project elements, including the sewer line, septic tank, and leach field. The biological study area included the area within a 500-foot buffer of the project features on top of Spooner's Mesa and a 100-foot buffer from the sewer line.

The study area is 39.51 acres and supports five vegetation communities/land cover types: disturbed habitat (including bare ground), Diegan coastal sage scrub (including disturbed), Diegan coastal sage scrub (*Baccharis*-dominated), maritime succulent scrub (including disturbed), and urban/developed. Development would occur within lands mapped as developed and disturbed habitat. The sewer line would be positioned within the developed gravel road that climbs Spooner's Mesa from the river valley floor. The leach field would be positioned within disturbed habitat on the top of the mesa. No direct temporary or permanent impacts would occur to sensitive vegetation communities, and no habitat mitigation would be required under the Multiple Species Conservation Program (MSCP). Clearing restrictions, biological monitoring, and Best Management Practices (BMPs), as outlined in **MM-BIO-1** through **MM-BIO-3**, would ensure that no errant impacts occur for sensitive vegetation communities or sensitive species.

Six sensitive plant species were observed within the study area: San Diego sunflower (*Bahiopsis laciniata*), western dichondra (*Dichondra occidentalis*), cliff spurge (*Euphorbia misera*), San Diego barrel cactus (*Ferocactus viridescens*), sea dahlia (*Leptosyne maritima*), and ashy spike moss (*Selaginella cinerascens*). No other plant species were identified as having a high potential to occur in the study area after focused rare plant surveys were conducted in 2019. No sensitive plant species were observed within the proposed project footprint, but sensitive plant species are common in the maritime succulent scrub along the access road/proposed sewer line alignment. No sensitive plant species would be directly impacted by the proposed project. Construction dust deposited on adjacent sensitive plants could have a potentially significant temporary indirect impact. Construction BMPs described in MM-BIO-3 would ensure that temporary indirect impacts to sensitive plant species is kept below a level of significance.

Eight sensitive animal species were observed in or adjacent to the study area in 2019, including California horned lark (*Eremophila alpestris actia*), coastal California gnatcatcher (*Polioptila californica californica*), Cooper's hawk (*Accipiter cooperii*), least Bell's vireo (*Vireo bellii pusillus*), Quino checkerspot butterfly (*Euphydryas editha quino*), northern harrier (*Circus cyaneus*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), and Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*). Seven sensitive animal species were determined to have a high potential to occur within the study area, including Belding's orange-throated whiptail (*Aspidoscelis hyperythra beldingi*), Blainville's horned lizard (*Phrynosoma blainvillii*), coastal tiger whiptail (*Aspidoscelis tigris stejnegeri*), Coronado skink (*Plestiodon skiltonianus interparietalis*),

red diamond rattlesnake (*Crotalus ruber*), turkey vulture (*Cathartes aura*), and white-tailed kite (*Elanus leucurus*).

Restrictions on vegetation clearing during the avian breeding season (**MM-BIO-1**) and biological monitoring (**MM-BIO-2**) would be implemented to ensure that there are no direct impacts on avian species, including raptors, and that no violations would occur pursuant to the Migratory Bird Treaty Act (MBTA) or California Fish and Game Code (FGC) bird protection provisions.

The project was designed to avoid impacts on jurisdictional wetland and water resources regulated by the, the City of San Diego (City), the County, and the California Coastal Commission (CCC). Biological monitoring, as outlined in **MM-BIO-2**, and BMPs, as outlined in **MM-BIO-3**, would ensure that no impacts occur on jurisdictional wetland and water resources. No wetland resources occur onsite that fall under the jurisdiction of U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), or California Department of Fish and Wildlife (CDFW).

The project would not result in significant unmitigated impacts on sensitive biological resources under the California Environmental Quality Act (CEQA).

Chapter 1
Introduction

1.1 Purpose of the Report

The County of San Diego (County) Department of Parks and Recreation (DPR) is proposing the Tijuana River Valley Regional Park (TRVRP) Campground and Education Center Project, Spooner's Mesa Septic project. DPR proposes to develop a portion of the TRVRP, one of the largest parks in the County system, into a campground and education center. As part of this development, DPR proposes to install a sewage tank, pump chamber, and associated piping and electrical conduit in the area of Monument Road and Spooner's Mesa (proposed project). This Biological Resources Report documents the biological resources present around the proposed project, identifies impacts on biological resources resulting from the proposed project, and recommends measures to avoid, minimize, and mitigate significant impacts consistent with federal, state, and local regulations. The baseline environmental conditions, regulatory setting, and project description/identification of impacts herein provide the County DPR, resource agencies, including the U.S. Fish and Wildlife Service (USFWS), and California Department of Fish and Wildlife (CDFW), and the public with sufficient information to adequately review the proposed project under the stipulations of the California Environmental Quality Act (CEQA). Furthermore, the environmental conditions described herein have been used to demonstrate compliance with other federal, state, and local regulations, such as the federal Clean Water Act (CWA) and state Lake and Streambed Alteration Program (LSA), among others. The surveys and report were conducted and prepared in conformance with the County of San Diego Report Format and Content Requirements (2010a) and Guidelines for Determining Significance Biological Resources (2010b).

1.2 Project Location and Description

The Tijuana River Valley is in southwestern San Diego County, east of Border Field State Park, and just north of the United States–Mexico border. The Tijuana River, which bisects the Tijuana River Valley Regional Park, flows from Mexico and drains into the Pacific Ocean. The park encompasses approximately 1,800 acres, of which the County owns 1,552.

The location of the proposed project consists of a paved access road that runs up the north side of Spooner's Mesa and crosses three parcels (APNs 662-020-12-00, 663-010-49-00, 663-010-48-00). Also included is the northwestern quarter of a single parcel at the top of Spooner's Mesa (APN 663-010-51-00). The proposed project is located just east of Border Field State Park approximately 1.60 miles east of the Pacific Ocean (Figures 1 and 2).

The phrase *project site* is used in this study to refer to the physical space encompassed by the proposed project elements, including the sewer line, septic tank, and leach field. The biological study area included the area within a 500-foot buffer of the project features on top of Spooner's Mesa and a 100-foot buffer from the sewer line. The study area did not include project features situated within disturbed habitat or developed areas within the TRVRP campground site.

\\PDCITRDSGIS1\Projects_1\County_of_San_Diego\DPRIMSA_557765\TO22_TRVRP_SpoonersMesa\Figures\DocSpecies\CAGN_15DayUFig01_Regional.mxd User: 10542 Date: 4/5/2019

Figure 1
Regional Location
TRVRP Campground Spooner's Mesa Septic

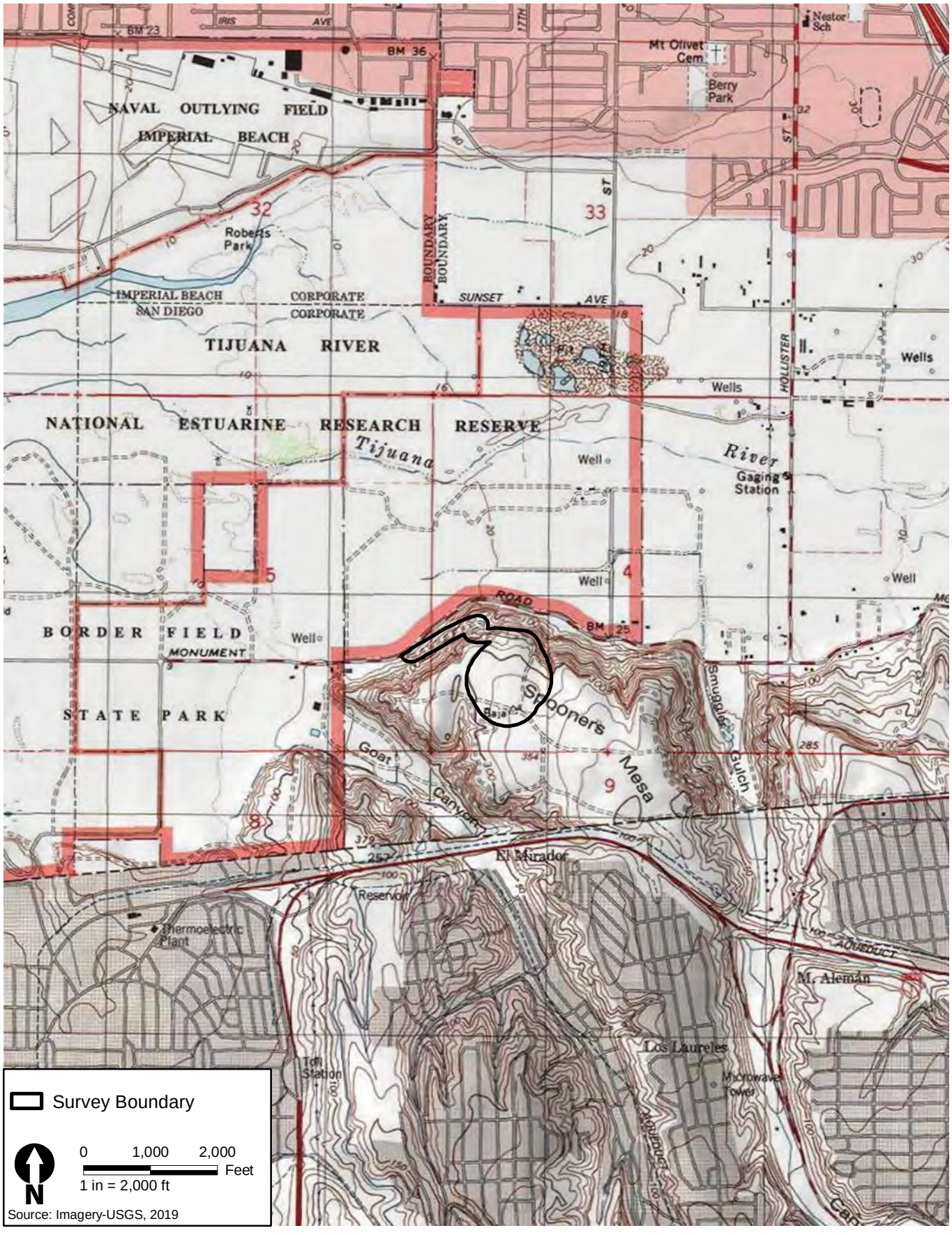


Figure 2
Project Vicinity
TRVRP Campground Spooner's Mesa Septic

The proposed project will include the installation of a 3,000-gallon sewage septic tank and pump chamber on Spooner's Mesa. The proposed project is composed of the installation of the septic tank and pump, as well as the installation of approximately 3,300 feet of effluent transport piping and electrical conduit. The piping and conduit will be installed approximately 2 to 3 feet below the ground surface from Monument Road up to Spooner's Mesa, within the shoulder of an existing County-owned access road. The proposed project will also include a 32,000-square-foot leach field composed of an approximately 15,876-square-foot primary drip tube system and 15,876 square feet set aside for a reserve system. The drip tube will be buried 1 foot below ground surface.

The proposed project, located immediately south of the campground, will serve as an option for disposing of sewage from the campground. The proposed project will include a pumping system and piping to carry sewage from the campground to the proposed septic leach field on the mesa. The top of the system will be a minimum of 2 feet below ground surface and have risers to access and maintain the tank.

Representative photos of the study area are included as Appendix A.

1.3 Survey Methods

1.3.1 Literature and Records Search

Prior to field surveys, a literature and records search was conducted to establish the existence or potential occurrence of sensitive biological resources (e.g., plant or animal species) or water resources on or within the vicinity of the study area.

The following databases/resources were reviewed:

- CDFW California Natural Diversity Data Base (CNDDB) (CDFW 2019)
- California Native Plant Society's (CNPS) Online Inventory of Rare and Endangered Plants, 8th Edition (CNPS 2019)
- San Diego Plant Atlas (San Diego Natural History Museum 2019)
- USFWS Carlsbad Fish and Wildlife Office species occurrence data (CFWO 2018)
- SanBIOS sensitive species sightings (SANDAG 2017)
- National Wetlands Inventory (NWI) database (USFWS 2019)

For the purposes of this report, species are considered to be sensitive or have special status if they meet at least one of the following criteria:

- Species listed or proposed for listing as threatened or endangered under the Federal Endangered Species Act (FESA) (Code of Federal Regulations [CFR], Title 50, Section 17.12 [listed plants]), 50 CFR 17.11 (listed animals), and various notices in the Federal Register (FR) (proposed species);
- Species that are candidates for possible future listing as threatened or endangered under the FESA;

- Species listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act (CESA) (14 California Code of Regulations [CCR] 670.5);
- Plant species listed as rare under the California Native Plant Protection Act (NPPA (Fish and Game Code [FGC] Section 1900, et seq.);
- Species that meet the definitions of *rare* or *endangered* under CEQA (CEQA Guidelines Sections 15380 and 15125);
- Animal species of special concern to the CDFW;
- Animals that are fully protected in California (FGC Sections 3511 [birds], 4700 [mammals], 5050 [amphibians and reptiles], and 5515 [fish]);
- Species listed as having a California Rare Plant Rank (CRPR) of 1A (presumed extinct in California), 1B (rare, threatened, and endangered in California and elsewhere), or 2 (rare, threatened, or endangered in California, but more common elsewhere). CRPR List 1A, 1B, and 2 species are considered special-status plant species as defined in the NPPA, FGC Section 1901, or CESA, FGC Sections 2050 through 2098; or
- Species considered CRPR List 3 (plants for which more information is needed [a review list]), or List 4 (plants of limited distribution [watch list]) (CNPS 2019). Many CRPR List 3 and List 4 species may not meet the definitions of special status as defined in the NPPA, FGC Section 1901, or the CESA, FGC Sections 2050 through 2098, but are strongly recommended for consideration under CEQA (CNPS 2001).

1.3.2 Survey Methodology

The results of the literature review were refined through habitat assessments and focused surveys for these species and resources. Field surveys were conducted by ICF biologists in January through May 2019. Table 1 provides a summary of all of the biological surveys and assessments conducted within the study area.

Table 1. TRVRP Campground Spooner's Mesa Septic Project Biological Surveys

Date	Survey Activity	Survey Personnel
1/18/2019	Habitat Assessment	Linnea Spears-Lebrun, Kelsey Dix
3/18/2019	Jurisdictional Delineation	Meris Guerrero
3/18/2019	Vegetation Mapping, Rare Plant Survey	Shawn Johnston, Kelsey Dix
5/8/2019	California Gnatcatcher Survey	Brian Lohstroh*
5/15/2019	California Gnatcatcher Survey	Brian Lohstroh*
5/16/2019	Rare Plant – Reference Population Check	Shawn Johnston
5/21/2019	Rare Plant Survey	Kelsey Dix, Camilla Estes
5/23/2019	California Gnatcatcher Survey	Brian Lohstroh*

*= Permitted individual, USFWS Permit TE-063608-6

1.3.2.1 Vegetation Mapping and Floral Inventory

The study area for plants and vegetation included a 100-foot buffer around the proposed septic line and 500-foot buffer around the leach fields. Vegetation mapping within the study area was conducted on March 18, 2019, by walking meandering transects and recording observations from selected vantage points that allowed 100-percent visual coverage of the study area. Vegetation mapping was conducted pursuant to County of San Diego Guidelines (County of San Diego 2010).

Vegetation communities were classified based on the dominant and characteristic plant species, in accordance with the Holland classification system (1986), as modified by Oberbauer et al. (2008). Vegetation mapping was completed with Apple iPad Air devices using the ESRI Collector application. Digital aerial imagery for the study area was loaded into ESRI Collector, which allowed for the digital mapping of vegetation polygons over aerial imagery in the field.

All plants observed within the study area were identified to the species level (including subspecies or variety, as applicable) using *The Jepson Manual Vascular Plants of California,* 2nd Edition (Baldwin et al. 2012) and recorded in a species compendium. Plant common names followed the *Checklist of The Vascular Plants of San Diego County Fifth Edition* (Rebman and Simpson 2014) if the common names were not provided in Baldwin et al. (2012).

1.3.3 Jurisdictional Wetland Delineation

ICF wetland specialist Meris Guerrero conducted a jurisdictional delineation within the study area (i.e., 100-foot buffer surrounding the proposed sewer line and 500-feet around the proposed leach fields) on March 18, 2019. Prior to beginning the field delineation, aerial photography, U.S. Geological Survey (USGS) topographic maps, the national hydrography dataset (NHD), and the National Wetland Inventory (NWI) map were analyzed to determine the locations of potential waters of the U.S. (WOUS) and State, CDFW jurisdiction, and City of San Diego (City))/California Coastal Commission (CCC)/County wetlands. Based on the pre-field analysis, it was determined that there was a potential for jurisdictional features to occur within the delineation area.

The delineation area was analyzed for potential non-wetland and wetland jurisdictional features. While in the field, potential jurisdictional features were recorded on an Apple iPad using ESRI Collector software and on a Trimble hand-held GeoXH Global Positioning System (GPS) unit with sub-meter accuracy.

Potential non-wetland features were evaluated for the presence of a definable channel. Lateral limits of non-wetland waters were identified using field indicators (e.g., ordinary high water mark [OHWM] or top of bank) pursuant to *A Field Guide to the Identification of the Ordinary High Water Mark in the Arid West Region of the Western United States: A Determination Manual* (USACE 2008b) and CDFW standard practice. Potential wetland features were evaluated for the presence of hydrophytic vegetation, hydric soils, and wetland hydrology using the methodology set forth in the 1987 *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory 1987) and the *2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008a). The following three criteria are evaluated to identify an area as a wetland feature: (1) a predominance of hydrophytic vegetation; (2) the presence of hydric soils; and (3) the presence of wetland hydrology. Details of the application of these techniques are provided below.

- **Hydrophytic Vegetation:** The hydrophytic vegetation criterion is satisfied at a location if greater than 50 percent of all the dominant species present within the vegetation unit have a wetland indicator status of obligate (OBL), facultative wetland (FACW), or facultative (FAC) (Environmental Laboratory 1987). An OBL indicator status refers to plants that almost always occur in wetlands under natural conditions. A FACW indicator status refers to plants that usually occur in wetlands, but are occasionally found elsewhere. A FAC indicator status refers to plants that are equally likely to occur in wetlands or elsewhere. A No Indicator (NI) status designates that insufficient information was available to determine an indicator status. A No Occurrence (NO status indicates that the species does not occur in the region; when a plant with a NO status is found within a region, it usually indicates that the plant is ornamental. The wetland indicator status used for this report follows the National Wetland Plant List (Lichvar et al. 2016).
- **Hydric Soils:** The definition of 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 (USDA/NRCS 1994). This determination is made based on various field indicators detailed in the *Arid West Supplement and the Field Indicators of Hydric Soils in the United States* (Version 8.0) (USDA/NRCS 2016).
- **Wetland Hydrology:** Wetland hydrology is determined using indicators of inundation or saturation (flooding, ponding, or tidally influenced) detailed in the *Wetland Delineation Manual* (Environmental Laboratory 1987) and the Arid West Supplement (USACE 2008a). Vascular plants were identified using *The Jepson Manual: Vascular Plants of California* (Baldwin et al. 2012).

The U.S. Army Corps of Engineers (USACE) and Regional Water Quality Control Board (RWQCB) regulate WOUS, including wetlands, under the authority of Sections 404 and 401, respectively, of the CWA. USACE defines *wetlands* as areas that are dominated by hydrophytic plant species, exhibit wetland hydrology, and have hydric soils. Areas that do not meet these criteria, but exhibit a defined channel, are considered non-wetland WOUS. The jurisdiction typically extends across the OHWM of these features. Under the Porter-Cologne Water Quality Control Act (Porter-Cologne), the RWQCB regulates waters of the State, which include not only the same features regulated as WOUS, but also isolated wetlands and other waters that are not jurisdictional under the CWA. CDFW takes jurisdiction over lakes, rivers, and streams under Section 1600 et seq. of the FGC. CDFW jurisdiction includes the bed, channel, and bank and typically extends to the top of bank of these features. CDFW jurisdiction also includes areas beneath a riparian canopy, as these areas can affect regulated fish and wildlife resources, even if the canopy areas are well away from the stream channel (such as in riparian areas). CCC jurisdiction includes wetlands and other coastal waters located within the

coastal zone. The Coastal Act, Section 30121 defines CCC wetland, which is an area with sufficient hydrology to support hydric soils or hydrophytic vegetation. The City, under the Environmentally Sensitive Lands (ESL) regulation, defines wetlands as areas that have naturally occurring wetland vegetation, as well as areas that have hydric soils or wetland hydrology, but lack wetland vegetation because of human activities. Finally, The County, through the Resource Protection Ordinance (RPO), restricts impacts on County wetlands for certain project types. The RPO defines wetlands as features with any of the following: wetland vegetation, hydrophytic soils, or certain streams with non-soil substrates. CCC, City ESL, and County RPO wetland boundaries are delineated based on the presence of either hydrophytic vegetation or hydric soils. The project site does not contain any USACE, RWQCB, CCC, City ESL, or County RPO wetlands.

A total of five OHWM transects were taken in the delineation area. USACE OHWM data forms, included in Appendix B, were completed for each transect in the field. No USACE Arid West wetland data forms were taken as site conditions did not warrant them.

1.3.4 Sensitive Plant Species Surveys

Focused sensitive plant species surveys were performed within the study area on March 18 and May 21, 2019 (see Table 1, above). Surveys were conducted in accordance with survey protocols set forth by *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants* (USFWS 2000), *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFG 2009), and *CNPS Botanical Survey Guidelines* (CNPS 2001).

All plants observed within the study area were identified to species (including subspecies or variety, as applicable) using *The Jepson Manual Vascular Plants of California, 2nd Edition* (Baldwin et al. 2012) and recorded in a species compendium. Plant common names followed the *Checklist of the Vascular Plants of San Diego County, 5th Edition* (Rebman and Simpson 2014) if the common names were not provided in Baldwin et al. (2012).

The locations of special-status plants were mapped with ESRI Collector software on an Apple iPad and uploaded to ArcGIS Online. Subsequent to the field survey, data were brought into GIS for analysis.

A list of plant species observed is provided as Appendix C. Sensitive plant species were evaluated for their probability of occurring within the study area, presented as Appendix D.

Otay tarplant (*Deinandra conjugens*) is a federally endangered annual plant that occurs on clay soils in southwestern San Diego County. Prior to the late-season rare plant survey on May 23, 2019, ICF botanist Shawn Johnston utilized a reference population of Otay tarplant in eastern Chula Vista on May 16, 2019, to check the phenology and confirm that the local population was in bloom.

1.3.5 California Gnatcatcher Surveys

Surveys for coastal California gnatcatcher were conducted following the Coastal California Gnatcatcher (*Polioptila californica californica*) Presence/Absence Survey Guidelines (USFWS 1997). The survey protocol to determine presence/absence of coastal California gnatcatcher requires that the surveyor have a federal 10(A)1(a) permit. In the period from May 8 through May 23, 2019, Brian Lohstroh (USFWS permit TE-063608-6) performed three focused surveys for coastal California

gnatcatcher in all potentially suitable habitat (see Table 1, above). Incidental observations in the adjacent suitable habitat were also recorded.

Three surveys were conducted at least 1 week apart, between 6:00 a.m. and 12:00 p.m. Surveys were not conducted during periods of excessive or abnormal heat, wind, rain, fog, or other inclement weather. Methods included slowly walking through the vegetation and making frequent stops to listen and play recorded coastal California gnatcatcher vocalizations. During each visit, the recorded vocalization was broadcast at least once in all potential habitat at distance intervals of approximately 23 to 30 meters (75 to 100 feet).

A list of animal species observed during 2019 surveys is provided as Appendix E. Sensitive animal species were evaluated for their probability of occurring within the study area; the results table is presented as Appendix E. The California gnatcatcher survey report (ICF 2019) is included as Appendix F.

1.3.6 Habitat Assessments for Other Highly Sensitive Species

Quino Checkerspot Butterfly

Quino checkerspot butterfly (*Euphydryas editha quino*) is a federally endangered and County Group I butterfly that occurs in San Diego and Riverside Counties in association with its larval host plants, including as dot-seed plantain (*Plantago erecta*) and purple owl's clover (*Castilleja exserta*). This site is outside of the USFWS Recommended Quino Survey Area (USFWS 2014), therefore focused surveys were not conducted for this species.

Burrowing Owl

Western burrowing owl (*Athene cunicularia hypugaea*) is a California Species of Special Concern and a County Group I animal species. A small fossorial owl that nests in burrows of ground squirrels, the Burrowing owl is declining as a breeding species throughout San Diego County, but known to nest at the Naval Outlying Landing Field in Imperial Beach.

A habitat assessment was conducted in the study area for burrowing owl on January 18, 2019. The study area was walked and inspected for the presence of California ground squirrel (*Otospermophilus beecheyi*) and burrows of ground squirrel or other fossorial mammals.

No ground squirrel, burrows or other potential breeding habitat were observed within the study area, so no breeding season surveys were conducted for burrowing owl.

San Diego Fairy Shrimp

San Diego fairy shrimp (*Branchinecta sandiegonensis*) are a federally endangered and County Group I freshwater crustacean that occurs in vernal pools, road ruts, and other seasonally inundated basins in San Diego County. San Diego fairy shrimp lay resting eggs (cysts) that can lay dormant in the soil for years. A portion of the cysts will hatch during appropriate inundation, and adults will mature in a few weeks, adding more cysts to the habitat. Cysts may be moved between basins by natural means, such as waterfowl, and very frequently by anthropogenic means, such as mud on vehicle tires.

A habitat assessment was conducted for fairy shrimp on January 18, 2019, when the study area was inspected for any potential habitat: none was observed within the study area. Spooner's Mesa has a

gently rolling topography different from the very flat mesas common in coastal San Diego County, which makes natural vernal pool presence unlikely. No Mima-mound topography was observed within the study area, nor were any vernal pools.

San Diego fairy shrimp often occur in road ruts in dirt roads, which are often heavily compacted and hold water at least as well as natural vernal pools. The site was assessed in January 2019, in the middle of an extremely wet winter, which would make for good visibility of any potential ephemeral basins. No road ruts were observed in the study area.

1.4 Environmental Setting (Existing Conditions)

1.4.1 Regional Context

The proposed project is situated on Spooner's Mesa, along the western edge of the TRVRP campground, south of Monument Road, in southwestern San Diego County. The proposed project is located east of Border Field State Park, approximately 1.6 miles east of the coast, and just north of the U.S. border with Mexico (Figure 1). Elevations range from 24 to 335 feet above mean sea level. The project area is depicted within Township 18 South, Range 1 West, in an area not sectioned, of the Otay Mesa, California, USGS 7.5-minute quadrangle map (Figure 2).

The proposed project is located on County-owned and -managed land within the City of San Diego municipal boundaries. The proposed project site is within the area covered by the San Diego Multiple Species Conservation Program (MSCP)(County 1997). The project is within City of San Diego Multi-Habitat Preservation Area (MHPA)(Figure 3), which qualifies as a Biological Resource Core Area (BRCA) as defined in the Biological Mitigation Ordinance (BMO)(County 2010c).

Soils within the study area include Carlsbad gravelly loamy sand, 2 to 5 percent slopes, and terrace escarpments (Figure 4). No hydric or sensitive soils are present on site (USDA/NRCS 2011). The Carlsbad soil series can be associated with vernal pools, as this soil type is known to have a weakly cemented hardpan (Bauder and McMillan 1996). The terrain of the top of Spooner's Mesa is composed of gently rolling hills with 2 to 5 percent slopes that are not conducive to pool formation. This area has previously existed as farmland and no Mima-mound or other vernal pool topography exists.

1.4.2 Habitat Types/Vegetation Communities

The study area includes 39.51 acres and supports five vegetation communities/land cover types: disturbed habitat (including bare ground), Diegan coastal sage scrub (including disturbed), Diegan coastal sage scrub (*Baccharis*-dominated), maritime succulent scrub (including disturbed), and urban/developed (Figure 5; Table 2). Vegetation communities were described and assigned numerical codes according to the Holland classification system (1986), as modified by Oberbauer et al. (2008).

The proposed project area was previously legally disturbed for agricultural activities. Some native vegetation communities mapped within the study area were considered "disturbed" mainly because of low cover of native species compared to typical expressions of those vegetation communities. These communities are treated similarly to their undisturbed counterparts with respect to habitat value for species and preference for avoidance.

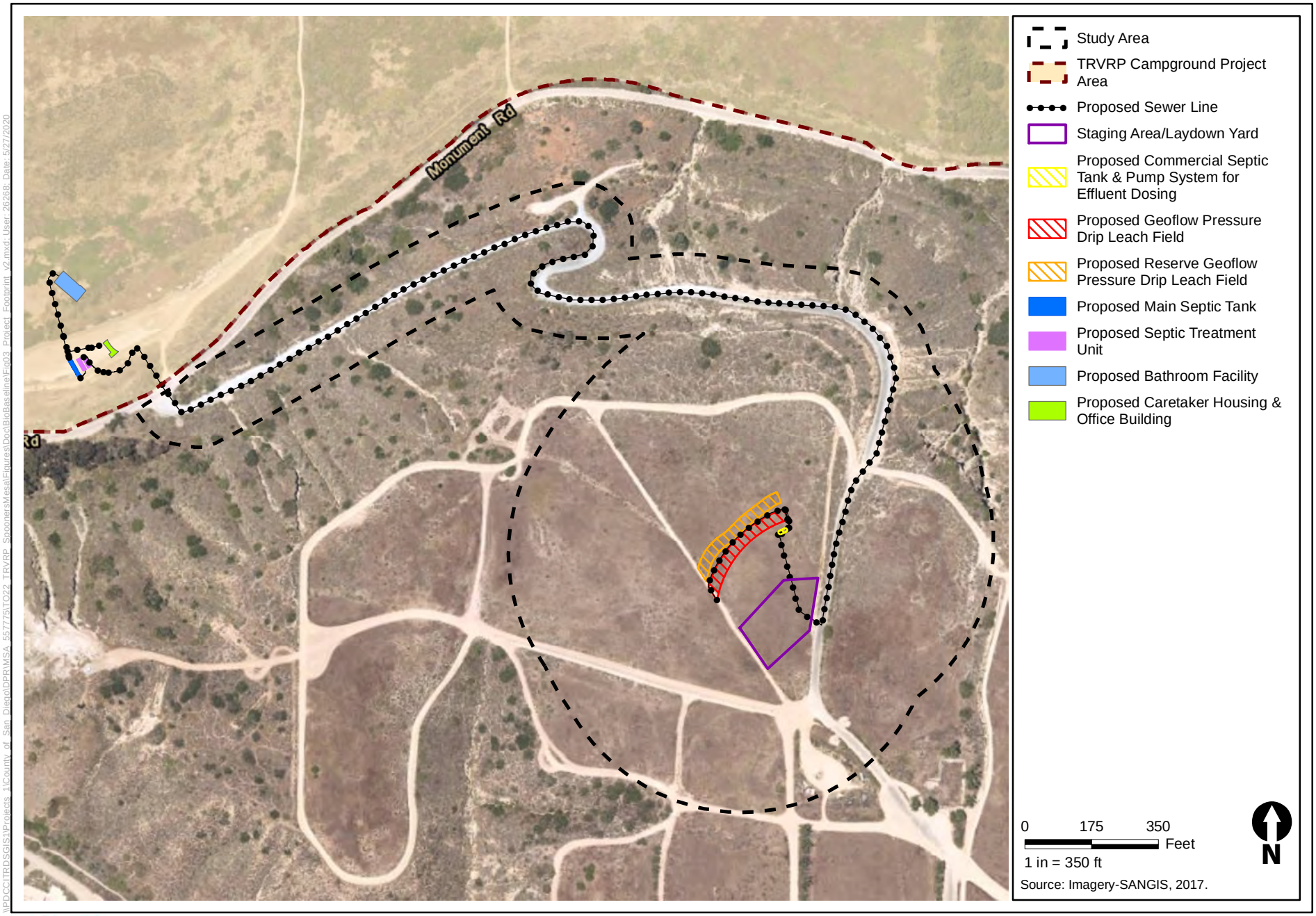


Figure 3
Project Footprint
TRVRP Campground Spooner's Mesa Septic

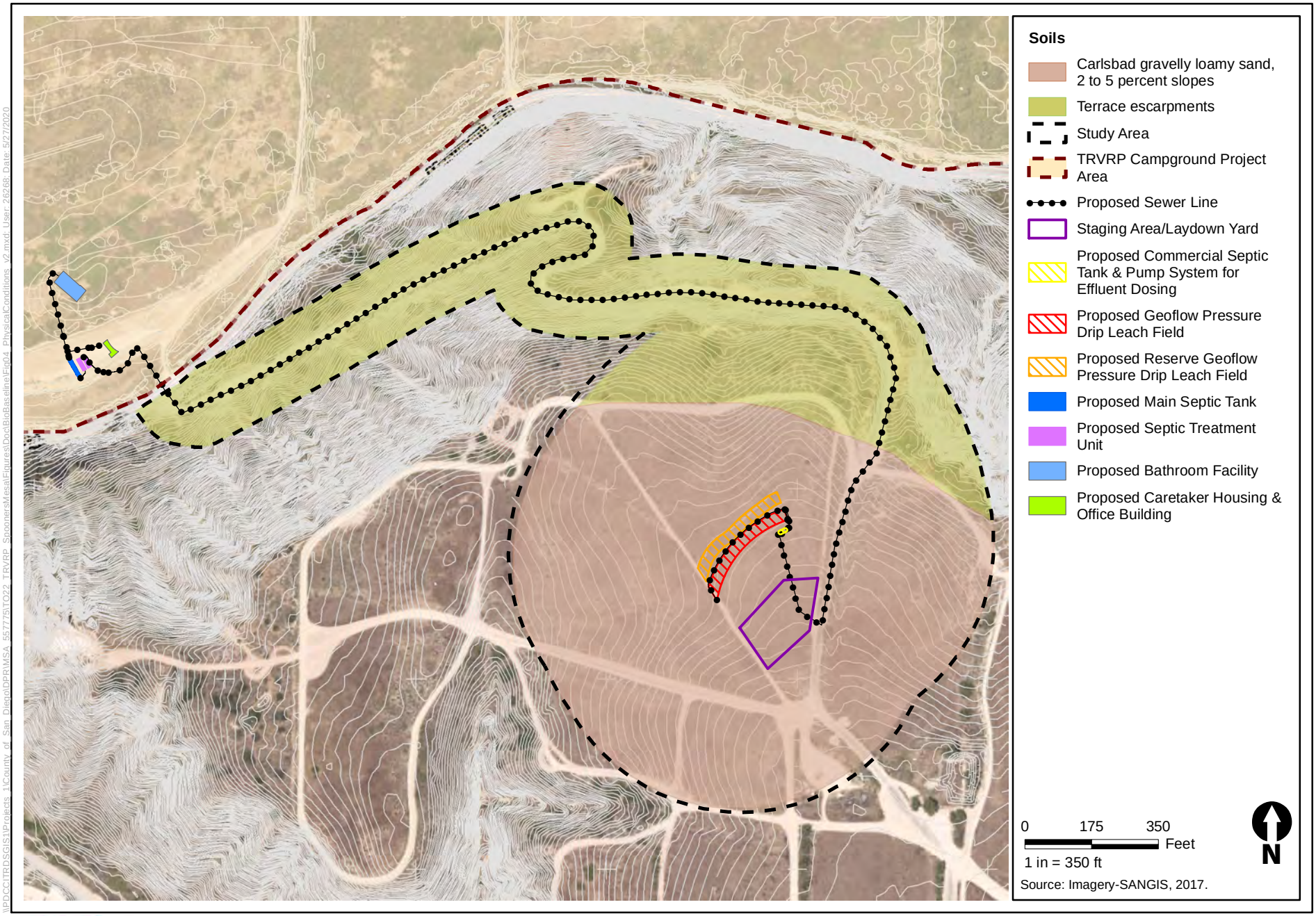


Figure 4
Physical Conditions
TRVRP Campground Spooner's Mesa Septic

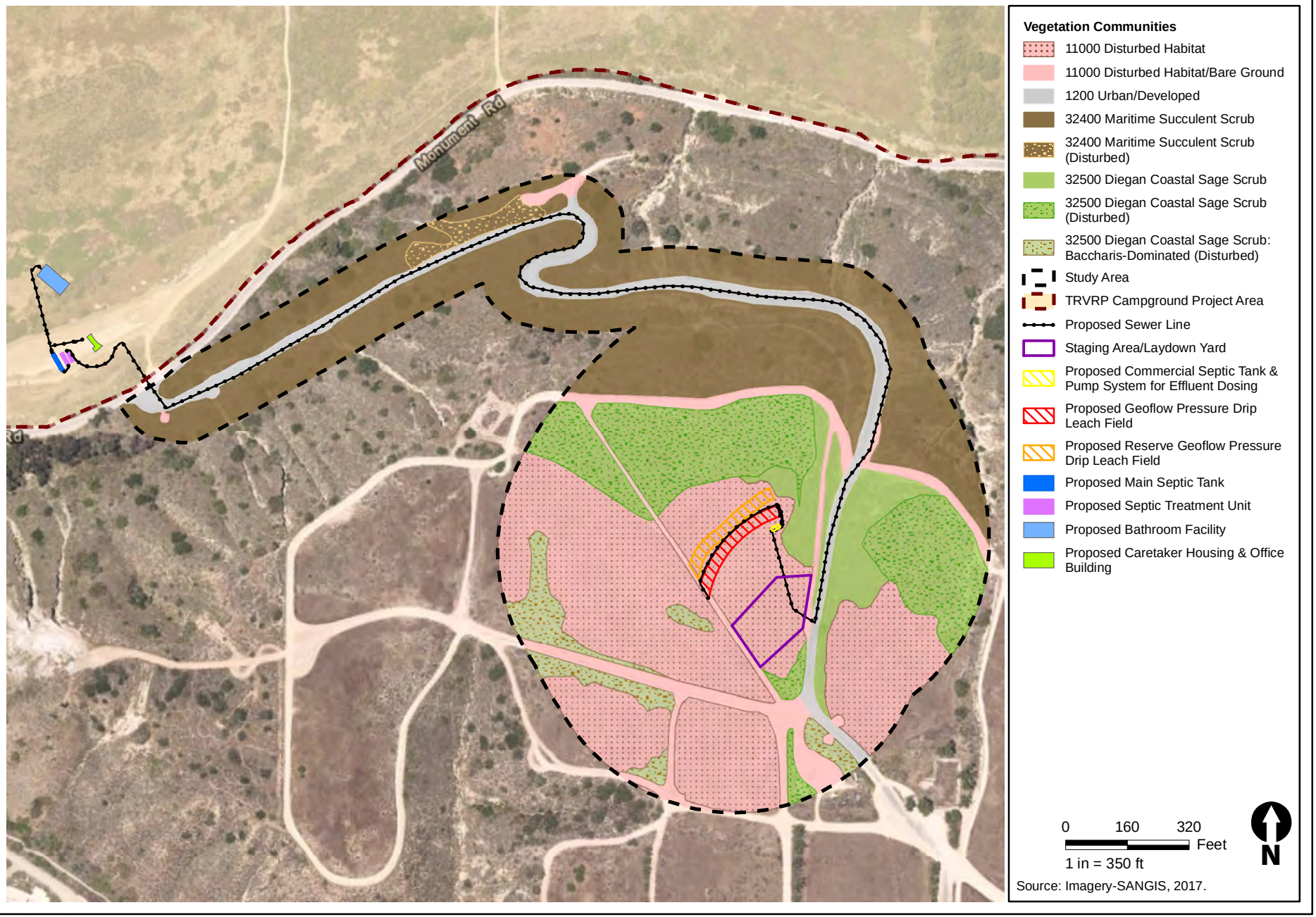


Figure 5
Vegetation Communities
TRVRP Campground Spooner's Mesa Septic

Table 2. Vegetation Communities Occurring within the Study Area

Vegetation Community (Holland Code)	Area (acres)
Disturbed Habitat (11000)	12.14
Disturbed Habitat/Bare Ground (11000)	2.66
Diegan Coastal Sage Scrub (32500)	2.08
Diegan Coastal Sage Scrub – Disturbed (32500)	5.39
Diegan Coastal Sage Scrub (Baccharis-dominated) (32530)	1.38
Maritime Succulent Scrub (32400)	12.86
Maritime Succulent Scrub – Disturbed (32400)	0.41
Urban/Developed (12000)	2.59
Total*	39.51

*= sum of values do not equal site total because of rounding

1.4.2.1 Disturbed Habitat: 11000

Disturbed habitat is characterized as areas dominated by nonnative weedy species adapted to a regime of frequent human disturbance. Many of the characteristic species of this habitat are also indicator species of annual grasslands, although disturbed areas tend to be dominated more by forbs than grasses. Characteristic species may include black mustard (*Brassica nigra*), tocalote (*Centaurea melitensis*), Italian thistle (*Carduus pycnocephalus*), bristly ox-tongue (*Helminthotheca echioides*), and milk thistle (*Silybum marianum*). Dirt roads, cleared areas, and cut-wood stockpiles are included in disturbed habitat for this survey (Oberbauer et al. 2008).

The disturbed habitat on site was generally dominated by nonnative herbaceous species, including crown daisy (*Glebionis coronaria*), red-stemmed filaree (*Erodium cicutarium*), and black mustard.

Areas mapped as disturbed habitat/bare ground were composed of dirt roads kept free of vegetation by vehicular movement through the area.

1.4.2.2 Diegan Coastal Sage Scrub: 32500

Diegan coastal sage scrub is a low, soft-woody community of shrubs most active in the winter and early spring. Many species are facultatively drought-deciduous, and the dominant species may vary by soil type, slope, and aspect. This habitat is most commonly dominated by California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), laurel sumac (*Malosma laurina*), black sage (*Salvia mellifera*), white sage (*Salvia apiana*), and lemonade berry (*Rhus integrifolia*). This vegetation community is primarily constrained to the drier coastal slope, areas that have experience high pressure from urban and agricultural development. Many species associated with this community have become rarer because of these development pressures.

Areas mapped as Diegan coastal sage scrub included land dominated by California sagebrush, California buckwheat, deerweed (*Acmispon glaber*) lemonadeberry, coast bladderpod (*Peritoma arborea* ssp*. arborea*), California encelia (*Encelia californica*), and laurel sumac.

Areas mapped as Diegan coastal sage scrub – disturbed include open areas dominated by deerweed, California encelia, and African crown daisy or by California sagebrush, California buckwheat, and

coyote brush (*Baccharis pilularis*), all with high cover of invasive nonnative annual grasses and perennials.

1.4.2.3 Diegan Coastal Sage Scrub (*Baccharis*-dominated): 32530

Diegan coastal sage scrub may be dominated by a variety of species depending on soil type, slope, and aspect. Diegan coastal sage scrub (*Baccharis*-dominated) is dominated by baccharis (*Baccharis* spp.). This community is typically found in areas of Diegan coastal sage scrub that have suffered deep disturbance of the soils. Other species that may be found within Diegan coastal sage scrub include California sagebrush, California buckwheat, laurel sumac, black sage, white sage, and lemonade berry.

Areas mapped as Diegan coastal sage scrub (*Baccharis*-dominated) within the study area consisted of open stands dominated by coyote bush and California buckwheat, with invasive nonnative weeds present between the shrubs.

1.4.2.4 Maritime Succulent Scrub: 32400

Maritime succulent scrub is a low, open scrub community dominated by a mixture of succulent, drought-deciduous species that may also occur within sage scrub communities. This vegetation community typically occurs on thin, sandy, or rocky soils on steep slopes of coastal headlands and bluffs. Maritime succulent scrub is restricted to within a few miles of the coast, from approximately Torrey Pines to Baja California, Mexico, and also occurs on San Clemente and Catalina islands. The dominant species found within this community typically include San Diego barrel cactus (*Ferocactus viridescens*), golden-spined cereus (*Bergerocactus emoryi*), prickly pear cactus (*Opuntia littoralis*), cliff spurge (*Euphorbia misera*), dudleya (*Dudleya* spp.), California box-thorn (*Lycium californicum*), and California encelia (Beauchamp 1986).

Within the study area, maritime succulent scrub was dominated by California sagebrush, California buckwheat, and coast bladderpod, with characteristic species of maritime succulent scrub scattered within, including sea dahlia, San Diego viguiera (*Bahiopsis laciniata*), jojoba (*Simmondsia chinensis*), and cliff spurge.

Areas mapped as maritime succulent scrub – disturbed had high proportions of nonnative species, such as African daisy, but still exhibited the characteristic species of maritime succulent scrub.

1.4.2.5 Urban/Developed: 12000

Developed areas include areas that have been constructed upon or otherwise physically altered to an extent that native vegetation is no longer supported. These areas are characterized by permanent or semi-permanent structures, pavement, or hardscape, and landscaped areas that require irrigation. Areas where no natural land is evident because of a large amount of debris or other materials placed upon it may also be considered urban/developed (e.g., car recycling plant, quarry) (Oberbauer et al. 2008).

Urban/developed land within the study area consisted of the wide, heavily compacted gravel road.

1.4.3 Flora

Overall, 151 plant species were observed within the study area during the field surveys, including 100 native and 51 nonnative species. These include species characteristic of Diegan coastal sage scrub and maritime succulent scrub, as well as invasive nonnative grasses and forbs common in coastal San Diego County. All vascular plant species observed are listed in Appendix C.

1.4.4 Fauna

Several wildlife species commonly associated with the habitat types identified within the study area and parcel were observed. Overall, two reptile, 31 bird, and three mammal species were observed or otherwise detected in the study area during the field surveys listed in Table 1. All wildlife species observed or detected are listed in Appendix E.

1.4.4.1 Reptiles

Two species of reptile were detected within the study area: western fence lizard (*Sceloporus occidentalis*) and side-blotched lizard (*Uta stansburiana*). Plant communities and associated site characteristics in the study area offer basking, refuge, and foraging habitat for reptiles.

1.4.4.2 Birds

Thirty-one bird species were observed or detected within the study area, including birds typical of scrub and riparian vegetation communities. Year-round residents include California gnatcatcher, California towhee (*Melozone crissalis*), and Bewick's wren (*Thryomanes bewickii*).

1.4.4.3 Mammals

Three mammal species were detected within the study area: Botta's pocket gopher (*Thomomys bottae*), desert cottontail (*Sylvilagus audubonii*), and San Diego black-tailed jackrabbit (*Lepus californica bennettii*). No California ground squirrels were observed within the study area.

1.4.5 Sensitive Plant Species

No federally listed endangered or threatened plant species were observed, but six sensitive plant species were mapped within the study area (Figure 6). Two other sensitive plant species were mapped in the vicinity, during surveys in 2018, but were not observed within the study area: golden-spined cereus and California box-thorn (ICF 2018; Figure 6). The CNDDB search identified 83 sensitive plant species that occur within the USGS 7.5-minute Imperial Beach quad map and surrounding four USGS quads: Point Loma, National City, Jamul Mountains, and Otay Mesa. All 83 sensitive plant species identified were evaluated for their potential to occur within the study area and are discussed in Appendix C. No sensitive plant species were observed within the project area during the rare plant focused surveys (Figure 6).

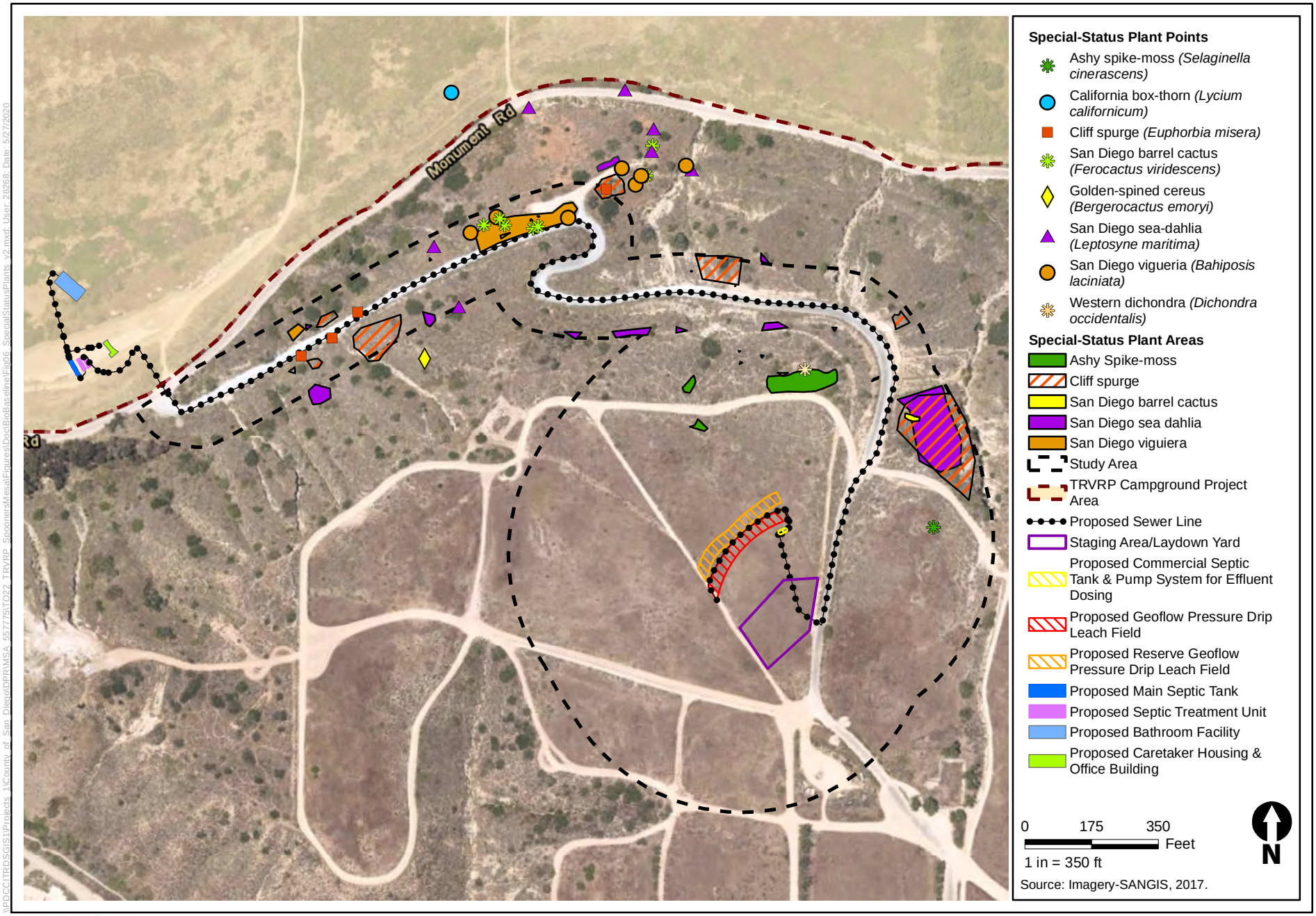


Figure 6
Special-Status Plants
TRVRP Campground Spooner's Mesa Septic

1.4.5.1 Sensitive Plant Species Observed

San Diego Viguiera (*Bahiopsis laciniata*)

CRPR 4.2, County List D

San Diego viguiera (formerly *Viguiera laciniata*) is hairy, resinous, semi-deciduous shrub in the Asteraceae (sunflower) family that occurs from San Diego County to northwestern Mexico in chaparral and coastal sage scrub up to 800 meters. The glandular, mostly alternate leaves have lance-shaped blades, up to 5 centimeters long, that are shiny with resin and have smooth or shallowly toothed edges that are sometimes rolled under or crinkled. The shrub produces large quantities of inflorescences of a solitary sunflower flower head with many golden-yellow ray florets up to 1 centimeter long. The bloom is from January to June, and the fruit is an achene tipped with a pappus.

San Diego viguiera is present at scattered locations within maritime succulent scrub within the study area (Figure 6). No San Diego viguiera was observed within the project area.

Western Dichondra (*Dichondra occidentalis*)

CRPR 4.2, County List D

Western dichondra is a small, cryptic perennial herb in the Convolvulaceae (morning glory) family that often occurs under shrubs within chaparral and Diegan coastal sage scrub habitat.

One location was observed within the study area (Figure 6).

Cliff Spurge (*Euphorbia misera*)

CRPR 4.2, County List D

Cliff spurge is a low-growing shrub in the Euphorbiaceae (spurge) family that primarily occurs within maritime succulent scrub. In San Diego, it is concentrated in southwestern San Diego County, but is also known in several occurrences within Orange County and on San Clemente Island (Reiser 2001).

Cliff spurge was observed near the access road and scattered locations within maritime succulent scrub within the study area (Figure 6). No cliff spurge was observed within the project area.

San Diego Barrel Cactus (*Ferocactus viridescens*)

CRPR 2B.1, County List B, MSCP Covered Species

San Diego barrel cactus is a small succulent in the Cactaceae (cactus) family that is found in rocky, gravelly loams or clay loam soils from southern California to northern Baja California, Mexico, in rocky coastal bluffs, coastal chaparral, and shrub hillsides at elevations up to 450 meters. This pale-green, ribbed cactus is spherical or nearly cylindrical, often wider than tall, and less than 30 centimeters in height. The ribs are covered in arrays of long spine clusters that are red when new and gray or tan when older. The yellow-to-greenish flowers, which bloom in spring to early summer, have red or pink scales with yellow stigma lobes. The fruit is yellow or red with pitted seeds approximately 2 millimeters long.

San Diego barrel cactus occurs in scattered locations in the maritime succulent scrub in the study area (Figure 6). No San Diego barrel cacti were observed within the project area during focused surveys during 2019.

San Diego Sea Dahlia (*Leptosyne maritima*)

CRPR 2B.2, County List B

San Diego sea dahlia is a perennial species with semi-succulent leaves in the Asteraceae (sunflower) family. It produces showy sunflowers in March to May. It primarily occurs within sandstone cliffs near the ocean, and it occurs throughout coastal San Diego County. This species may be declining based on habitat loss, herbivory, and displacement by weedy nonnative species in pioneering areas.

San Diego sea dahlia was observed scattered throughout the maritime succulent scrub within the study area (Figure 6), occurring on terrace escarpment sandstone soils. San Diego sea dahlia was not observed within the project area.

Ashy Spike-moss (*Selaginella cinerascens*)

CRPR 4.1, County List D

Ashy spike-moss is a creeping perennial herb typically found in undisturbed soils in chaparral and Diegan coastal sage scrub (Reiser 2001). Its range is primarily restricted to coastal San Diego County.

This species is found on undisturbed soils in Maritime succulent scrub and Diegan coastal sage scrub within the study area.

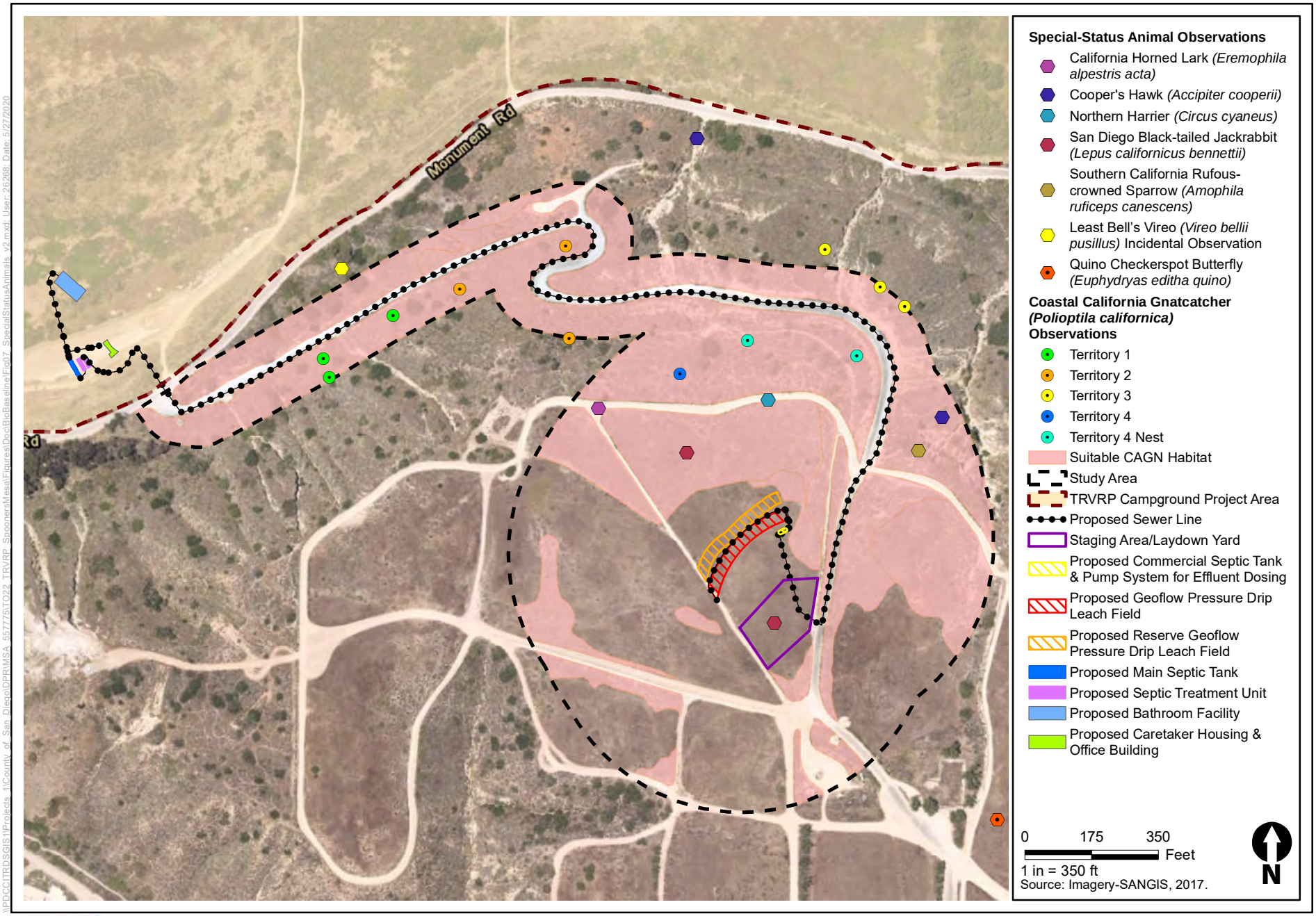
1.4.5.2 Sensitive Plant Species with High Potential to Occur

No other sensitive plant species were determined to have a high potential to occur in the study area (Appendix D).

While other sensitive plants are known to be present in the vicinity in maritime succulent scrub in the San Ysidro area, including golden-spined cereus, California boxthorn, snake cholla (*Cylindropuntia californica* var. *californica*), San Diego bur-sage (*Ambrosia chenopodiifolia*), and Shaw's agave (*Agave shawii*), these species are all conspicuous perennial or large succulent species and would be readily observable year-round and expected to have been observed during rare plant surveys in 2019. These locally common sensitive plant species were therefore determined to have less than a high potential to occur within the study area.

1.4.6 Sensitive Animal Species

Eight sensitive animal species were observed or detected during surveys in 2019. Two federally or state-listed threatened or endangered animal species were observed during field surveys, including coastal California gnatcatcher (Appendix G) and least Bell's vireo (Figure 7). Additionally, Quino checkerspot butterfly was reported outside the study area in April 2019, in a nearby habitat restoration area. Four other sensitive avian species were observed: California horned lark (*Eremophila alpestris actia*), Cooper's hawk (*Accipiter cooperii*), northern harrier (*Circus cyaneus*), and southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*). One sensitive mammal species was observed: San Diego black-tailed jackrabbit (*Lepus californicus bennettii*).



\\PDOGITRDSGIS1\Projects_1\County of San Diego\DPRMSA_557765\TO22_TRVRP_SpoonersMesa\Figures\Doc\BioBaselineFig07_SpecialStatusAnimals_v2.mxd User: 26268 Date: 6/27/2020

Figure 7
Special-Status Animals
TRVRP Campground Spooner's Mesa Septic

1.4.6.1 Sensitive Animal Species Observed

California Horned Lark (*Eremophila alpestris actia*)

California Watch List, County Group II

California horned lark is a CDFW Watch List and a County Group II species. A year-round resident of the coastal strand, grasslands, and sandy desert floors, California horned lark walks through open ground, foraging for insects and seed. It primarily nests in areas where disturbance has created openings in vegetation (Unitt 2004). This species is primarily non-migratory in San Diego County, but may gather into flocks in the winter. This species was observed foraging on dirt roads within the study area (Figure 7).

Coastal California Gnatcatcher (*Polioptila californica californica*)

Federally Threatened, California Species of Special Concern, San Diego County Group I, MSCP Covered Species

Coastal California gnatcatcher is a small resident songbird primarily restricted to coastal sage scrub. During the 2019 surveys, coastal California gnatcatchers were detected during each of the three visits. The study area was determined to support at least four breeding territories of coastal California gnatcatcher during the protocol surveys, three of which supported active family groups with adults tending to fledglings or juveniles during all three protocol surveys. The fourth coastal California gnatcatcher territory supported an actively nesting pair, with one nest failing over the course of the first two surveys and a second nesting attempt confirmed on the third survey visit. Locations of the territories are depicted on Figure 7. The survey report is included as Appendix G.

Cooper's Hawk (*Accipiter cooperii*)

California Watch List, San Diego County Group I, MSCP Covered Species

Cooper's hawk is a resident of riparian deciduous habitats and oak woodlands, but in recent times it has become adapted to urban park environments (Unitt 2004). Cooper's hawks hunt passerine birds, their primary source of food, in broken woodlands and forest margins, and they are also known to take fish and mammals. The Cooper's hawk population declined because of hunting and loss of habitat; however, this species is making a comeback through its adaptation to the urban environment (Unitt 2004). Cooper's hawk was observed foraging over the study area (Figure 7), but no suitable tree-nesting habitat was present.

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

Federally Endangered, California Endangered, San Diego County Group I, MSCP Narrow Endemic

Least Bell's vireo is a migratory songbird that generally arrives in San Diego County in March and April and leaves by August to September. It is highly restricted to willow and mule fat scrubs and riparian woodlands (Unitt 2004).

In 2019, least Bell's vireo was incidentally observed on the lower slopes of Spooner's Mesa, outside of the study area, near Monument Road (Figure 7). Surveys conducted for this species for the TRVRP campground in 2018 found it as a breeding species within suitable habitat, primarily in riparian scrub habitat to the west of the TRVRP campground site (ICF 2018). Least Bell's vireo is not expected to nest in the succulent scrub habitat within the study area.

Quino Checkerspot Butterfly (*Euphydryas editha quino*)

Federally Endangered, San Diego County Group I

Quino checkerspot butterfly was observed in a nearby restoration site during April 2019. The restoration site is outside of the study area for the proposed project, but included large amounts of dot-seed plantain, a larval host plant for Quino checkerspot butterfly. Dot-seed plantain was observed in low density within maritime succulent scrub in the study area. No host plants were observed within the proposed project area. The proposed project does not contain suitable larval area for this species.

Northern Harrier (*Circus cyaneus*)

California Species of Special Concern, San Diego County Group I, MSCP Covered Species

Northern harrier, considered a breeding resident and migrant species, is most closely associated with open grassland and marshes. This species typically forages in open, undisturbed habitat and nests on the ground in areas of dense low-growing vegetation to help conceal the nest. Nesting harriers are now considered rare, and the known breeding population in San Diego County was estimated at 25 to 75 pairs in 2004 (Unitt 2004). As with other ground-nesting grassland birds, the northern harrier population is on the decline because of urban sprawl (Unitt 2004). The study area provides suitable breeding and foraging habitat for northern harrier, and Northern harriers were observed foraging there in 2019 (Figure 7).

San Diego Black-Tailed Jackrabbit (*Lepus californicus bennettii*)

California Species of Special Concern; San Diego County Group II

Black-tailed jackrabbits are habitat generalists (Howard 1995) that prefer open areas with sparse vegetation and scattered cacti and shrubs (Best 1996). Black-tailed jackrabbits require shrubs for hiding, nesting, and thermal cover (Howard 1995). They are common in deserts, grasslands, and agricultural areas (Jameson and Peeters 2004) and can also occur in oak woodlands, pinyon-juniper woodlands, and low- to mid-elevation conifer forests (Howard 1995). In areas with high density of chamise chaparral, jackrabbits prefer openings interspersed with grasses and tend not to occupy closed-canopy chaparral (Howard 1995).

Black-tailed jackrabbits breed year-round. Reproduction is generally dependent on the availability of food (Jameson and Peeters 2004). They can have up to four litters of one to eight young in a year and are strictly vegetarian and opportunistic foragers. Black-tailed jackrabbits prefer grasses and forbs, but will eat any kind of vegetation. Diet will change during the seasons as forage availability changes, shifting from foraging on grasses and forbs to woody perennials during dry periods (Lightfoot et al. 2010). They will also forage on agricultural plants when available (Best 1996). This species was observed utilizing the open habitats atop Spooner's Mesa (Figure 7).

Southern California Rufous-crowned Sparrow (*Aimophila ruficeps canescens*)

California Watch List; San Diego County Group II, MSCP Covered Species

The southern California rufous-crowned sparrow is a resident species that is closely associated with coastal sage scrub, steep rocky hillsides, burned chaparral, and openings in mature chaparral (Unitt 2004). Preferring open habitat with approximately 50 percent shrub cover, this species seeks cover in shrubs, rocks, grass, and forb patches (Unitt 2004). The southern California subspecies is

restricted to semiarid coastal sage scrub and sparse chaparral, from Santa Barbara south to the northwestern corner of Baja California. Southern California rufous-crowned sparrows are declining due to loss of appropriate habitat and their sensitivity to habitat fragmentation (Unitt 2004). Southern California rufous-crowned sparrows were incidentally detected in Diegan coastal sage scrub within the slopes of Spooner's Mesa (Figure 7).

1.4.6.2 Sensitive Animal Species with High Potential to Occur

Five sensitive reptile and two bird species were evaluated to have high potential to occur within the study area. These primarily represent locally common reptile species with limited distributions and raptor species impacted by loss of habitat. Although focused surveys were not conducted to determine the presence/absence of these species, there is a reasonable assumption that these species will periodically to frequently utilize the habitats within the study area because of the suitability of the habitat and the local distribution of these species.

Reptiles

Belding's Orange-throated Whiptail (*Aspidoscelis hyperythra beldingi*)

California Watch List; San Diego County Group II, MSCP Covered Species

Belding's orange-throated whiptail occurs in low-elevation coastal scrub, chamise-redshank chaparral, mixed chaparral, and valley-foothill hardwood habitats (Zeiner et al. 1988). Belding's orange-throated whiptail occurs in Orange, Riverside, and San Diego Counties, west of the crest of the Peninsular Ranges, and in southwestern San Bernardino County, near Colton. It extends up to 3,410 feet above mean sea level (Zeiner et al. 1988). Belding's orange-throated whiptails forage on the ground and scratch through surface debris for food. Their diet consists of a variety of small arthropods, especially termites. Belding's orange-throated whiptails likely lay eggs in loose, well-aerated soil under or near surface objects or at the base of dense shrubs (Zeiner et al. 1988). Although this species was not observed during the 2019 surveys, it has high potential to occur in all the natural habitats within the study area.

Blainville's Horned Lizard (*Phrynosoma blainvillii*)

California Species of Special Concern; San Diego County Group II, MSCP Covered Species

The range of the Blainville's (coast/San Diego) horned lizard extends from the Sacramento Valley south to San Diego County, including the Coast, Transverse, and Peninsular Ranges below 4,000 feet. Blainville's horned lizards are found in a wide variety of vegetation communities, from grasslands and shrublands to woodlands, including open coniferous forests. Critical factors are the presence of loose soils with a high sand fraction, an abundance of native ants or other insects, especially harvester ants (*Pogonomyrmex* spp.), and the availability of both sunny basking spots and dense cover for refuge. The species apparently does not eat the introduced Argentine ant (*Linepithema humile*) (Jennings and Hayes 1994). Although this species was not observed during the 2019 surveys, it has high potential to occur in the scrub communities within the study area.

Coastal Tiger Whiptail (*Aspidoscelis tigris stejnegeri*)

California Species of Special Concern, San Diego County Group II

Coastal tiger whiptail is a medium-sized slender lizard that is found in arid and semiarid desert to open woodlands, where the vegetation is sparse, which makes running easy (Stebbins 2003). Its range includes coastal southern California and western Baja California. The decline of coastal tiger

whiptails is likely linked to loss of habitat to agriculture and urban development. Although this species was not observed during the 2019 surveys, it has high potential to occur in all the natural habitats within the study area.

Coronado Skink (*Plestiodon skiltonianus interparietalis*)

California Species of Special Concern, San Diego County Group II

The Coronado skink is a medium-sized secretive lizard typically found in the moister areas of coastal sage, chaparral, oak woodlands, pinyon-juniper, riparian woodlands, and pine forests (Jennings and Hayes 1994). Its prey includes small invertebrates found in leaf litter or dense vegetation at the edges of rocks and logs. The Coronado skink is found along the coastal plain and Peninsular Ranges west of the deserts, from approximately San Gorgonio Pass in Riverside County south to San Quentin, Mexico (Jennings and Hayes 1994). Although this species was not observed during the 2019 surveys, it has high potential to occur in the scrub communities within the study area.

Red Diamond Rattlesnake (*Crotalus ruber*)

California Species of Special Concern; San Diego County Group II

The red diamond rattlesnake is a heavy-bodied rattlesnake with a tan, pink, brick-red, or reddish dorsal color with a tail that is marked with broad, evenly spaced, distinct black rings. Its range extends from near Morongo Valley (San Bernardino County), south along the coast and desert sides of the Peninsular Range, to Loreto, Baja California. It is found in a variety of habitats, although it is generally associated with habitats with thick brush and large rocks or boulders. Typical habitats include chamise and redshank habitats, as well as coastal sage scrub and desert slope scrub. Its elevation range extends from sea level to around 5,000 feet above mean sea level. Mating occurs in the early spring, and it bears live young between late July and September (Jennings and Hayes 1994). Although this species was not observed during the 2019 surveys, it has high potential to occur in the scrub communities within the study area.

Birds

Turkey Vulture (*Cathartes aura*)

San Diego County Group I

Turkey vultures are often seen foraging over woodlands and nearby open country (Unitt 2004). They prefer dry, open country and ranch lands, and they often occur along roadsides, where carrion is common, and nest in crevices among granite boulders (Unitt 2004). Turkey vulture range has been retracting from the coast because of human disturbance, loss of foraging habitat, and pesticide contamination (Unitt 2004). Turkey vultures were observed foraging over the adjacent TRVRP campground site in July 2018 (ICF 2018), but no suitable nesting habitat for this species is present within the study area.

White-Tailed Kite (*Elanus leucurus*)

CDFW Fully Protected Species; San Diego County Group I

White-tailed kite is found in lower elevations in open grasslands, agricultural areas, wetlands, and oak woodlands. Its primary source of food is the California vole (*Microtus californicus sanctidiegi*) (Unitt 2004). It typically forages in open, undisturbed habitats and nests in the top of dense oaks, willows, or other large trees (Unitt 2004). The white-tailed kite population is on the decline, mostly due to habitat loss associated with urban sprawl; however, this species is still considered fairly widespread throughout the foothills of San Diego County (Unitt 2004). A white-tailed kite was

observed foraging over the adjacent TRVRP campground site during the 2018 surveys (ICF 2018). Suitable nesting habitat for this species was present in large shrubs within the maritime succulent scrub within the study area.

1.4.7 Wetlands/Jurisdictional Waters

Based on the field delineation, the study area supports several ephemeral streams (e.g., potentially jurisdictional waters) that are regulated by the USACE, RWQCB, and CDFW. Additionally, numerous non-jurisdictional features including erosional features, swales, and road-side ditches were also mapped throughout the study area. A total of 11 features that are potentially jurisdictional WOUS. and CDFW jurisdictional streambed were identified and delineated within the boundaries of the study area. Table 3 summarizes the mapped jurisdictional features. Figures depicting the various features mapped in the study area are provided Figure 8 and representative photographs of the potentially jurisdictional wetlands are provided in Appendix H. USACE OHWM delineation data forms were completed for each sampling point in the field and are included in Appendix B.

A total of 11 non-wetland ephemeral streams, with total area of 0.211 acre (2,873 linear feet) of non-wetland WOUS. and 0.362 acre (2,873 linear feet) of CDFW jurisdictional streambed were delineated in the study area. All of the ephemeral streams within the study area originate near the top of the mesa, have a native surface bed and channel, and are primarily unvegetated. OHWM and TOB widths are generally less than 8 feet and 12 feet respectively. These streams do not carry water from groundwater sources; rather, all flows arise from precipitation and typically only carry flows during and immediately after rain events (e.g., a few days or weeks). All streams flow north to Monument Road and then sheet flow over the road before entering the property to the north.

Additionally, numerous potential steam channels were investigated throughout the study area and determined to not be jurisdictional WOUS and/or waters of the State subject to USACE or RWQCB; or lakes, rivers, or streambeds subject to CDFW jurisdiction. Features determined to not be jurisdictional were either strictly road-side ditches that do not divert or replace a natural stream channel, erosional features, not associated with a lake, river, or streambed; or swales that lacked identifiable OHWM indicators or TOB features.

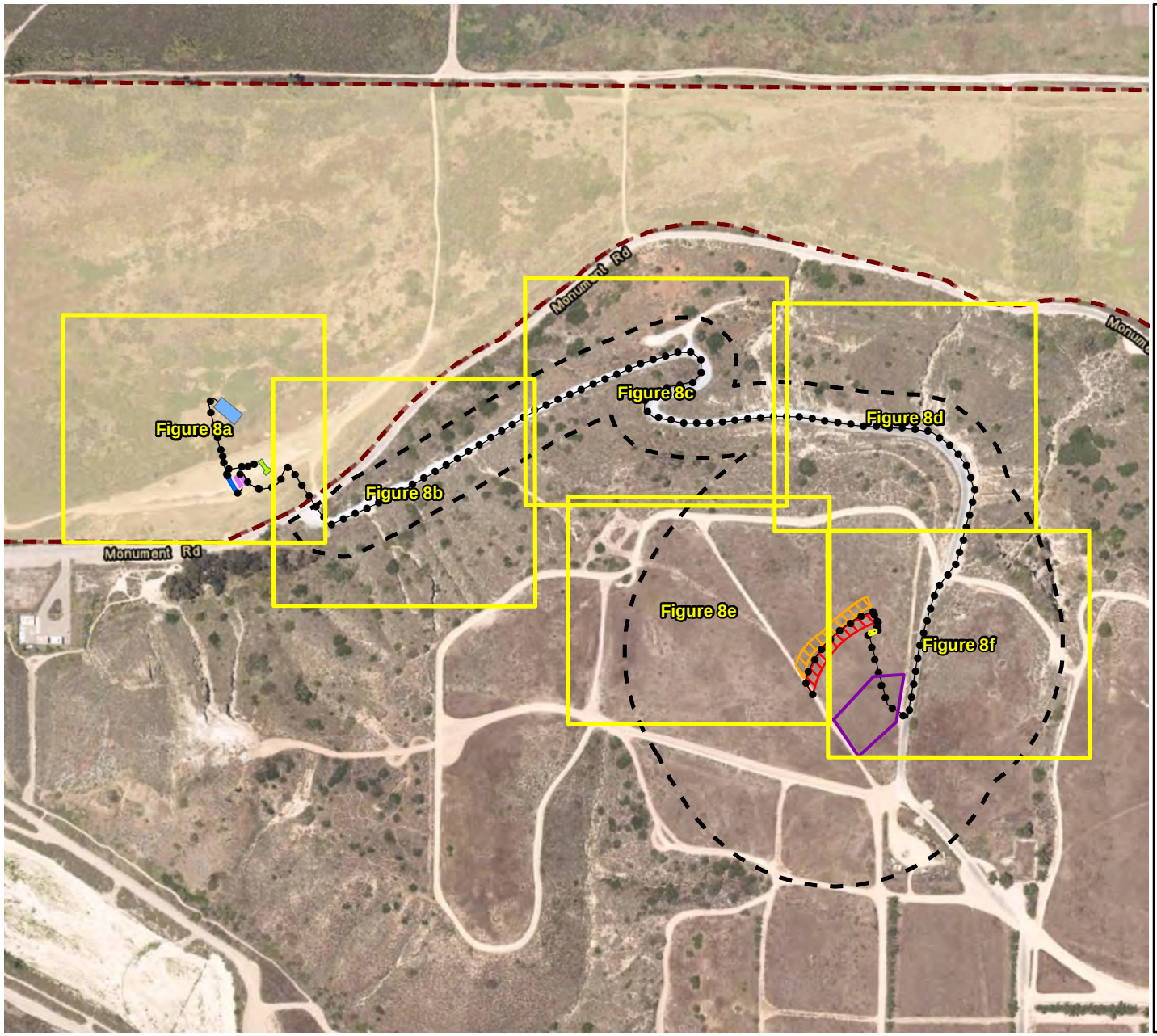


Figure Extent
Study Area
TRVRP Campground Project Area
Proposed Sewer Line
Staging Area/Laydown Yard
Proposed Commercial Septic Tank & Pump System for Effluent Dosing
Proposed Geoflow Pressure Drip Leach Field
Proposed Reserve Geoflow Pressure Drip Leach Field
Proposed Main Septic Tank
Proposed Septic Treatment Unit
Proposed Bathroom Facility
Proposed Caretaker Housing & Office Building

0 175 350
Feet
1 in = 450 ft

N

Source: Imagery-SANGIS, 2017.

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Figure 8 - Index Map
Jurisdictional Resources
TRVRP Campground Spooner's Mesa Septic

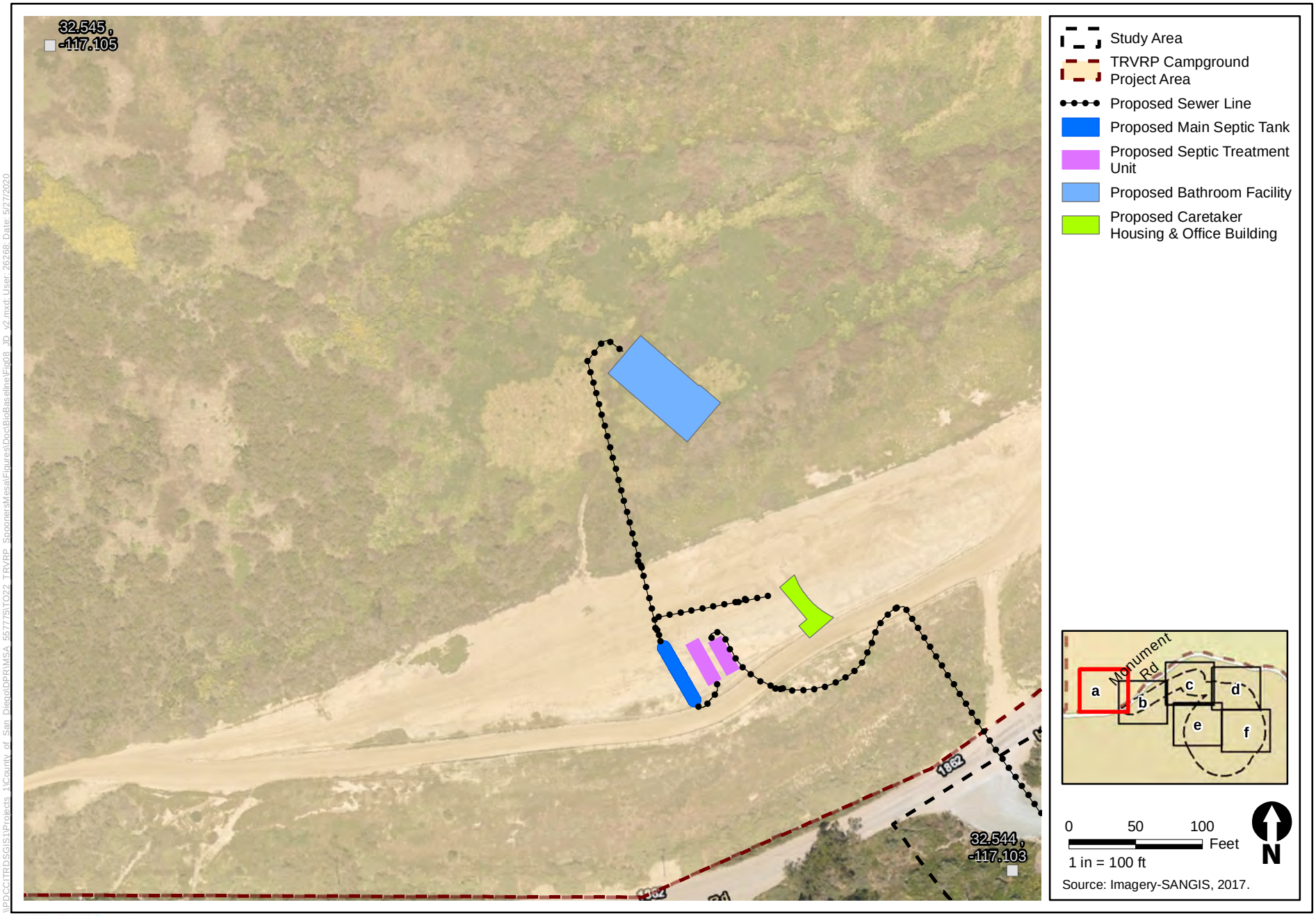

Figure 8a
Jurisdictional Resources
TRVRP Campground Spooner's Mesa Septic

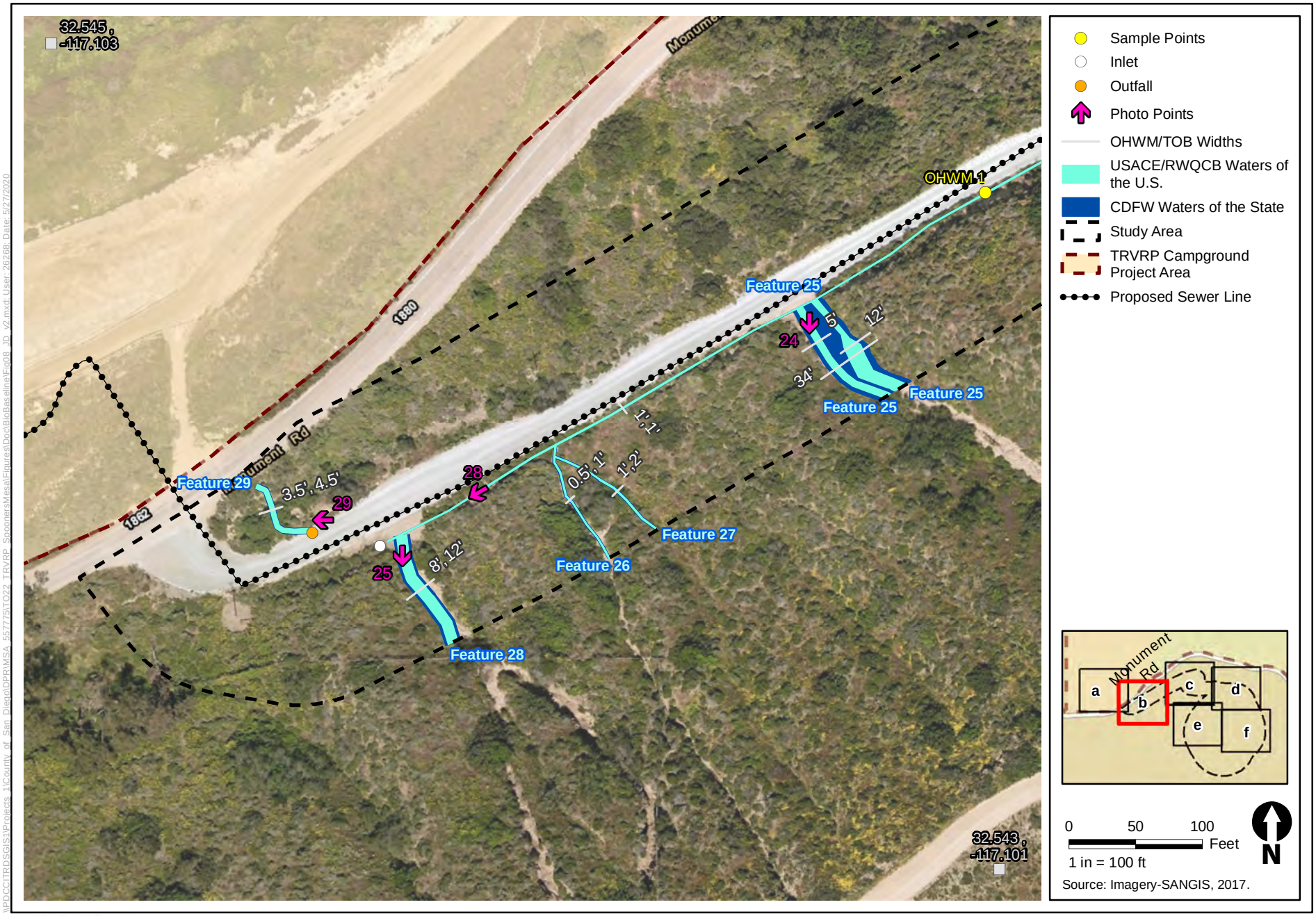

Figure 8b
Jurisdictional Resources
TRVRP Campground Spooner's Mesa Septic

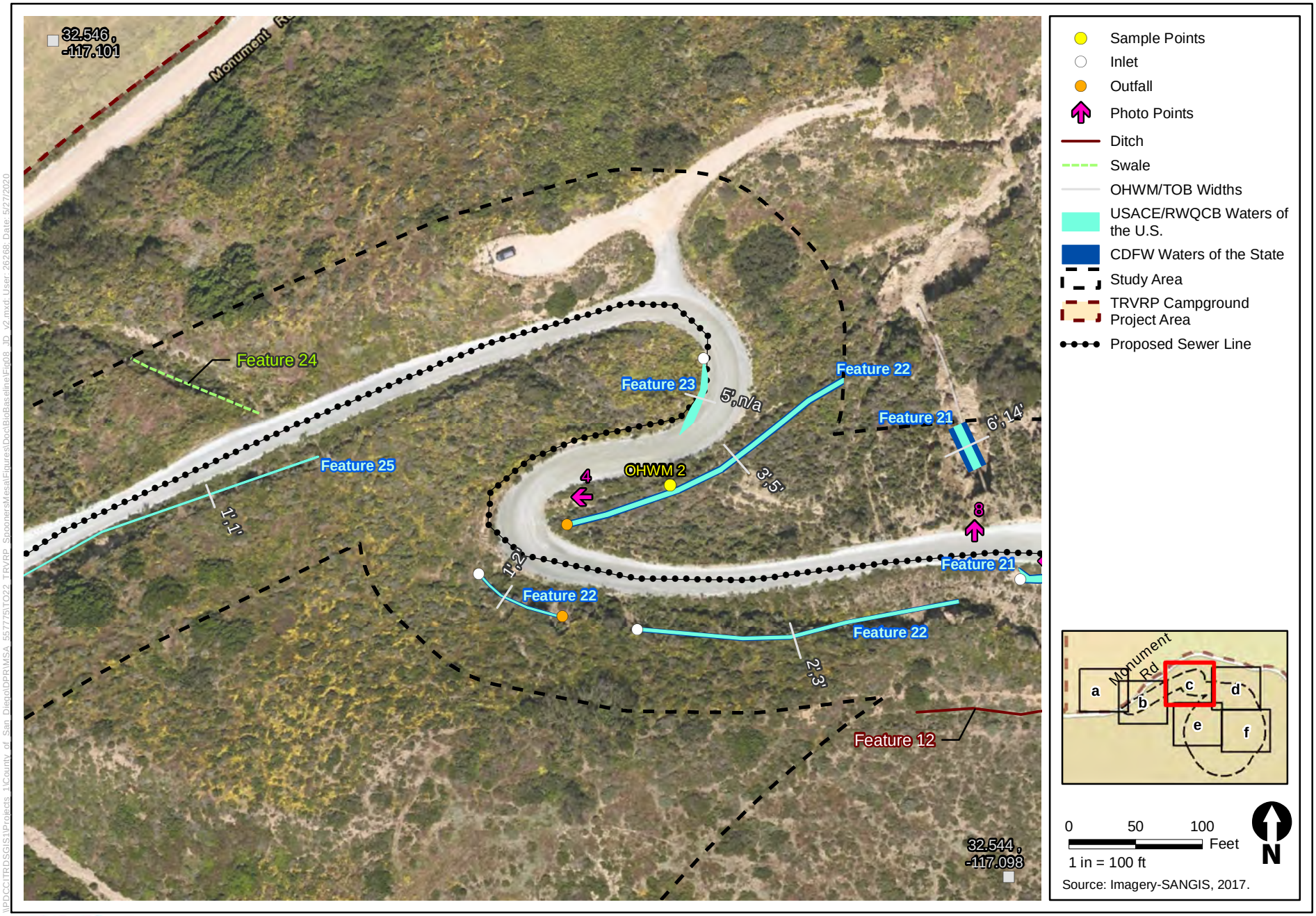

Figure 8c
Jurisdictional Resources
TRVRP Campground Spooner's Mesa Septic

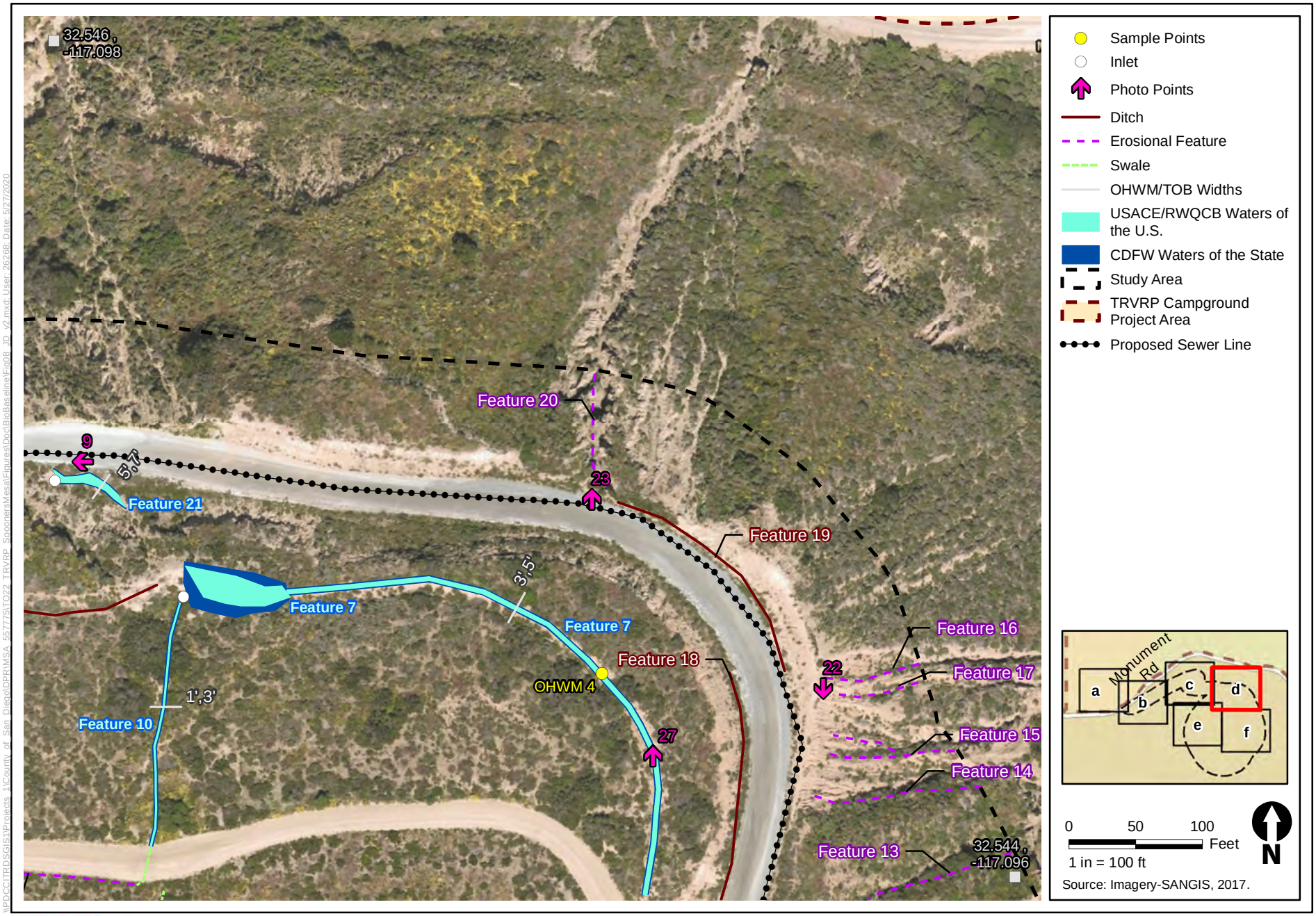

Figure 8d
Jurisdictional Resources
TRVRP Campground Spooner's Mesa Septic

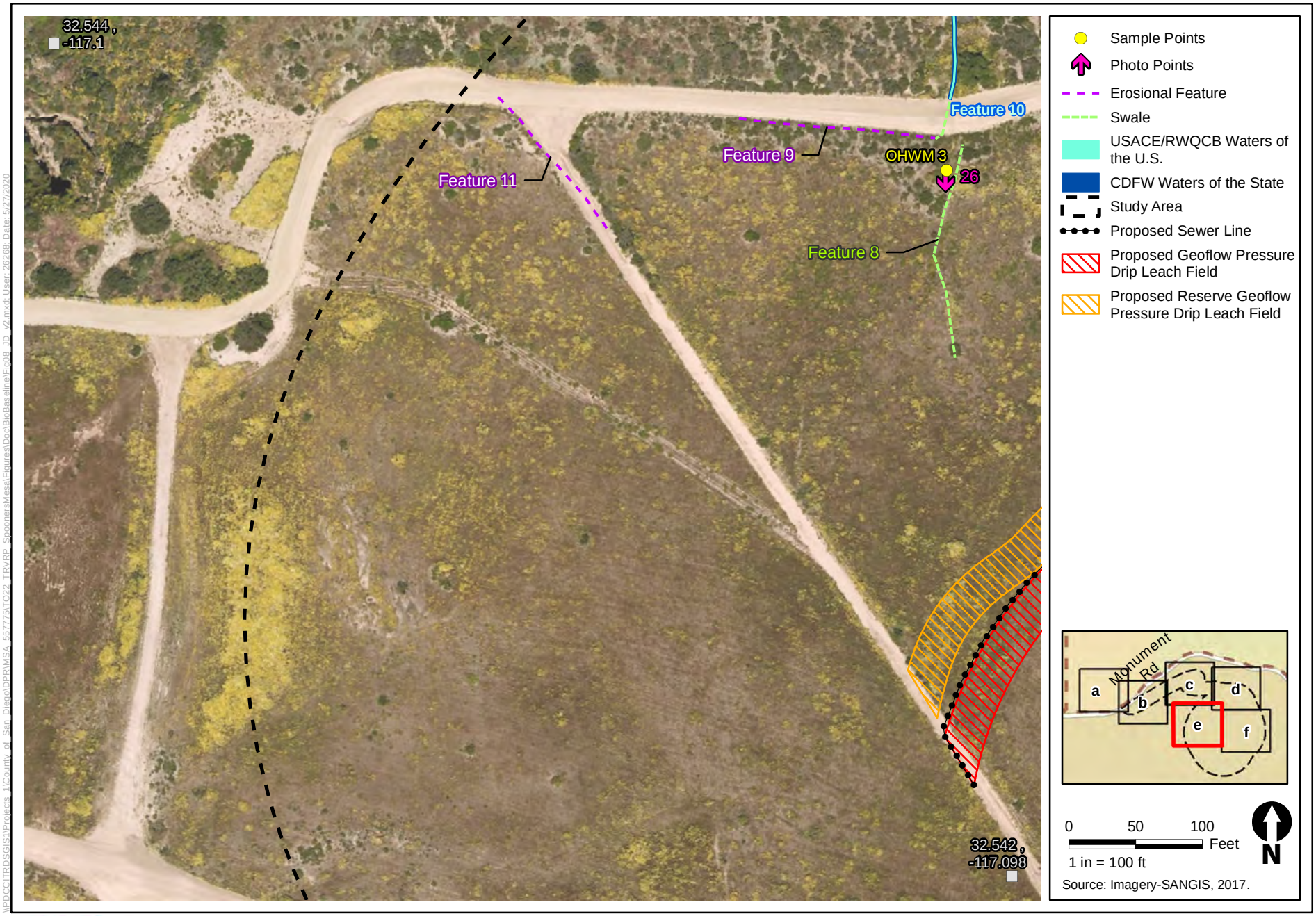

Figure 8e
Jurisdictional Resources
TRVRP Campground Spooner's Mesa Septic

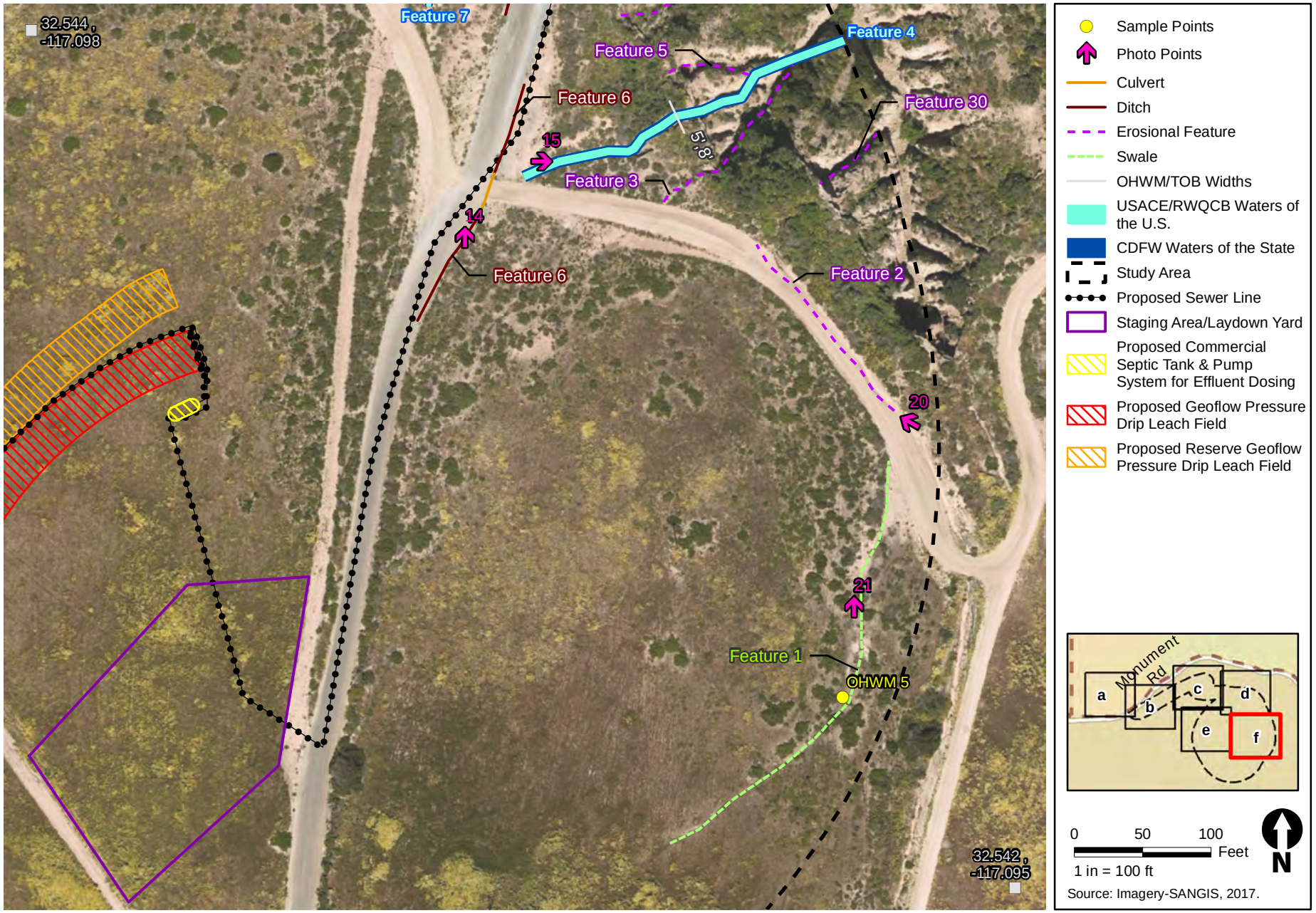

Figure 8f
Jurisdictional Resources
TRVRP Campground Spooner's Mesa Septic

Table 3. Summary of Potential USACE, RWQCB, and CDFW Jurisdiction within the Study Area

Feature ID	USACE/RWQCB Waters of the U.S. (Acre)	CDFW Jurisdictional Streambed (Acre)	Linear Feet	OHWM/TOB Width (feet)
4	0.030	0.048	264	5/8
7	0.59	0.104	507	3/5
10	0.004	0.013	185	1/3
21	0.011	0.026	89	5.5/10.5
22	0.029	0.047	553	2/3
23	0.006	0.006	61	5/5
25	0.045	0.078	868	8.5/34
26	0.002	0.004	96	0.5/1
27	0.002	0.004	95	1/2
28	0.017	0.025	92	8/12
29	0.005	0.007	63	3.5/4.5
Total	**0.211**	**0.362**	**2,873**	**n/a**

1.4.8 Habitat Connectivity and Wildlife Corridors

Wildlife movement corridors are areas that connect suitable wildlife habitat areas in a region otherwise fragmented by rugged terrain, changes in vegetation, or human disturbance. Natural features, such as canyon drainages, ridgelines, or areas with vegetative cover, provide corridors for wildlife movement. These corridors are important because they provide access to mates, food, and water, allow the dispersal of individuals away from high population density areas, and facilitate the exchange of genetic traits between populations.

The study area is within the County's Tijuana River Valley Regional Park, which provides open space habitat for wildlife that is connected to other conserved lands composed of beaches, estuaries, riparian and upland habitats, and mesas and hillsides (e.g., State Parks land, Tijuana River National Estuarine Research Reserve, etc.). The project area is within area designated as the City MHPA; the study area is within a BRCA. This BRCA is constrained by the Pacific Ocean to the west, Imperial Beach to the north, San Ysidro to the east, and Tijuana to the south.

The study area is part of a BRCA and does not include any focused wildlife corridors, nor does it include any streams, drainages, or canyons that would focus wildlife movement. The ridgeline at the northern edge of the mesa would not concentrate wildlife movement. Dirt roads within the study area could use used for local movements of wildlife, but do not constitute movement corridors.

1.5 Applicable Regulations

1.5.1 Federal Environmental Regulations

1.5.1.1 Federal Endangered Species Act

FESA was enacted in 1973 to provide protection to threatened and endangered species and their associated ecosystems. Take of a listed species is prohibited except when authorization has been

granted through a permit under Section 4(d), 7, or 10(a) of the act. *Take* is defined as to harass, harm, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any of these activities without a permit.

1.5.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) was enacted in 1918. Its purpose is to prohibit the killing or transport of covered native migratory birds—or any part, nest, or egg of any such bird—unless allowed by another regulation adopted in accordance with the MBTA. There is a list of species that are protected by this act and includes almost all native non-game species.

1.5.1.3 Bald and Golden Eagle Protection Act

When first enacted in 1940, the Bald and Golden Eagle Protection Act prohibited the take, transport, or sale of bald eagles, their eggs, or any part of the eagle. The act was amended in 1962 to extend prohibitions to the golden eagle. In terms of the Act, take is defined as to "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb."

1.5.1.4 Clean Water Act

In 1948, Congress first passed the Federal Water Pollution Control Act, which was amended in 1972 and became known as the CWA, and regulates the discharge of pollutants into the WOUS. Under Section 404, permits need to be obtained from the USACE for discharge of dredge or fill material into WOUS. Under Section 401 of the act, water quality certification from the RWQCB needs to be obtained if there will be any impacts on WOUS.

1.5.2 State Environmental Regulations

1.5.2.1 California Environmental Quality Act

CEQA requires that biological resources be considered when assessing the environmental impacts resulting from proposed actions. CEQA does not specifically define what constitutes an "adverse effect" on a biological resource. Instead, lead agencies are charged with determining what specifically should be considered an impact.

1.5.2.2 California Fish and Game Code

The FGC regulates the taking or possession of birds, mammals, fish, amphibians, and reptiles. It also provides additional protections for endangered species and regulations for lakes and streams and associated fish and wildlife habitat. Provisions regarding the protections for nesting birds are described in FGC Section 3503 and make it unlawful to take, possess, or needlessly destroy the nest or eggs of most wild birds.

1.5.2.3 California Endangered Species Act

CESA, administered by the CDFW, prohibits the take of any species that the California Fish and Game Commission determines to be a threatened or endangered species. CESA is found in FGC Sections 2050–2116. Incidental take of these listed species can be approved by the CDFW. Under CESA, take is defined as to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.

1.5.2.4 Lake and Streambed Alteration Program

The LSA, also administered by the CDFW, is found in Section 1600 et seq. of the FGC. CDFW regulates streams and waterways and associated fish and wildlife habitat. The CDFW is to be notified if a project will affect lake or streambed resources.

1.5.2.5 Porter-Cologne Water Quality Control Act

Porter-Cologne is the California equivalent of the CWA and provides for statewide coordination of water quality regulations through the establishment of the California State Water Resources Control Board (SWRCB) and nine separate RWQCBs that oversee water quality on a day-to-day basis at the regional/local level.

1.5.2.6 Natural Community Conservation Planning Act of 1991

The Natural Community Conservation Planning (NCCP) Act of 1991 is designed to conserve natural communities at the ecosystem scale while accommodating compatible land use. The CDFW is the principal state agency implementing the NCCP Program. NCCP plans developed in accordance with this act provide for comprehensive management and conservation of multiple wildlife species and identify and provide for the regional or area-wide protection and perpetuation of natural wildlife diversity while allowing compatible and appropriate development and growth. The project area is within the boundaries of the San Diego MSCP, which is an adopted NCCP Plan, and the County of San Diego maintains an Implementing Agreement with CDFW.

1.5.2.7 Native Plant Protection Act

NPPA, enacted in 1977, allows the California Fish and Game Commission to designate plants as rare or endangered. Sixty-four species of plants are designated and protected as rare under the NPPA. Species designated as endangered are regulated under provisions of CESA. The NPPA prohibits take of endangered or rare native plants, but includes some exceptions for agricultural and nursery operations, emergencies, and—after properly notifying CDFW—certain vegetation removal. It is primarily codified in FGC Section 1900 et seq.

Chapter 2
Project Effects

2.1 Impact Definitions

Biological resource impacts can be considered direct, indirect, or cumulative. They are also either permanent or temporary in nature.

- **Direct**: Occur when biological resources are altered, disturbed, or destroyed during project implementation. Examples include clearance of vegetation, encroachment into wetland buffers, diversion of surface water flows, and the loss of individual species and/or their habitats.
- **Indirect**: Occur when project-related activities affect biological resources in a manner that is not direct. Examples include elevated noise and dust levels, increased human activity, decreased water quality, and the introduction of invasive wildlife (e.g., domestic cats and dogs) and plants.
- **Cumulative**: Occur when biological resources are either directly or indirectly affected to a minor extent as a result of a specific project, but the project-related impacts are part of a larger pattern of similar minor impacts. The overall result of these multiple minor impacts from separate projects is considered a cumulative impact on biological resources.
- **Temporary**: Temporary impacts can be direct or indirect and are considered reversible. Examples include the removal of vegetation from areas that will be revegetated and elevated noise levels and increased levels of dust during construction.
- **Permanent**: Permanent impacts can be direct or indirect and are not considered reversible. Examples include removing vegetation from areas that will have permanent structures placed on them or landscaping an area with nonnative plant species.

2.2 Project Impacts

The proposed project would result in direct temporary impacts within the access road and disturbed habitat on the hilltop. All potential project-related impacts (direct, indirect, and cumulative) were evaluated as a part of this assessment.

2.2.1 Habitats

Construction of the proposed project would result in direct, temporary impacts on up to 2.15 acres, including 1.34 acres of disturbed habitat, and 0.81 acre of urban/developed (Table 4; Figure 9).

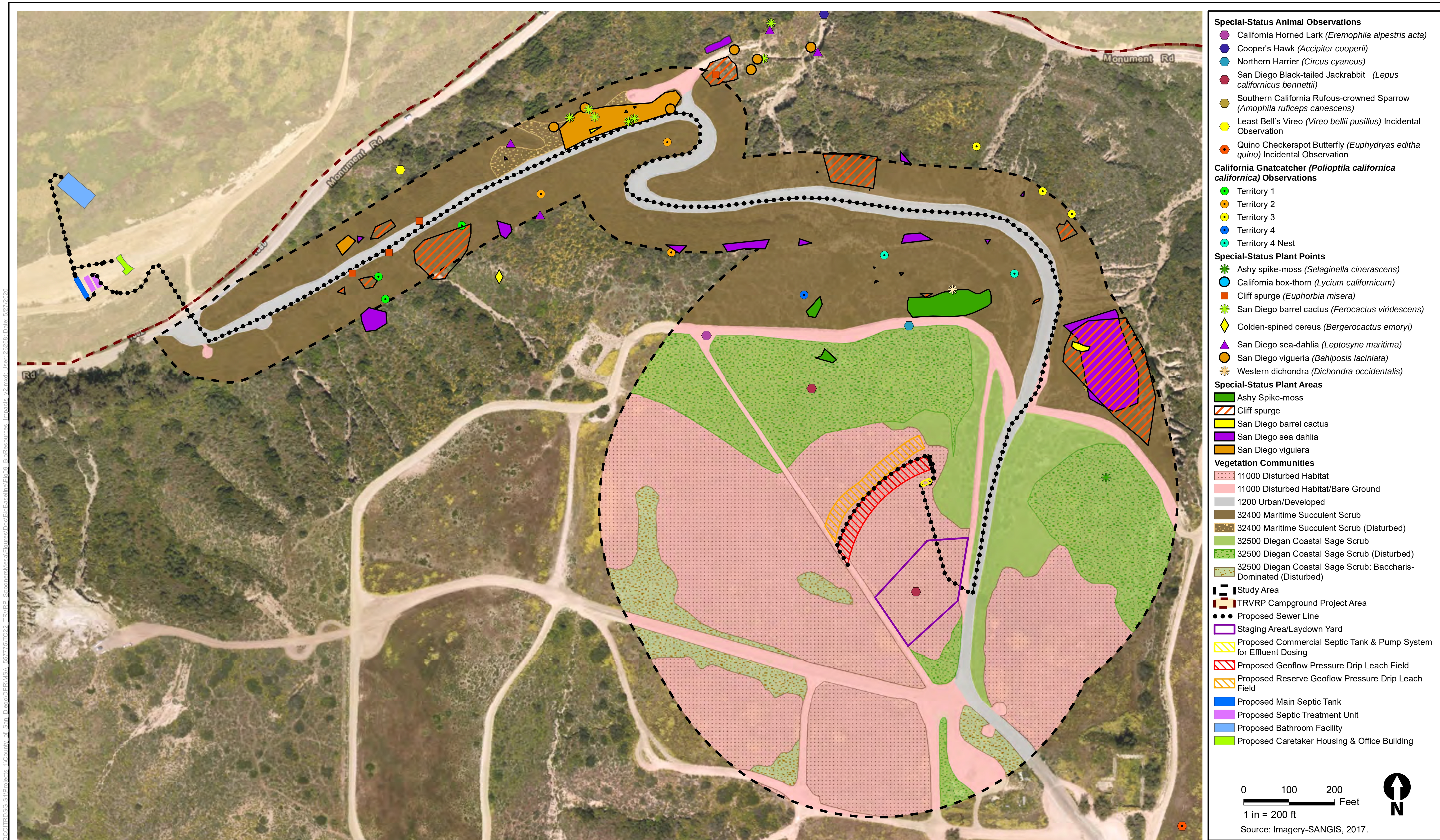

Figure 9
Biological Resource Map with Project Impacts
TRVRP Campground Spooner's Mesa Septic

Table 4. Habitat/Vegetation Communities and Impacts

Habitat/Vegetation Community (Holland Code)	Temporary Impacts (acres)
Disturbed Habitat (11000)	1.34
Urban/Developed (12000)	0.81
Total	2.15

The project is situated entirely within disturbed habitat and urban/developed vegetation community/land cover types. The wide gravel road between Monument road and the top of Spooner's Mesa was mapped as developed land cover type.

Disturbed habitat and urban/developed vegetation communities are not considered sensitive vegetation communities by the County, the MSCP, or the BMO. No direct temporary or permanent impacts on sensitive vegetation would occur as a result of this project.

2.2.2 Sensitive Plants

No sensitive plant species are present within the footprint of the proposed project. The proposed project would not result in direct impacts on sensitive plant species.

Sensitive plant species, including cliff spurge, San Diego sea dahlia, and San Diego viguiera, are common in the surrounding maritime succulent scrub habitat. Ground-disturbing activities from construction of the proposed project have potential to increase fugitive dust, which could deposit onto sensitive plant populations. Increased dust on the leaves of plants can shade leave surfaces, increasing temperature, and plugging stomata, thereby reducing photosynthetic rate necessary for growth and survival (Hirano et al. 1990)

2.2.3 Sensitive Wildlife

Northern harrier is a ground-nesting raptor species that has potential to nest within disturbed habitat and forage in the various other habitats within the study area. Direct impacts are prohibited by state and federal law and may include harming or killing individuals or removal of nests. Construction activity and noise could have indirect, temporary impacts on nesting behavior and success.

Cooper's hawk is a tree-nesting species. No potential nesting habitat is present within the study area. The proposed project would not have a permanent or temporary impact on potential breeding habitat.

White-tailed kite is a shrub and tree nesting raptor species that could nest in larger shrubs within the study area. No potential nesting habitat is present within the limits of the proposed project so the project would not have a direct impact on the nesting of this species. Construction activity and noise could have an indirect, temporary impact on the nesting behavior and success of this species.

Turkey vulture is a County Group I animal species strongly associated with dry, open country and ranch lands. Turkey vultures have been observed in the vicinity (ICF 2018) and have high potential to forage over the study area. No suitable nesting habitat will be affected, as there are no boulder outcrops or other suitable nesting habitat present in the study area. No roosting areas were observed within the study area. The construction activities are limited in scope and extents and are

not expected to disrupt the foraging behaviors of this species, an animal that often forages along roads in suburban and rural conditions.

Noise from construction of the proposed project could also result in temporary impacts on the behavior of other sensitive avian species using the surrounding habitat. Coastal California gnatcatcher, Southern California rufous-crowned sparrow, northern harrier, and white-tailed kite all have potential to nest within the study area and could be disturbed or displaced by temporary noise effects of the proposed project.

Coastal whiptail, Belding's orange-throat whiptail, Blainville's horned lizard, Coronado skink, red diamond rattlesnake, and San Diego black-tailed jackrabbit were observed or determined to have a high potential to occur within the study area. Ground-disturbing activities within disturbed habitat have the potential to directly impact these species, but these species would not be expected to be affected by project implementation and could move out of harm's way during construction.

2.2.4 Wetlands and Jurisdictional Waters

No jurisdictional resources are present with the project footprint. The project would have no direct or indirect impacts to jurisdictional waters and therefore the project does not appear to require authorization from the USACE, RWQCB, and/or CDFW.

2.2.5 Core Wildlife Area/Wildlife Corridors

The proposed project would not have a significant adverse effect on wildlife corridors or wildlife movement. The proposed project is not situated within a wildlife corridor; there are no landscape features such as ridgelines or canyons that would focus wildlife movement, and, as such, no wildlife corridors could be affected by the proposed project.

The proposed project is situated within the MHPA and is therefore within a core wildlife area. The proposed project is positioned within developed and disturbed habitat and has been situated to avoid direct impacts on sensitive natural or naturalized vegetation communities. The proposed project will not have any permanent direct or indirect impacts on wildlife use of the core area as project features will all be buried within developed disturbed habitat. The proposed project could have temporary indirect effects on wildlife usage. Although construction noise could adversely affect usage of the area by diurnal animals, construction activity will take place during daylight hours, so use of the project areas by nocturnal animals would not be temporarily indirectly affected by construction noise or lighting.

Chapter 3
Special-Status Species

3.1 Guidelines for the Determination of Significance

CEQA defines that a project would have a potentially significant effect on biological resources if:

> the project would have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service. (County 2010b)

Specifically, the County details that any of the following conditions would be considered significant (County 2010b):

> 3.A. The project would impact one or more individuals of a species listed as federally or state endangered or threatened.
>
> 3.B. The project would impact an onsite population of a County List A or B plant species, or a County Group I animal species, or a species listed as a state Species of Special Concern.
>
> 3.C. The project would impact the local long-term survival of a County List C or D plant species or a County Group II animal species.
>
> 3.D. The project may impact arroyo toad aestivation, foraging, or breeding habitat.
>
> 3.E. The project would impact golden eagle habitat.
>
> 3.F. The project would result in a loss of functional foraging habitat for raptors.
>
> 3.G. The project would impact the viability of a core wildlife area, defined as a large block of habitat that supports a viable population of a sensitive wildlife species or an area that supports multiple wildlife species.
>
> 3.H. The project would cause indirect impacts to levels that would likely harm sensitive species over the long term.
>
> 3.I. The project would impact occupied burrowing owl habitat.
>
> 3.J. The project would impact occupied coastal cactus wren habitat.
>
> 3.K. The project would impact occupied Hermes copper habitat.
>
> 3.L. The project would impact nesting success of sensitive animals (as listed in the Guidelines for Determining Significance) through grading, clearing, fire fuel modification, and/or noise generating activities such as construction.

Each of these significance criteria is discussed in Section 3.2, below, with respect to the proposed project.

3.2 Analysis of Project Effects

Each of the significance criteria listed in Section 3.1 is discussed below with respect to the project's anticipated effects. Those criteria for which impacts are not anticipated are discussed briefly at the end of the section.

- **3.A&L.** The project has the potential to result in indirect impacts on one or more individuals of a species listed as federally or state endangered or threatened.
    - Coastal California gnatcatcher is listed as a federally threatened species. It was observed throughout suitable scrub habitat in the study area. No clearing of occupied habitat would occur, and no suitable habitat would be directly affected by project development. The indirect effects of noise and dust from construction activities adjacent to suitable coastal California gnatcatcher habitat during the breeding season could affect the success of nesting coastal California gnatcatcher. Construction activities would have a potentially significant temporary indirect impact on coastal California gnatcatcher.
    - The proposed project would not result in direct or indirect temporary or permanent impacts to least Bell's vireo habitat.
    - The proposed project would not result in direct or indirect temporary or permanent impacts to Quino checkerspot butterfly larval habitat or host plants.
- **3.B&L.** The project has the potential to result in indirect impacts on an onsite population of County Group I animal species or a species listed as a California Species of Special Concern.
    - Northern harrier is a ground-nesting raptor species that has potential to nest within disturbed habitat within the study area and thus has potential to be directly affected by construction activities or indirectly affected by construction noise. Construction activities during the breeding season could have a potentially significant direct and indirect impact on this species.
    - White-tailed kite is a CDFW fully protected species and County Group I animal species. This raptor nests on trees and large shrubs and forages over grassland and open shrub habitats. This species was observed in the vicinity (ICF 2018) and has a high potential to utilize the study area for nesting and foraging. The proposed project could indirectly impact the nesting success of this species.
    - Coastal whiptail, Blainville's horned lizard, Coronado skink, red diamond rattlesnake, and San Diego black-tailed jackrabbit are California Species of Special Concern and County Group II animal species. These animals were observed or evaluated to have a high potential to occur in scrub habitats within the study area. No habitat-based mitigation is required under the MSCP for impacts on the disturbed habitat or urban/developed land. These species would not be expected to be affected by project implementation and could move out of harm's way during construction.
- The proposed project would have no direct impacts on County List A or B plant species.
- The proposed project would not result in significant impacts under the following guidelines for the following reasons:
    - **3.C.** The project would not result in impacts on the local long-term survival of a County List C or D Species or a County Group II animal species. Belding's orange-throated whiptail is a County Group II animal with high potential to occur in scrub habitats within the study area. No habitat-based mitigation is required under the MSCP for impacts on the disturbed habitat or urban/developed land. Temporary impacts to suitable habitat would not impact the local long-term survival of this species. Southern California rufous-crowned sparrow is a County Group II animal species that was observed in scrub habitats within the study area. This species is expected to nest and forage in scrub habitats within the study area. No

nesting habitat would be directly impacted. California horned lark is a County Group II animal species with potential to nest in the study area. Temporary impacts to suitable habitat would not impact the local long-term survival of this species. Cooper's hawk is a County Group II animal species that nests in trees. No nesting habitat exists within the study area. The proposed project would not impact the local long-term survival of Cooper's hawk.

- The proposed project would have no direct impacts on List C or D plant species. The sewer line would be installed within the road, and the associated construction impacts would not impact List C or D plant species. Any potential indirect impacts from construction dust would not impact the local long-term survival of these species.
- **3.D.** No suitable arroyo toad breeding or aestivation habitat occurs within the study area.
- **3.E.** No golden eagles are nesting on site or within 4,000 feet of the site (CFWO 2018; CDFW 2019). No suitable nesting trees or cliffs are present on Spooner's Mesa.
- **3.F.** The proposed project would not result in a loss of functional foraging habitat for raptors. The proposed project would temporarily impact developed and disturbed habitats within the MHPA, but would not permanently alter the condition of the area as foraging habitat for raptors.
- **3.G.** The proposed project would not have impacts on the viability of a core wildlife area. Although the project area is surrounded by high-quality habitat, it is situated entirely on developed and disturbed areas.
- **3.H.** The proposed project would not cause indirect impacts to levels likely to harm sensitive species over the long term.
- **3.I.** The proposed project would not have impacts on occupied burrowing owl habitat. The study area was determined to be unsuitable as habitat for burrowing owl and is not regarded as occupied.
- **3.J.** The proposed project would not have impacts on cactus wren habitat. No cactus wren habitat occurs within the proposed project area. No cactus wren or suitable cactus wren habitat was observed within the study area.
- **3.K.** The proposed project would not have impacts on Hermes copper butterfly (*Lycaena hermes*) habitat. The host plant for Hermes copper butterfly, spiny redberry (*Rhamnus crocea*), was not observed within the project footprint during focused floristic surveys; lacking the host plant, there is no reasonable potential for impacts on Hermes copper butterfly.

3.3 Cumulative Impact Analysis

The study area is entirely within the MSCP. The proposed project is consistent with the MSCP and avoids all direct impacts on sensitive vegetation habitat communities. Therefore, any project impacts are not cumulatively considerable. Furthermore, neither the City of San Diego nor County of San Diego are aware of current or future projects or discretionary applications for development in the Tijuana River Valley because the majority of land is being conserved.

3.4 Mitigation Measures and Design Consideration

Under CEQA, mitigation is required for project effects on biological resources that are identified as being significant. An appropriate level of mitigation is determined primarily through two considerations, as follows:

- The nature and relative magnitude of the project's impacts on the resource; and
- The resource's degree of sensitivity.

The County proposes the following mitigation measures to reduce potentially significant impacts to below a level of significance.

MM-BIO-1: Clearing Restrictions. To mitigate for potentially significant impacts on sensitive nesting birds and raptors, the County will avoid vegetation removal or ground-disturbing activities during the bird-breeding season to keep the project in compliance with state and federal regulations regarding nesting birds (i.e., the federal Migratory Bird Treaty Act [MBTA] and California Fish and Game Code [CFGC]. The bird breeding season is defined as January 15 to September 1, which includes the tree-nesting raptor breeding season of January 15 to July 15, the ground-nesting raptor breeding season of February 1 to July 15, and the general avian breeding season of February 1 to September 1. If removal cannot be avoided during this time-period, a nesting bird survey will be conducted no more than 72 hours prior to ground-disturbing activities by a qualified avian biologist through the entirety of the project site, as well as a 900-foot buffer inspecting for northern harrier, a 500-foot buffer inspecting for raptors, and a 300-foot buffer inspecting for other nesting birds. This is necessary to definitively ascertain whether raptors or other migratory birds are actively nesting in the project site, or in a vicinity, that could be indirectly impacted by work activities (i.e., through noise or visual disturbances). If the survey results are positive, the location of active raptor or migratory bird nests will be mapped by a qualified avian biologist. All construction activities in proximity to active nests will be delayed or otherwise modified as necessary to prevent nest failure (e.g., nest abandonment). Nesting northern harriers will be given a 900-foot avoidance buffer (per the Multiple Species Conservation Program [MSCP]), raptors will be afforded a 500-foot no-disturbance buffer, nesting special-status birds will be afforded at least a 300-foot buffer, and common birds protected by the MBTA and CFGC will be afforded a 50- to 100-foot buffer. Buffers may be adjusted based on the observations by the biological monitor(s) of the response of the nesting birds to human activity and will be conducted in coordination with the resource agencies (USFWS and CDFW).

MM-BIO-2: Biological Monitoring. The County will retain a qualified biologist to conduct biological monitoring during project construction. After the surveyor has flagged the limits of disturbance (but prior to brushing, clearing, or other ground-disturbing activities or other construction activities or staging) the biological monitor will conduct a review of the limits of disturbance, to ensure that the project does not cause errant impacts on surrounding sensitive vegetation communities, and to inspect the project area for sensitive species. The biological monitor will be on site during all vegetation, brushing, clearing, or initial grading that could disturb topsoil. The biological monitor will conduct weekly monitoring visits after initial grading to ensure that perimeter controls are in place and that errant biological impacts do not occur. The biological monitor will also monitor any and all avian nest avoidance buffers established during nesting bird surveys (see **MM BIO-01**) during the breeding season. Monitors will work

with construction personnel to minimize and avoid disruption to breeding birds and other special-status wildlife potentially present within or adjacent to construction areas.

MM-BIO-3: Best Management Practices (BMPs): To reduce and avoid indirect impacts from the project construction, the following BMPs will be implemented:

- Appropriate construction scheduling and sequencing will be established to reduce the amount and duration of soil exposed to vehicle tracking.
- Vehicle speeds will be limited to 15 miles per hour in the project area.
- Regular watering of roadways will be conducted to prevent and alleviate dust generation, but will not be applied in quantities that would allow for water ponding.
- Limits of construction areas will be fenced or flagged and maintained throughout the construction activities.
- Appropriate stormwater BMPs will be established during the rainy season (October 1 to April 30) to reduce erosion and control siltation. BMPs may include silt fences, fiber rolls, and application of organic soil tackifiers (e.g., guar gum).

3.5 Conclusions

The proposed measures detailed above would reduce the proposed project's impacts on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS, to a less-than-significant level.

Biological mitigation measures **MM-BIO-1**, **MM-BIO-2**, and **MM-BIO-3** would ensure that errant impacts would not occur, impacts would remain at or below levels identified in this analysis, and no other potentially significant impacts would occur.

- **3.A&L.** Potential indirect impacts coastal California gnatcatcher would be avoided through implementation of **MM-BIO-1** and **MM-BIO-2**. These mitigation measures would ensure that no significant impacts on this species would occur.
- **3.B&L.** Potential direct and indirect impacts on northern harrier and white-tailed kite would be avoided through implementation of **MM-BIO-1** and **MM-BIO-2**. These mitigation measures would ensure that no significant impacts on these species would occur.

Chapter 4

Riparian Habitat or Sensitive Natural Communities

4.1 Guidelines for the Determination of Significance

CEQA states that a project would have a potentially significant effect on biological resources if:

> the project would have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service (County 2010b).

Specifically, the County of San Diego details that any of the following conditions would be considered significant (County 2010b):

> 4.A. Project-related grading, clearing, construction or other activities would temporarily or permanently remove sensitive native or naturalized habitat on or off the project site.
>
> 4.B. Any of the following will occur to or within jurisdictional wetlands and/or riparian habitats as defined by USACE, CDFW and the County of San Diego: removal of vegetation; grading; obstruction or diversion of water flow; adverse change in velocity, siltation, volume of flow, or runoff rate; placement of fill; placement of structures; construction of a road crossing; placement of culverts or other underground piping; any disturbance of the substratum; and/or any activity that may cause an adverse change in native species composition, diversity and abundance.
>
> 4.C. The project would draw down the groundwater table to the detriment of groundwater-dependent habitat, typically a drop of 3 feet or more from historical low groundwater levels.
>
> 4.D. The project would cause indirect impacts to levels that would likely harm sensitive habitats over the long term.
>
> 4.E. The project does not include a wetland buffer adequate to protect the functions and values of existing wetlands.

Each of these significance criteria is discussed in Section 4.2 below with respect to the proposed project.

4.2 Analysis of Project Effects

The proposed project would not result in significant impacts under the following guidelines for the following reasons:

- **4.A.** The proposed project would not remove sensitive native or naturalized habitat.
- **4.B.** Impacts on USACE/RWQCB, CDFW, and County/CCC/City jurisdictional habitat have been avoided.
- **4.C.** The proposed project would not use groundwater and therefore would not draw down the groundwater table to the detriment of groundwater-dependent habitat.
- **4.D.** The proposed project would not cause indirect impacts to sensitive habitats over the long term. The proposed project would be buried in existing developed and disturbed habitats and

would not have any permanent indirect effects. Construction-related temporary indirect effects on sensitive habitats would be avoided and mitigated through **MM-BIO-3**.

- **4.E.** Wetland buffers have been incorporated into the project design to protect the functions and values of wetlands. Development has been sited at least 100 feet away from wetland vegetation. Trails are a resource-dependent activity situated in wetland buffers; they have been situated at least 50 feet away from wetland resources whenever possible. This is consistent with County guidelines (County 2010b) and the Coastal Act.

4.3 Cumulative Impact Analysis

No impacts were identified in Section 4.2; therefore, the proposed project does not cumulatively add to regional impact significance.

4.4 Mitigation Measures and Design Consideration

No impacts were identified in Section 4.2; therefore, no mitigation measures are considered.

4.5 Conclusions

This project would not result in impacts on riparian or sensitive vegetation communities, and appropriate wetland buffers have been incorporated in to project design. No significant impacts were identified.

Chapter 5
Federal Wetlands and Waterways

5.1 Guidelines for the Determination of Significance

CEQA defines that a project would have a potentially significant effect on biological resources if:

> Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? (CA 2018)

The County details that any of the following conditions would be considered significant impact on wetlands (County 2010b):

> 5.A. Any of the following will occur to or within jurisdictional wetlands as defined by USACE: removal of vegetation; grading; obstruction or diversion of water flow; adverse change in velocity, siltation, volume of flow, or runoff rate; placement of fill; placement of structures; construction of a road crossing; placement of culverts or other underground piping; any disturbance of the substratum; and/or any activity that may cause an adverse change in native species composition, diversity and abundance.
>
> 5.B. The project would draw down the groundwater table to the detriment of groundwater-dependent federal wetlands, typically a drop of 3 feet or more from historical low groundwater levels.
>
> 5.C. The project does not include a wetland buffer adequate to protect the functions and values of existing wetlands.

Since the issuance of the County Guidelines, the CEQA Checklist IV., *Biological Resources*, has been revised to include all state or federally protected wetlands, no longer limiting to those defined in Section 404 of the Clean Water Act (CA 2018).

These significance criteria, for which impacts are not anticipated, are discussed briefly in Section 5.2, below.

5.2 Analysis of Project Effects

The proposed project would not result in significant impacts under the following guidelines for the following reasons:

- **5.A.** No federal wetlands were mapped within the project area, and no impacts on federal wetlands would occur. The proposed project would avoid CDFW jurisdictional habitat, as well as CCC/City/County jurisdictional wetlands.
- **5.B.** The proposed project would not use groundwater.
- **5.C.** No wetlands are present within the study area; therefore no wetland buffers are required to protect the functions and values of wetlands. This is consistent with County guidelines (County 2010) and the Coastal Act.

5.3 Cumulative Impact Analysis

The proposed project would not result in impacts on wetlands and therefore would not contribute to the cumulative loss of federal wetlands.

5.4 Mitigation Measures and Design Consideration

The proposed project would not result in impacts on federal wetlands; no mitigation measures are required.

5.5 Conclusions

No wetlands were mapped within the study area, and no impacts on wetlands would occur. No significant impacts would occur.

Chapter 6
Wildlife Movement and Nursery Sites

6.1 Guidelines for the Determination of Significance

CEQA defines that a project would have a potentially significant effect on biological resources if:

> the project would interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites (County 2010b).

Specifically, the County details that any of the following conditions would be considered significant (County 2010b):

> 6.A. The project would prevent wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their reproduction.
>
> 6.B. The project would substantially interfere with connectivity between blocks of habitat, or would potentially block or substantially interfere with a local or regional wildlife corridor or linkage.
>
> 6.C. The project would create artificial wildlife corridors that do not follow natural movement patterns.
>
> 6.D. The project would increase noise and/or nighttime lighting in a wildlife corridor or linkage to levels proven to affect the behavior of the animals identified in a site-specific analysis of wildlife movement.
>
> 6.E. The project does not maintain an adequate width for an existing wildlife corridor or linkage and/or would further constrain an already narrow corridor through activities such as (but not limited to) reduction of corridor width, removal of available vegetative cover, placement of incompatible uses adjacent to it, and placement of barriers in the movement path.
>
> 6.F. The project does not maintain adequate visual continuity (i.e., long lines-of-site) within wildlife corridors or linkage.

These significance criteria, for which impacts are not anticipated, are discussed briefly in Section 6.2, below.

6.2 Analysis of Project Effects

The proposed project would not result in significant impacts under the following guidelines for the following reasons:

- **6.A.** The proposed project is situated in disturbed habitat and does not block or interfere with wildlife corridors or linkages. After construction is completed, the storage tank will be the only aboveground project feature, and this tank does not block regional or local wildlife movement.
- **6.B.** The proposed project is situated within disturbed areas within a biological resource core area. No wildlife corridors exist within the study area, so the proposed project would not interfere with connectivity or wildlife movement. The completed project will have very limited

aboveground features and would not interfere with local wildlife movement and usage of Spooner's Mesa.

- **6.C.** The proposed project would not create artificial wildlife corridors. The completed project will have very limited aboveground features and be situated in disturbed areas.
- **6.D.** The proposed project is not within a wildlife corridor or linkage. The proposed project will not produce any nighttime noise or lighting.
- **6.E.** The proposed project is not within a wildlife corridor or linkage, and the proposed project will have very limited aboveground features. Therefore, it will not constrain a narrow wildlife corridor.
- **6.F.** The proposed project is not within a wildlife corridor or linkage. The completed project will have very limited aboveground features and will not interrupt visual continuity for local wildlife movement.

6.3 Cumulative Impact Analysis

The proposed project would not result in impacts on a wildlife corridor and therefore would not contribute to the cumulative loss of wildlife movement corridors.

6.4 Mitigation Measures and Design Consideration

The proposed project would not result in significant impacts on wildlife corridors and linkages; therefore, mitigation is not proposed.

6.5 Conclusions

The proposed project would not result in significant impacts on wildlife corridors and linkages.

Chapter 7
Local Policies, Ordinances, and Adopted Plans

7.1 Guidelines for the Determination of Significance

CEQA defines that project would have a potentially significant effect on biological resources if:

> the project would conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation Plan (County 2010b).

Specifically, the County details that any of the following conditions would be considered significant (County 2010b):

> 7.A. For lands outside of the MSCP, the project would impact coastal sage scrub vegetation in excess of the County's 5 percent habitat loss threshold as defined by the Southern California Coastal Sage Scrub Natural Community Conservation Planning (NCCP) Guidelines.
>
> 7.B. The project would preclude or prevent the preparation of the subregional NCCP. For example, the project proposes development within areas that have been identified by the County or resource agencies as critical to future habitat preserves.
>
> 7.C. The project will impact any amount of sensitive habitat lands as outlined in the Resource Protection Ordinance (RPO).
>
> 7.D. The project would not minimize and/or mitigate coastal sage scrub habitat loss in accordance with Section 4.3 of the NCCP Guidelines.
>
> 7.E. The project does not conform to the goals and requirements as outlined in any applicable Habitat Conservation Plan (HCP), Habitat Management Plan (HMP), Special Area Management Plan (SAMP), Watershed Plan, or similar regional planning effort.
>
> 7.F. For lands within the MSCP, the project would not minimize impacts to BRCAs, as defined in the Biological Mitigation Ordinance (BMO).
>
> 7.G. The project would preclude connectivity between areas of high habitat values, as defined by the Southern California Coastal Sage Scrub NCCP Guidelines.
>
> 7.H. The project does not maintain existing movement corridors and/or habitat linkages as defined by the BMO.
>
> 7.I. The project does not avoid impacts to MSCP narrow endemic species and would impact core populations of narrow endemics.
>
> 7.J. The project would reduce the likelihood of survival and recovery of listed species in the wild.
>
> 7.K. The project would result in the killing of migratory birds or destruction of active migratory bird nests and/or eggs (Migratory Bird Treaty Act).
>
> 7.L. The project would result in the take of eagles, eagle eggs or any part of an eagle (Bald and Golden Eagle Protection Act).

Each of these significance criteria is discussed in Section 7.2, below, with respect to the proposed project. Those criteria for which impacts are not anticipated are discussed briefly at the end of the section.

7.2 Analysis of Project Effects

Each of the significance criteria listed in Section 7.1 is discussed below with respect to the project's anticipated effects. Those criteria for which impacts are not anticipated are discussed briefly at the end of the section.

- **7.K.** Construction-related impacts could result in the killing of migratory birds or destruction of active migratory bird nests and/or eggs protected under the MBTA and FGC.
    - The proposed project would have potential to destroy birds or bird nests protected under the federal MBTA and FGC if grading or vegetation clearing is conducted during the breeding season for these taxa, defined as January 15–July 15 for tree nesting raptors, February 1–July 15 for ground-nesting raptors, and February 15–September 1 for other birds. Such impacts would violate the MBTA and FGC and would be considered significant.

The proposed project would not result in significant impacts under the following guidelines for the following reasons:

- **7.A&D.** The proposed project would have no direct impacts on coastal sage scrub or maritime succulent scrub.
- **7.B.** The proposed project is consistent with the existing NCCP and San Diego MSCP and would not prelude the preparation of another subregional NCCP.
- **7.C.** The proposed project would not result in impacts on any sensitive habitat lands described by the RPO. Additionally, while the proposed project is consistent with the RPO, it is not subject to the RPO.
- **7.E.** The proposed project is consistent with the San Diego MSCP. It is not subject to any other HCP, HMP, SAMP, or other regional planning effort.
- **7.F.** The proposed project is within the MSCP and MHPA (a BRCA). Development within the MHPA has been constrained to non-sensitive developed and disturbed habitats. Impacts to BRCAs have been minimized.
- **7.G.** The proposed project is sited in developed and disturbed habitat, preserves natural habitats within the project area, and does not preclude connectivity within an area of high habitat.
- **7.H.** The proposed project would not result in impacts on existing movement corridors or habitat linkages.
- **7.I.** Least Bell's vireo are listed by the MSCP as a narrow endemic species. No suitable breeding habitat is present within the study area. The proposed project avoids all breeding habitat for least Bell's vireo.
- **7.J.** The proposed project would not reduce the likelihood of recovery of listed species. The project would avoid direct impacts on habitat of listed species.
- **7.L.** The proposed project is not situated within potential eagle foraging habitat, and no eagle nests are known from the area. Golden eagles nest on Otay Mountain, but do not forage over habitat adjacent to highly urbanized areas, such as this site. The proposed project would not result in take of eagles.

7.3 Cumulative Impact Analysis

The project is consistent with the MSCP and would not conflict with any local policies or ordinances or any HCP, NCCP, or other approved local, regional, or state HCP. Furthermore, neither the City of San Diego nor County of San Diego is aware of current or future projects or discretionary applications for development in the Tijuana River Valley because the majority of land is being conserved. Therefore, the project would not add to cumulative impacts related to local policies or plans.

7.4 Mitigation Measures and Design Consideration

7.K. Potential violation of the MBTA or FGC would be avoided through seasonal restrictions and pre-construction surveys, as detailed in **MM-BIO-1** and **MM-BIO-2**.

7.5 Conclusions

The project design would avoid potential conflicts with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, and would not conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state HCP. The project would implement **MM-BIO-1** and **MM-BIO-2** to avoid impacts on species protected under the MBTA, preventing significant impacts.

Chapter 8
Summary of Project Impacts and Mitigation

The proposed project has been designed to avoid impacts on sensitive habitat types and would not result in direct impacts on sensitive vegetation communities. Therefore, no habitat-based mitigation is required.

Potentially significant impacts could occur for sensitive wildlife species through direct or indirect construction-related disturbance. Potentially significant impacts could occur for the following special-status species: northern harrier, white-tailed kite, and coastal California gnatcatcher. Project implementation of **MM-BIO-1** and **MM-BIO-2** would ensure that construction activities would not result in impacts on these sensitive species and would keep impacts below a significant level.

Potentially significant impacts on birds protected under the MBTA and FGC would be avoided by restricting vegetation clearing or grading during the breeding season for migratory birds (approximately February 1 through September 1 annually), as described in **MM-BIO-1**.

Mitigation measures **MM-BIO-1**, **MM-BIO-2**, and **MM-BIO-3** would be implemented to ensure that errant construction impacts are avoided and that impacts in excess of those analyzed in this report do not occur.

Chapter 9
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Chapter 10

List of Preparers and Person and Organizations Contacted

10.1 Preparers

Dale Ritenour - Author

Meris Guerrero - Jurisdictional Surveys, Section Author

Teal Zeisler - GIS

10.2 Contacts

Crystal Benham - County of San Diego Department of Parks and Recreation

Appendix A
Representative Photos

Appendix A – Representative Photographs

	Photograph 1 Representative photo of location of proposed septic leach field in disturbed habitat. April 2019.
	Photograph 2 Diegan coastal sage scrub – disturbed within study area. April 2019.
	Photograph 3 View downslope from Spooner's Mesa. TRVRP Campground site at base of hill. Tijuana River in background. April 2019.

Appendix B
OHWM Datasheets

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: TRURP Spooners Mesa
Project Number: TO22
Stream: unnamed eph stream
Investigator(s): Meris Guerrero
Date: 3/18/19
Town: San Isidro
Time: 1250
State: CA
Photo begin file#: 28
Photo end file#: 29

Y [X] / N [ ] Do normal circumstances exist on the site?

Y [ ] / N [X] Is the site significantly disturbed?

Location Details: OHWM # 1

Projection: **Datum:**

Coordinates: 32.544610, -117.100775

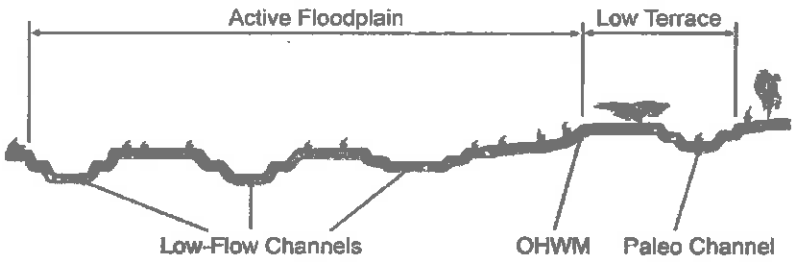
Potential anthropogenic influences on the channel system:
Channel that runs along road that bisects several ephemeral stream channels. Likely carries Road runoff and has some gravel from the road.

Brief site description:
channel runs parallel and along the south side of Road to Spooners mesa. Channel bisects several ephemeral stream channels & carries flows downstream/down Road & into a culvert

Checklist of resources (if available):

- [X] Aerial photography
  Dates: 5/94, 8/2018
- [X] Topographic maps
- [ ] Geologic maps
- [X] Vegetation maps
- [ ] Soils maps
- [ ] Rainfall/precipitation maps
- [ ] Existing delineation(s) for site
- [ ] Global positioning system (GPS)
- [ ] Other studies
- [ ] Stream gage data
  Gage number:
  Period of record:
- [ ] History of recent effective discharges
- [ ] Results of flood frequency analysis
- [ ] Most recent shift-adjusted rating
- [ ] Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

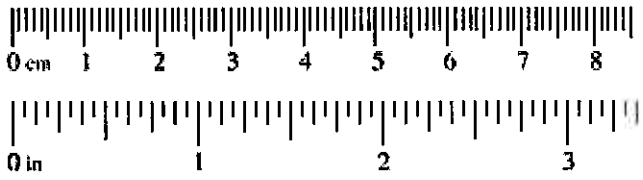


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - [X] Mapping on aerial photograph
   - [X] GPS
   - [ ] Digitized on computer
   - [ ] Other:

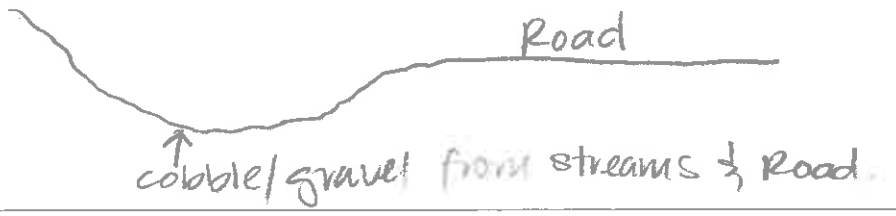
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	Gravel
0.157	4	Pebble	Gravel
0.079	2.00	Granule	Gravel
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
1/8 0.0025	0.0625	Very fine sand	Sand
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud



Project ID: **Cross section ID:** OHWM#1 **Date:** 3/18/19 **Time:** 1250

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [ ] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [ ] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- [ ] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [ ] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:

Project ID: **Cross section ID:** **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: TRURP Spooner's Mesa
Project Number: TO 22
Stream: unnamed eph stream
Investigator(s): M. Guerrero

Date: 3/18/19 **Time:** 925
Town: San Ysidro **State:** CA
Photo begin file#: 4 **Photo end file#:** 5

Y ☐ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☐ Is the site significantly disturbed?

Location Details: OHWM # 2, Feature 22

Projection: **Datum:**
Coordinates: 32.544821, -117.099277

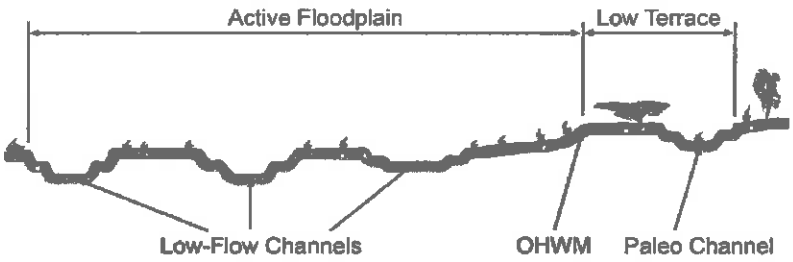
Potential anthropogenic influences on the channel system:
adjacent to gravel road - confined channel that receives road run off

Brief site description:
channel runs along/parallel to existing road. culvert outlets into channel @ its western most end. receives flows from channels upstream & that also run along the road.

Checklist of resources (if available):

- ☒ Aerial photography (Google 2018) Dates: 5/94, 8/2018
- ☒ Topographic maps
- ☐ Geologic maps
- ☒ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

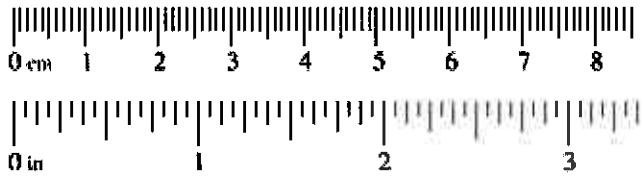


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☒ GPS
   - ☐ Other:

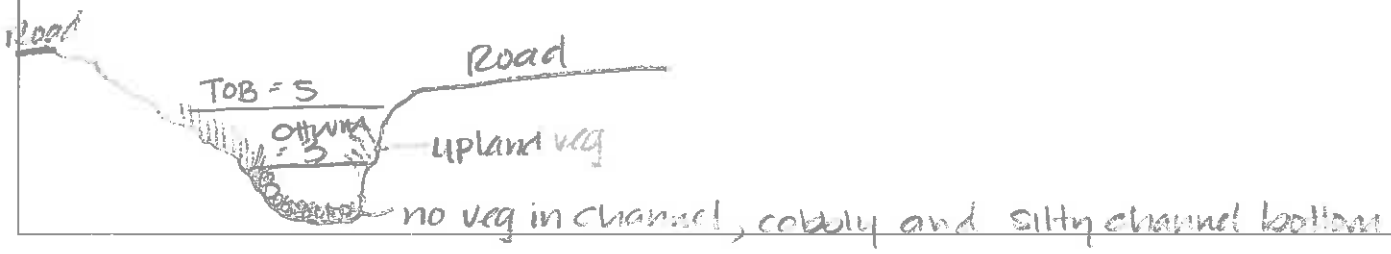
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: **Cross section ID:** OHWM 2 **Date:** 3/18/19 **Time:** 925

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- ☐ Change in average sediment texture
- ☐ Change in vegetation species
- ☒ Change in vegetation cover
- ☒ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Project ID: **Cross section ID:** **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: TRVRP Spooners Mesa
Project Number: T022
Stream: Swale features
Investigator(s): M Guerrero

Date: 3/19/18 **Time:** 11am
Town: San Ysidro **State:** CA
Photo begin file#: **Photo end file#:**

Y [X] / N [ ] Do normal circumstances exist on the site?

Y [ ] / N [X] Is the site significantly disturbed?

Location Details: Feat. #8 3 1 OHWM #3 + OHWM 5

Projection: **Datum:**

Coordinates: #3: 32.543679, -117.098134

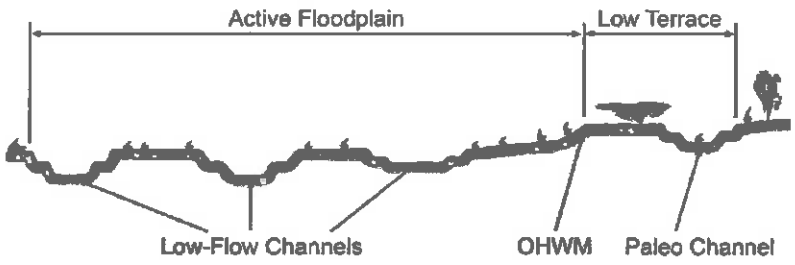
Potential anthropogenic influences on the channel system:
Boarder Patrol utilize Mesa top. Likely drive off road

Brief site description:
Relatively flat mesa top w/ minimal low points.

Checklist of resources (if available):

- [X] Aerial photography (Google Earth)
  Dates: 5/94, 8/2018
- [X] Topographic maps
- [ ] Geologic maps
- [X] Vegetation maps
- [ ] Soils maps
- [ ] Rainfall/precipitation maps
- [ ] Existing delineation(s) for site
- [ ] Global positioning system (GPS)
- [ ] Other studies
- [ ] Stream gage data
  Gage number:
  Period of record:
- [ ] History of recent effective discharges
- [ ] Results of flood frequency analysis
- [ ] Most recent shift-adjusted rating
- [ ] Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

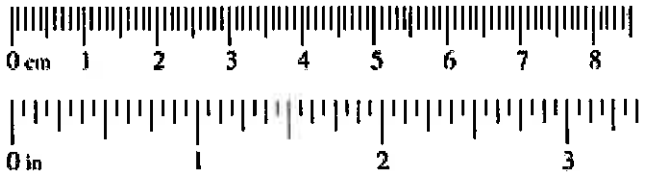


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - [X] Mapping on aerial photograph
   - [ ] Digitized on computer
   - [X] GPS
   - [ ] Other:

Wentworth Size Classes

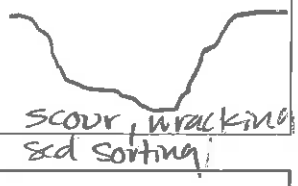
Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
		Pebble	
0.157	4		
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
		Coarse sand	
0.020	0.50		
		Medium sand	Sand
1/2 0.0098	0.25		
		Fine sand	
1/4 0.005	0.125		
		Very fine sand	
1/8 0.0025	0.0625		
		Coarse silt	
1/16 0.0012	0.031		
		Medium silt	
1/32 0.00061	0.0156		Silt
		Fine silt	
1/64 0.00031	0.0078		
		Very fine silt	
1/128 0.00015	0.0039		
		Clay	Mud



Project ID: **Cross section ID:** OHWM#3 **Date:** 3/18/19 **Time:** 11AM

Cross section drawing:

upland veg present. No bed & bank very bowl/swale like.



OHWM

GPS point: _____

Indicators:

- ☐ Change in average sediment texture
- ☐ Change in vegetation species
- ☐ Change in vegetation cover
- ☐ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments: no OHWM indicators present Low point in landscape. However is still relatively flat

Floodplain unit:

☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Project ID: **Cross section ID:** **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: TRVRP Spooner's Mesa
Project Number: T022
Stream: unnamed eph Stream
Investigator(s):

Date: 3/18/19 **Time:** 1130
Town: San Ysidro **State:** CA
Photo begin file#: **Photo end file#:**

Y [X] / N [ ] Do normal circumstances exist on the site?

Y [ ] / N [X] Is the site significantly disturbed?

Location Details:
OHWM # 9 - Feature 7

Projection: **Datum:**
Coordinates: 32.549198, -117.096964

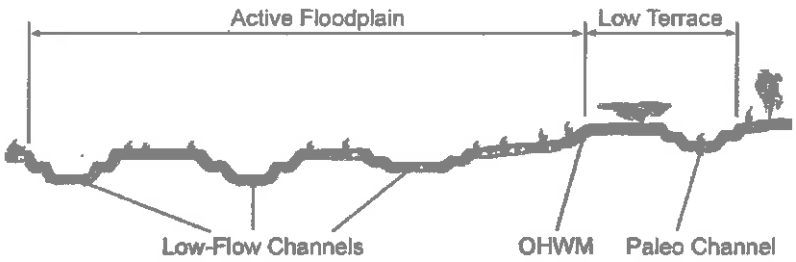
Potential anthropogenic influences on the channel system:
channel originates at dirt road at the top of Spooner's Mesa

Brief site description:
channel occurs on the mesa top and runs along the north eastern edge of the mesa

Checklist of resources (if available):

- [X] Aerial photography google 18 Dates: 5/94, 8/2018
- [X] Topographic maps
- [ ] Geologic maps
- [X] Vegetation maps
- [ ] Soils maps
- [ ] Rainfall/precipitation maps
- [ ] Existing delineation(s) for site
- [ ] Global positioning system (GPS)
- [ ] Other studies
- [ ] Stream gage data
  Gage number:
  Period of record:
- [ ] History of recent effective discharges
- [ ] Results of flood frequency analysis
- [ ] Most recent shift-adjusted rating
- [ ] Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

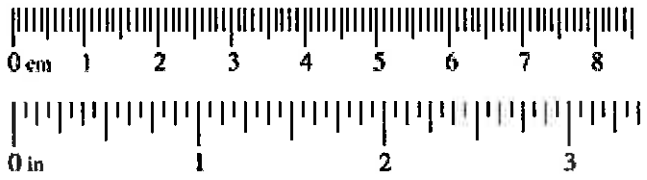


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - [X] Mapping on aerial photograph
   - [ ] Digitized on computer
   - [X] GPS
   - [ ] Other:

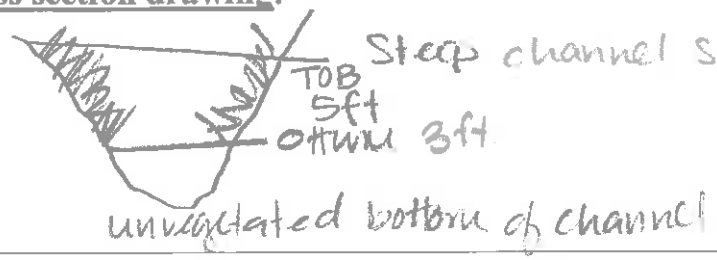
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



Project ID: **Cross section ID:** OHWM 4 **Date:** 3/18/19 **Time:** 1130

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- ☐ Change in average sediment texture
- ☐ Change in vegetation species
- ☒ Change in vegetation cover
- ☒ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Project ID: **Cross section ID:** **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Appendix C
Observed Species List – Flora

Appendix C Plant Species Detected

Scientific Name	Common Name	Special Status
LYCOPHYTES		
Selaginellaceae - Spike-moss family		
Selaginella bigelovii	Bushy spike-moss	
Selaginella cinerascens	Ashy spike-moss	CRPR 4.1
EUDICOTS		
Adoxaceae - Muskroot family		
Sambucus nigra ssp. caerulea	Blue elderberry	
Aizoaceae - Fig-marigold family		
* *Carpobrotus edulis*	Hottentot fig	
* *Mesembryanthemum crystallinum*	Crystalline iceplant	
* *Mesembryanthemum nodiflorum*	Slender-leaved iceplant	
Amaranthaceae - Amaranth family		
* *Amaranthus albus*	White tumbleweed	
Anacardiaceae - Sumac Or Cashew family		
Malosma laurina	Laurel sumac	
Rhus integrifolia	Lemonade berry	
* *Schinus molle*	Peruvian pepper tree	
Toxicodendron diversilobum	Western poison oak	
Apiaceae - Carrot family		
Apiastrum angustifolium	Mock parsley	
* *Apium graveolens*	Celery	
Bowlesia incana	Hoary bowlesia	
* *Conium maculatum*	Poison hemlock	
Daucus pusillus	Rattlesnake weed	
* *Foeniculum vulgare*	Fennel	
Sanicula arguta	Sharptooth sanicle	
Asteraceae - Sunflower family		
Artemisia californica	California sagebrush	
Artemisia dracunculus	Tarragon	
Baccharis pilularis ssp. pilularis	Coyote brush	
Baccharis salicifolia ssp. salicifolia	Mule fat	
Baccharis sarothroides	Broom baccharis	
Bahiopsis laciniata	San Diego viguiera	CRPR 4.2
* *Centaurea melitensis*	Tocalote	

Scientific Name	Common Name	Special Status
Chaenactis glabriuscula	Yellow pincushion	
Corethrogyne filaginifolia	Common sand aster	
* *Cotula australis*	Australian cotula	
Deinandra fasciculata	Fascicled tarplant	
* *Dittrichia graveolens*	Stinkwort	
Encelia californica	California encelia	
* *Erigeron bonariensis*	Flax-leaved horseweed	
Erigeron canadensis	Horseweed	
Eriophyllum confertiflorum	Golden yarrow	
* *Glebionis coronaria*	Crown daisy	
* *Helminthotheca echioides*	Bristly ox-tongue	
Heterotheca grandiflora	Telegraph weed	
* *Hypochaeris glabra*	Smooth cat's-ear	
Isocoma menziesii	Coastal goldenbush	
Lasthenia coronaria	Common goldfields	
Leptosyne maritima	Sea dahlia	CRPR 2B.2
Logfia filaginoides	California cottonrose	
* *Logfia gallica*	French cottonrose	
Malacothrix saxatilis	Cliff malacothrix	
Pseudognaphalium biolettii	Bicolor everlasting	
Pseudognaphalium californicum	California everlasting	
* *Pseudognaphalium luteoalbum*	White lamb everlasting	
* *Silybum marianum*	Milk thistle	
* *Sonchus oleraceus*	Common sow thistle	
Uropappus lindleyi	Silver puffs	
Boraginaceae - Borage family		
Amsinckia menziesii	Menzies's fiddleneck	
Cryptantha intermedia	Clearwater cryptantha	
Eucrypta chrysanthemifolia	Common eucrypta	
Heliotropium curassavicum var. oculatum	Alkali heliotrope	
Nemophila menziesii	Menzie's baby blue eyes	
Phacelia cicutaria	Caterpillar phacelia	
Phacelia distans	Wild heliotrope phacelia	
Pholistoma racemosum	Racemed fiesta flower	

Scientific Name	Common Name	Special Status
Brassicaceae - Mustard family		
* *Brassica nigra*	Black mustard	
* *Capsella bursa-pastoris*	Shepherd's purse	
* *Hirschfeldia incana*	Field mustard	
Lepidium nitidum	Shining pepper-grass	
Planodes virginicum	Virginia rockcress	
* *Raphanus sativus*	Radish	
* *Sisymbrium irio*	London rocket	
Cactaceae - Cactus family		
Cylindropuntia prolifera	Coast cholla	
Ferocactus viridescens	San Diego barrel cactus	CRPR 2B.1
Mammillaria dioica	White fishhook cactus	
Opuntia oricola	Chaparral prickly pear	
Caryophyllaceae - Pink family		
Cardionema ramosissimum	Sandcarpet	
Silene laciniata	Cardinal catchfly	
* *Stellaria media*	Common chickweed	
Chenopodiaceae - Goosefoot family		
Atriplex argentea var. expansa	Silverscale saltbush	
Atriplex canescens var. canescens	Four-wing saltbush	
* *Chenopodium album*	Lamb's quarters	
* *Chenopodium murale*	Nettleleaf goosefoot	
* *Salsola australis*	Russian thistle	
Cleomaceae - Spiderflower family		
Peritoma arborea	Bladderpod	
Convolvulaceae - Morning-glory family		
Calystegia macrostegia	Coast morning-glory	
Dichondra occidentalis	Western dichondra	CRPR 4.2
Crassulaceae - Stonecrop family		
Crassula connata	Pygmyweed	
Dudleya edulis	Ladies fingers	
Dudleya pulverulenta	Chalk dudleya	
Cucurbitaceae - Gourd family		
Marah macrocarpa	Wild cucumber	

Scientific Name	Common Name	Special Status
Euphorbiaceae - Spurge family		
Acalypha californica	California copperleaf	
Croton californicus	California croton	
Euphorbia misera	Cliff spurge	CRPR 2B.2
* *Ricinus communis*	Castorbean	
Fabaceae - Legume family		
Acmispon glaber	Deerweed	
Astragalus trichopodus var. lonchus	Hairy fruit spear milkvetch	
Lupinus bicolor	Miniature lupine	
Lupinus hirsutissimus	Stinging lupine	
Lupinus truncatus	Cut leaf lupine	
* *Medicago polymorpha*	Burclover	
Gentianaceae - Gentian family		
Zeltnera venusta	California centaury	
Geraniaceae - Geranium family		
* *Erodium botrys*	Longbeak filaree	
* *Erodium cicutarium*	Redstem filaree	
* *Erodium moschatum*	Whitestem filaree	
Lamiaceae - Mint family		
* *Marrubium vulgare*	Horehound	
Salvia mellifera	Black sage	
Malvaceae - Mallow family		
Malacothamnus fasciculatus	Chaparral bush-mallow	
Montiaceae - Purslane family		
Claytonia perfoliata	Round leaf miner's lettuce	
Onagraceae - Evening Primrose family		
Camissoniopsis bistorta	California sun cup	
Clarkia purpurea	Purple clarkia	
Orobanchaceae - Broom-rape family		
Castilleja affinis ssp. affinis	Coast indian paintbrush	
Oxalidaceae - Oxalis family		
Oxalis californica	California wood-sorrel	
* *Oxalis pes-caprae*	Bermuda buttercup	
Papaveraceae - Poppy family		
Eschscholzia californica	California poppy	
Papaver californicum	Fire poppy	

Scientific Name	Common Name	Special Status
Platystemon californicus	Cream cups	
Plantaginaceae - Plantain family		
Antirrhinum nuttallianum	Nuttall's snapdragon	
Collinsia concolor	Chinese houses	
Collinsia heterophylla	Purple chinese houses	
Plantago erecta	Dot-seed plantain	
Polemoniaceae - Phlox family		
Navarretia hamata	Hooked navarretia	
Polygonaceae - Buckwheat family		
Chorizanthe fimbriata	Fringed spineflower	
Chorizanthe procumbens	Prostrate spineflower	
Eriogonum fasciculatum	California buckwheat	
Pterostegia drymarioides	Granny's hairnet	
* *Rumex crispus*	Curly dock	
Rosaceae - Rose family		
Heteromeles arbutifolia	Toyon	
Rubiaceae - Madder family		
Galium angustifolium ssp. angustifolium	Narrow leaved bedstraw	
Galium aparine	Common bedstraw	
Rutaceae - Rue family		
Cneoridium dumosum	Bushrue	
Scrophulariaceae - Figwort family		
Scrophularia californica	California figwort	
Simmondsiaceae - Jojoba family		
Simmondsia chinensis	Jojoba	
Solanaceae - Nightshade family		
Datura wrightii	Wright's jimsonweed	
* *Nicotiana glauca*	Tree tobacco	
Solanum douglasii	Douglas' nightshade	
Solanum xanti	Chaparral nightshade	
Tamaricaceae - Tamarisk family		
* *Tamarix ramosissima*	Hairy tamarix	
Tropaeolaceae - Nasturtium family		
* *Tropaeolum majus*	Garden nasturtium	
Urticaceae - Nettle family		
Hesperocnide tenella	Western stinging-nettle	

Scientific Name	Common Name	Special Status
* *Urtica urens*	Dwarf nettle	
MONOCOTS		
Alliaceae - Onion or Garlic family		
Allium haematochiton	Redskin onion	
Iridaceae - Iris family		
* *Chasmanthe floribunda*	African cornflag	
Poaceae - Grass family		
* *Avena barbata*	Slender wild oat	
* *Bromus diandrus*	Ripgut brome	
* *Bromus hordeaceus*	Soft brome	
* *Bromus madritensis ssp. rubens*	Red brome	
* *Festuca perennis*	Italian ryegrass	
* *Hordeum murinum ssp. glaucum*	Smooth barley	
* *Lamarckia aurea*	Goldentop grass	
Melica imperfecta	Coast range onion grass	
Muhlenbergia microsperma	Littleseed muhly	
* *Polypogon monspeliensis*	Rabbit foot beard grass	
* *Schismus barbatus*	Mediterranean schismus	
Stipa lepida	Foothill needle grass	
* *Stipa miliacea var. miliacea*	Smilo grass	
Themidaceae - Brodiaea family		
Bloomeria crocea	Common goldenstar	
Dichelostemma capitatum ssp. capitatum	Blue dicks	

Scientific Name	Common Name	Special Status

Legend

*= Non-native or invasive species

Special Status:

Federal:
FE = Endangered
FT = Threatened

State:
SE = Endangered
ST =Threatened

CRPR – California Rare Plant Rank
1A. Presumed extinct in California and elsewhere
1B. Rare or Endangered in California and elsewhere
2A. Presumed extinct in California, more common elsewhere
2B. Rare or Endangered in California, more common elsewhere
3. Plants for which we need more information - Review list
4. Plants of limited distribution - Watch list

Threat Ranks
.1 - Seriously endangered in California
.2 – Fairly endangered in California
.3 – Not very endangered in California

Appendix D
Potential to Occur Sensitive Species Table – Flora

Appendix D. Potential to Occur - Sensitive Species Table - Flora

Common Name (Scientific Name)	Sensitivity Status	Habitat	Verified On-Site	Potential to Occur	Rationale
San Diego thorn-mint (*Acanthomintha ilicifolia*)	FT/SE CRPR 1B.1 SD County List A SDC NE	Annual herb. Prefers friable or broken clay soils in grassy openings in chaparral and coastal sage scrub, valley and foothill grassland, and vernal pools; 10-960 m (33-3150 ft). Blooming period: April - June	No	Low	Marginally suitable soils present within the study area. Not observed during focused rare plant surveys in 2019.
Nuttal's acmispon *(Acmispon prostratus)*	CRPR 1B.1 SD County List A	Annual herb. Coastal dunes and sandy coastal scrub; 0-10 m (0-32 ft). Blooming period: March - July	No	Not expected	Species of sandy beaches. Appropriate habitat not present within study area.
California adolphia *(Adolphia californica)*	CRPR 2B.1 SD County List B	Deciduous shrub. Clay soils in chaparral, coastal scrub, and valley and foothill grassland; 45-740 m (147-2428 ft). Blooming period: December - May	No	Moderate	Appropriate habitat present within study area and the species is known from the vicinity. Large perennial species that would be readily detectable but was not observed during rare plant surveys.
Shaw's agave *(Agave shawii var. shawii)*	CRPR 2B.1 SD County List B SDC NE	Perennial leaf succulent. Coastal bluff scrub, coastal scrub; 10-120 m (32-393 ft). Blooming period: September - May	No	Moderate	Appropriate habitat present within study area and the species is known from the vicinity. Large perennial species that would be readily detectable but was not observed during rare plant surveys.
San Diego bur-sage *(Ambrosia chenopodiifolia)*	CRPR 2B.1 SD County List B	Perennial shrub. Coastal scrub; 55-155 m (178-508 ft). Blooming period: April - June	No	Moderate	Appropriate habitat present within study area. Large perennial shrub that would be readily detectable but was not observed during rare plant surveys.
Singlewhorl burrobush (*Ambrosia monogyra*)	CRPR 2B.2	Perennial shrub. Washes, dry riverbeds; 55-155 m (178-508 ft). Blooming period: April - June	No	Low	Large perennial species that would be readily detectable but was not observed during rare plant surveys. Species is known from the Otay River Valley.
San Diego ambrosia (*Ambrosia pumila*)	FE CRPR 1B.1 SD County List A SDC NE	Rhizomatous herb. Sandy loam or clay soils in chaparral, coastal sage scrub, valley and foothill grassland, vernal pools; often in disturbed areas or sometimes alkaline areas. Can occur in creek beds, seasonally dry drainages, and floodplains; 20-415 m (66-1362 ft). Blooming period: April - October	No	Low	Appropriate habitat present within study area; however suitable soils heavily disturbed by agricultural activities within study area. Known occurrences are north of Chula Vista. Many reports from Otay area have been proven to be the similar *Ambrosia confertiflora*.
Aphanisma *(Aphanisma blitoides)*	CRPR 1B.2 SD County List A	Annual herb. Sandy soils in coastal bluff scrub, coastal dunes, and coastal scrub; 1-305 m (3-1000 ft). Blooming period: March - June	No	Low	Appropriate habitat not present within study area. Not observed during focused rare plant surveys. Closest record is Tijuana Slough National Wildlife Refuge.
Otay manzanita (*Arctostaphylos otayensis*)	CRPR 1B.2 SD County List A	Evergreen shrub. Chaparral or cismontane woodlands on volcanic rock outcrops; 275-1700 m (902-5576 ft). Blooming period: January - April	No	Low	Appropriate habitat not present within study area; species occurs east of study area in mountain regions. Large perennial species that would be readily detectable but was not observed during rare plant surveys.

Appendix D. Potential to Occur - Sensitive Species Table - Flora

Common Name (Scientific Name)	Sensitivity Status	Habitat	Verified On-Site	Potential to Occur	Rationale
San Diego sagewort (*Artemisia palmeri*)	CRPR 4.2 SD County List D	Deciduous shrub. Sandy soils in mesic areas in chaparral, coastal scrub, riparian forest, riparian scrub, riparian woodland; 15-915 m (49-3002 ft). Blooming period: February - September	No	Moderate	Appropriate habitat present within study area. Large perennial shrub that would be readily detectable but was not observed during rare plant surveys.
Dean's milk-vetch (*Astragalus deanei*)	CRPR 1B.1 SD County List A	Perennial herb. Open shrubby slopes, coastal sage scrub, chaparral, cismontane woodland, riparian forest, and sandy washes; 75-695 m (246-2279 ft). Blooming period: February - May	No	Not expected	Appropriate habitat no longer present within study area; heavily disturbed by agricultural activities.
Coastal dunes milk-vetch *(Astragalus tener var. titi)*	FE/SE CRPR 1B.1 SD County List A	Annual herb. Often in vernally mesic areas in sandy coastal bluff scrub, coastal dunes, and mesic coastal prairie; 1-50 m (3-164 ft). Blooming period: March - May	No	Not expected	Generally restricted to coastal dunes; no dune habitat present in the study area. Species may be extirpated from southern California (Reiser 2001).
Coulter's saltbush *(Atriplex coulteri)*	CRPR 1B.2 SD County List A	Perennial herb. Alkaline or clay soils in coastal bluff scrub, coastal dunes, coastal scrub, and valley and foothill grassland; 3-460 m (9-1509 ft). Blooming period: March - October	No	Moderate	Appropriate habitat present within study area. Large perennial shrub that would be readily detectable but was not observed during rare plant surveys.
South coast saltscale *(Atriplex pacifica)*	CRPR 1B.2 SD County List A	Annual herb. Coastal bluff scrub, coastal dunes, coastal scrub, playas; 0-140 m (0-459 ft). Blooming period: March - October	No	Moderate	Appropriate habitat present within study area. Large perennial shrub that would be readily detectable but was not observed during rare plant surveys.
San Diego viguiera *(Bahiopsis laciniata)*	CRPR 4.3 SD County List D	Perennial shrub. Chaparral and coastal scrub; 10-750 m (33-2461 ft). Blooming period: February - August	**Yes**	Present	Observed within the study area.
Golden-spined cereus *(Bergerocactus emoryi)*	CRPR 2B.2 SD County List B	Perennial stem succulent. Sandy soils in costal scrub, chaparral, and closed-cone coniferous forest, moist ocean breezes may be a key to its habitat requirements; 3-395 m (9-1295 ft). Blooming period: May - June	No	Moderate	**Observed within maritime succulent scrub on hillside outside of study area.** Large perennial shrub that would be readily detectable but was not observed during rare plant surveys.
San Diego goldenstar (*Bloomeria clevelandii*)	CRPR 1B.1 SD County List A	Perennial bulbiferous herb. Clay soils in chaparral, coastal sage scrub, valley grasslands, particularly near Mima mound topography or the vicinity of vernal pools; 50 - 465 m (164-1526 ft). Blooming period: April - May	No	Moderate	Marginally suitable soils present within the study area. Not observed during focused rare plant surveys in 2019.

Appendix D. Potential to Occur - Sensitive Species Table - Flora

Common Name (Scientific Name)	Sensitivity Status	Habitat	Verified On-Site	Potential to Occur	Rationale
Orcutt's brodiaea (*Brodiaea orcuttii*)	CRPR 1B.1 SD County List A	Bulbiferous herb. Found on mesic, clay, sometimes serpentinite soils in closed-cone coniferous forest, chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, and vernal pools; 30-1692 m (98-5550 ft). Blooming period: May - July	No	Low	No mesic pool areas present in the study area.
Dunn's mariposa-lily (*Calochortus dunnii*)	SR CRPR 1B.2 SD County List A SDC NE	Perennial bulbiferous herb. Gabbroic or metavolcanic soils, or rocky openings in chaparral or grassland/chaparral ecotone, also in closed-cone coniferous forest; 185-1830 m (606-6002 ft). Blooming period: February - June	No	Not expected	Highly restricted to volcanic features; locally common on San Miguel Mountain. Suitable soils and habitat not present within the study area.
Lakeside ceanothus (*Ceanothus cyaneus*)	CRPR 1B.2 SD County List A SDC NE	Evergreen shrub. Closed-cone coniferous forest, dense chaparral; 235-755 m (771-2543 ft). Blooming period: April - June	No	Not expected	Highly restricted to volcanic soils in central San Diego County foothills. Well outside of the known distribution of this species. Large perennial shrub that would be readily detectable but was not observed during rare plant surveys.
Otay Mountain ceanothus (*Ceanothus otayensis*)	CRPR 1B.2	Perennial evergreen shrub. Metavolcanic or gabbroic chaparral; 600-1100 m (1968-3608 ft). Blooming period: January - April	No	Low	Species restricted to volcanic soils. Outside of species known range; species occurs well east of study area. No volcanic soils present in the study area.
Wart-stemmed ceanothus *(Ceanothus verrucosus)*	CRPR 2B.2 SD County List B	Evergreen shrub. Chaparral; 1-380 m (3-1247 ft). Blooming period: December - May	No	Low	Outside of species current known range. Large perennial shrub that would be readily detectable but was not observed during rare plant surveys.
Orcutt's pincushion (*Chaenactis glabriuscula* var. *orcuttiana*)	CRPR 1B.1 SD County List A	Annual herb. Sandy soils in coastal bluff scrub and coastal dunes; 0-100 m (0-328 ft). Blooming period: January - August	No	Moderate	Not observed during rare plant surveys. No suitable habitat within the project area.
Salt marsh bird's-beak *(Chloropyron maritimum ssp. Maritimum)*	FE/SE CRPR 1B.2 SD County List A	Hemiparasitic annual herb. Coastal dunes and coastal salt marshes and swamps; 0-30 m (0-98 ft). Blooming period: May - October	No	Not expected	Restricted to salt marshes and dunes. No appropriate habitat present within the study area.
Orcutt's spineflower *(Chorizanthe orcuttiana)*	FE/SE CRPR 1B.1 SD County List A	Annual herb. Sandy openings in closed-cone coniferous forest, maritime chaparral, and coastal scrub; 3-125 m (9-410 ft). Blooming period: March - May	No	Low	Appropriate habitat present within study area; however suitable soils heavily disturbed by agricultural activities within study area and species is primarily restricted to central coastal San Diego.
Long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*)	CRPR 1B.2 SD County List A	Annual herb. Clay lenses, largely devoid of shrubs in chaparral, coastal scrub, meadows and seeps, valley and foothill grassland, and vernal pools; 30-1530 m (98-5018 ft). Blooming period: April - July	No	Low	Restricted to clay lenses. No appropriate habitat present within the study area.

Appendix D. Potential to Occur - Sensitive Species Table - Flora

Common Name (Scientific Name)	Sensitivity Status	Habitat	Verified On-Site	Potential to Occur	Rationale
Delicate clarkia (*Clarkia delicata*)	CRPR 1B.2 SD County List A	Annual herb. Oak woodlands and chaparral, often on gabbroic soils; 235-1000 m (770-3280 ft). Blooming period: April - June	No	Not expected	Restricted to gabbroic soils and higher elevations; known occurrences well east of study area. No appropriate habitat present within the study area.
San Miguel savory *(Clinopodium chandleri)*	CRPR 1B.2 SD County List A	Perennial shrub. Rocky, gabbroic, or metavolcanic areas in chaparral, cismontane woodland, coastal scrub, riparian scrub, and valley and foothill grassland; 120-1075 (393-3526 ft). Blooming period: March - July	No	Not expected	Restricted to rocky, gabbroic, or metavolcanic soils and higher elevations. No appropriate habitat present within the study area.
Summer holly *(Comarostaphylis diversifolia ssp. diversifolia)*	CRPR 1B.2 SD County List A	Evergreen shrub. Chaparral and cismontane woodland; 30-790 m (98-2591 ft). Blooming period: April - June	No	Low	This species is generally found in maritime chaparrals and would not be expected in drier maritime succulent scrub habitat. Large perennial shrub that would be readily detectable but was not observed during rare plant surveys.
San Diego sand aster *(Corethrogyne filaginifolia var. incana)*	CRPR 1B.1	Perennial herb. Coastal bluff scrub, chaparral, and coastal scrub; 3-115 m (9-377 ft). Blooming period: June - September	No	Low	Known populations are in Point Loma and Potrero.
Snake cholla *(Cylindropuntia californica var. californica)*	CRPR 1B.1 SD County List A SDC NE	Stem succulent. Chaparral and coastal scrub, typically on xeric hillsides; 30-150 m (98-492 ft). Blooming period: April - May	No	Moderate	Appropriate habitat present within study area. Cactus that would be readily detectable but was not observed during rare plant surveys.
Otay tarplant *(Deinandra conjugens)*	FT/SE CRPR 1B.1 SD County List A SDC NE	Annual herb. Clay soils in coastal sage scrub and valley and foothill grassland; 25-300 m (82-984 ft). Blooming period: May - June	No	Moderate	Was not observed during rare plant surveys. Reference population was checked to confirm that May 2019 rare plant survey was conducted while the local populations were in bloom.
Tecate tarplant (*Deinandra floribunda*)	CRPR 1B.2, SD County List A	Annual herb. Chaparral and coastal sage scrub, also in arroyos; 70-1220 m (230-4002 ft). Blooming period: August - October	No	Not expected	Outside of species known range.
Western dichondra (*Dichondra occidentalis*)	CRPR 4.2, SD County List D	Perennial rhizomatous herb. Chaparral, cismontane woodland, coastal scrub, and grassland. 50-500m. Blooming period mar-Jul.	**Yes**	**Present**	Observed in the study area.
Orcutt's bird's-beak *(Dicranostegia orcuttiana)*	CRPR 2B.1 SD County List B	Hemiparasitic annual herb. Coastal scrub, seasonally dry drainages, uplands adjacent to riparian habitat; 10-350 m (32-1148 ft). Blooming period: March - September	No	Low	Appropriate habitat not present within study area.
Orcutt's dudleya *(Dudleya attenuata ssp. attenuata)*	CRPR 2B.1 SD County List B	Perennial herb. Rocky or gravelly coastal bluff scrub, chaparral, coastal scrub; 3-50 m (9-160 ft). Blooming period: May -July	No	Moderate	The only known population of this species is near the International Friendship Park. Suitable habitat present within the buffer of the study area. No suitable habitat present in the project area.
Blochman's dudleya *(Dudleya blochmaniae ssp. Blochmaniae)*	CRPR 1B.1 SD County List A	Perennial herb. Rocky, often clay or serpentine soils in coastal bluff scrub, chaparral, coastal scrub, and valley and foothill grassland; 5-450 m (16-1476 ft). Blooming period: April - June	No	Moderate	Appropriate habitat is present in the study area. Not observed during rare plant surveys.

Appendix D. Potential to Occur - Sensitive Species Table - Flora

Common Name (Scientific Name)	Sensitivity Status	Habitat	Verified On-Site	Potential to Occur	Rationale
Variegated dudleya (*Dudleya variegata*)	CRPR 1B.2 SD County List A SDC NE	Perennial herb. Clay soils in chaparral, cismontane woodland, coastal scrub, valley and foothill grassland, and vernal pools; 3-580 m (9-1903 ft). Blooming period: April - June	No	Moderate	Appropriate habitat present in the study area. Not observed during rare plant surveys.
Sticky dudleya *(Dudleya viscida)*	CRPR 1B.2 SD County List A	Perennial herb. Rocky soils in coastal bluff scrub, chaparral, cismontane woodland, and coastal scrub; 10-550 m (32-1804 ft). Blooming period: May - June	No	Not expected	Study area is outside of the species' known range of North County San Diego, Riverside County, and Orange County.
Palmer's goldenbush (*Ericameria palmeri* var. *palmeri*)	CRPR 1B.1 SD County List B SDC NE	Evergreen shrub. Coastal drainages, in mesic chaparral sites, or rarely in coastal sage scrub; below 600 m (1969 ft). Blooming period: August - October (uncommon in July)	No	Low	Marginally suitable habitat is present within the study area. Evergreen shrub that would be readily detectable but was not observed during rare plant surveys.
San Diego button-celery (*Eryngium aristulatum* var. *parishii*)	FE/SE CRPR 1B.1 SD County List A	Annual/perennial herb. Mesic soils in coastal scrub, valley and foothill grassland, and vernal pools; 20-620 m (65-2034 ft). Blooming period: April - June	No	Not expected	Vernal pool species. No suitable habitat is present in the study area.
Sand-loving wallflower *(Erysimum ammophilum)*	CRPR 1B.2	Perennial herb. Sandy openings in maritime chaparral, coastal dunes, and coastal scrub; 0-60 m (0-196 ft). Blooming period: February - June	No	Low	Marginally suitable habitat is present in the study area. Not observed during rare plant surveys.
Cliff spurge *(Euphorbia misera)*	CRPR 2B.2 SD County List B	Perennial shrub. Rocky areas in coastal bluff scrub, coastal scrub, and Mojavean desert scrub; 10-500 m (32-1640 ft). Blooming period: December - October	**Yes**	**Present**	Observed within maritime succulent scrub on hillsides in the study area, outside of the Project Area.
San Diego barrel cactus (*Ferocactus viridescens*)	CRPR 2B.1 SD County List B	Stem succulent. Sandy to rocky areas; chaparral, coastal scrub, valley and foothill grassland, vernal pools; 3-450 m (9-1476 ft). Blooming period: May - June	**Yes**	**Present**	Observed within maritime succulent scrub on hillsides in the study area, outside of the Project Area.
Palmer's frankenia *(Frankenia palmeri)*	CRPR 2B.1 SD County List B	Perennial herb. Coastal dunes, coastal salt marshes and swamps, playas; 0-10 m (0-32 ft). Blooming period: May - July	No	Not expected	Restricted to coastal dunes, coastal salt marshes and swamps, playas. No appropriate habitat present within the study area.
Mexican flannelbush *(Fremontodendron mexicanum)*	FE/SR CRPR 1B.1 SD County List A	Evergreen shrub. Gabbroic, metavolcanic, or serpentine soils in closed-cone coniferous forest, chaparral, and cismontane woodland; 10-716 m (32-2349 ft). Blooming period: March - June	No	Low	Appropriate habitat present within study area. Only common in the U.S. on Otay Mountain. Large perennial shrub that would be readily detectable but was not observed during rare plant surveys.

Appendix D. Potential to Occur - Sensitive Species Table - Flora

Common Name (Scientific Name)	Sensitivity Status	Habitat	Verified On-Site	Potential to Occur	Rationale
Desert bedstraw *(Galium proliferum)*	CRPR 2B.2	Annual herb. Rocky or limestone carbonate areas in Joshua tree woodland, Mojavean desert scrub, and Pinyon and Juniper woodland; 1190-1630 m (3903-5346 ft). Blooming period: March - June	No	Not expected	Outside of species known range and habitat requirements.
San Diego gumplant (*Grindelia hallii*)	CRPR 1B.2 SD County List A	Perennial herb. Meadows, chaparral, lower montane coniferous forest, and valley and foothill grassland; 185-1745 m (606-5723 ft). Blooming period: May - October	No	Not expected	Montane species. This species is generally restricted to the mountains of San Diego County and is not expected at a coastal site.
Palmer's grapplinghook (*Harpagonella palmeri*)	CRPR 4.2 SD County List D	Annual herb. Clay soils in chaparral, grasslands, coastal sage scrub; 20-955 m (65 to 3132 ft). Blooming period: March - May	No	Low	Restricted to clay soils. No appropriate habitat present within the study area.
Tecate cypress (*Hesperocyparis forbesii*)	CRPR 1B.1 SD County List A	Perennial evergreen tree. Clay, gabbroic, or metavolcanic soils within closed-cone coniferous forest and chaparral; 80-1500 m (262-4921 ft).	No	Not expected	Appropriate habitat not present within study area. Large perennial species that would be readily detectable but was not observed during rare plant surveys.
Beach goldenaster *(Heterotheca sessiliflora ssp. Sessiliflora)*	CRPR 1B.1	Perennial herb. Coastal chaparral, coastal dunes, and coastal scrub; 0-1225 m (0-4018 ft). Blooming period: March - December	No	Not expected	Restricted to salt marshes and dunes. No appropriate habitat present within the study area.
Decumbent goldenbush *(Isocoma menziesii var. decumbens)*	CRPR 1B.2 SD County List A	Perennial shrub. Chaparral and in sandy coastal scrub, often in sandy disturbed areas; 10-135 m (33-443 ft). Blooming period: April - November	No	Moderate	Appropriate habitat present within study area, and the study area is within the appropriate geographical region for this species. Large perennial shrub that would be readily detectable but was not observed during rare plant surveys.
San Diego marsh-elder (*Iva hayesiana*)	CRPR 2B.2 SD County List B	Perennial herb. Marshes and swamps, wetland areas, and playas; 10-500 m (32-1640 ft). Blooming period: April - October	No	Low	Preferred mesic habitat not present in the study area. Large perennial shrub that would be readily detectable but was not observed during rare plant surveys.
Coulter's goldfields *(Lasthenia glabrata ssp. coulteri)*	CRPR 1B.1 SD County List A	Annual herb. Coastal salt marsh, coastal salt swamps, playas, vernal pools; 1-1220 m (3-4001 ft). Blooming period: February - June	No	Not expected	Restricted to coastal salt marsh, coastal salt swamps, playas, vernal pools. No appropriate habitat present within the study area.
Gander's pitcher sage *(Lepechinia ganderi)*	CRPR 1B.3 SD County List A SDC NE	Perennial shrub. Gabbroic or metavolcanic soils in closed-cone coniferous forest, chaparral, coastal scrub, and valley and foothill grassland; 305-1005 m (1000-3296 ft). Blooming period: June - July	No	Not expected	Restricted to gabbroic or metavolcanic soils. No appropriate habitat present within the study area.
Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*)	CRPR 4.3 SD County List A	Annual herb. Openings in chaparral and sage scrub; below 885 m (2900 ft). Blooming Period: January - July	No	Moderate	Appropriate habitat present within study area; however suitable soils heavily disturbed by agricultural activities within study area.

Appendix D. Potential to Occur - Sensitive Species Table - Flora

Common Name (Scientific Name)	Sensitivity Status	Habitat	Verified On-Site	Potential to Occur	Rationale
Sea dahlia *(Leptosyne maritima)*	CRPR 2B.2 SD County List B	Perennial herb. Coastal bluff scrub and coastal scrub; 5-150 m (16-492 ft). Blooming period: March - May	**Yes**	**Present**	Observed within maritime succulent scrub on hillsides in the study area, outside of the Project Area.
California desert thorn *(Lycium californicum)*	CRPR 4.2 SD County List D	Perennial shrub. Coastal bluff scrub and coastal scrub; 5-150 m (16-492 ft). Blooming period: December - August	**No**	Moderate	Not observed in the study area. **Observed outside of the study area in 2018** (ICF 2018). Large perennial shrub that would be readily detectable but was not observed during rare plant surveys.
Felt-leaved monardella (*Monardella hypoleuca* ssp. *lanata*)	CRPR 1B.2 SD County List A	Rhizomatous herb. Chaparral and cismontane woodland; 300-1575 m (984-5040 ft). Blooming Period: June - August	No	Not Expected	Generally restricted to undeveloped peaks and mountainous ridgelines. No appropriate habitat present within the study area.
Jennifer's monardella *(Monardella stoneana)*	CRPR 1B.2 SD County List A	Perennial herb. Usually in rocky, intermittent streambeds in closed-cone coniferous forest, chaparral, coastal scrub, riparian scrub; 10-790 m (32-2591 ft). Blooming period: June - September	No	Not Expected	Generally restricted to rocky, intermittent streambeds on Otay Mountain. No appropriate habitat present within the study area.
Willowy monardella *(Monardella viminea)*	FE/SE CRPR 1B.1 SD County List A SDC NE	Perennial herb. Alluvial ephemeral washes in chaparral, coastal scrub, riparian forest, riparian scrub, and riparian woodland; 50-225 m (164-738 ft). Blooming period: June - August	No	Not Expected	Species highly restricted to the canyons of central san Diego County. Well outside of the known range of this species. No appropriate stream terrace microhabitat present.
Little mousetail *(Myosurus minimus ssp. apus)*	CRPR 3.1 SD County List C	Annual herb. Alkaline vernal pools; 20-640 m (65-2100 ft). Blooming period: March - June	No	Not expected	Vernal pool species. No suitable habitat present in the study area.
Mud nama (*Nama stenocarpum*)	CRPR 2B.2 SD County List B	Annual/perennial herb. Marshes and swamps, also riverbanks and lake margins; 5-500 m (16-1640 ft). Blooming period: January - July	No	Not expected	Appropriate aquatic fringe habitat not present within the study area.
Spreading navarretia *(Navarretia fossalis)*	FT CRPR 1B.1 SD County List A	Annual herb. Chenopod scrub, assorted freshwater marshes and swamps, playas, and vernal pools; 30-655 m (98-2149 ft). Blooming period: April - June	No	Not expected	Vernal pool species. No suitable habitat present in the study area.
Prostrate vernal pool navarretia *(Navarretia prostrata)*	CRPR 1B.1 SD County List A	Annual herb. Mesic coastal scrub, meadows and seeps, alkaline valley and foothill grassland, and vernal pools; 15-1210 m (49-3968 ft). Blooming period: April - July	No	Not expected	Vernal pool species. No suitable habitat present in the study area.

Appendix D. Potential to Occur - Sensitive Species Table - Flora

Common Name (Scientific Name)	Sensitivity Status	Habitat	Verified On-Site	Potential to Occur	Rationale
Coast woolly-heads *(Nemacaulis denudata var. denudata)*	CRPR 1B.2 SD County List A	Annual herb. Coastal dunes and beaches; 0-100 m (0-328 ft). Blooming period: April - September	No	Low	Generally restricted to coastal beaches. Not observed during rare plant surveys in 2019.
Slender cottonheads *(Nemacaulis denudata var. gracilis)*	CRPR 2B.2 SD County List B	Annual herb. Coastal dunes, desert dunes, and Sonoran desert scrub; -50 – 400 m (-164 – 1312 ft). Blooming period: March - May	No	Low	Generally restricted to coastal beaches. Not observed during rare plant surveys in 2019.
California Orcutt's grass *(Orcuttia californica)*	FE/SE CRPR 1B.2 SD County List A	Annual herb. Vernal pools; 15-660 m (49-2165 ft). Blooming period: April - August	No	Not expected	Vernal pool species. No suitable habitat present in the study area.
Baja California birdbush *(Ornithostaphylos oppositifolia)*	SE CRPR 2B.1 SD County List B	Perennial evergreen shrub. Chaparral; 55-800 m (180-2624 ft). Blooming period: January - April	No	Not expected	Appropriate habitat present and within the potential range of this species. This species is known in the U.S. from only one location on Otay Mesa. Large perennial shrub that would be readily detectable but was not observed during rare plant surveys.
Short-lobed broomrape *(Orobanche parishii ssp. brachyloba)*	CRPR 4.2 SD County List D	Parasitic perennial herb. Sandy coastal bluff scrub, coastal dunes, and coastal scrub; 3-305 m (9-1000 ft). Blooming period: April - October	No	Not expected	Generally restricted to coastal dunes. Not observed during rare plant surveys in 2019.
Brand's star phacelia *(Phacelia stellaris)*	CRPR 1B.1 SD County List A	Annual herb. Coastal dunes, coastal scrub; 1-400 m (3-1312 ft). Blooming period: March - June	No	Low	Generally restricted to coastal dunes. Not observed during rare plant surveys in 2019.
San Diego mesa mint *(Pogogyne abramsii)*	FE/SE CRPR 1B.1 SD County List A	Annual herb. Vernal pools; 90-200 m (295-656 ft). Blooming period: March - July	No	Not Expected	Vernal pool species. No suitable habitat present in the study area. This species is not known to be extant south of Mission Valley.
Otay mesa mint *(Pogogyne nudiuscula)*	FE/SE CRPR 1B.1 SD County List A	Annual herb. Vernal pools; 90-250 (295-820 ft). Blooming period: May - July	No	Not expected	Vernal pool species. No suitable habitat present in the study area.
Nuttall's scrub oak *(Quercus dumosa)*	CRPR 1B.1 SD County List A	Perennial evergreen shrub. Sandy or clay loam in closed-cone coniferous forest, chaparral, and coastal scrub; 15-400 m (49-1312 ft.). Blooming period: February - August	No	Moderate	Appropriate habitat present. Large perennial shrub that would be readily detectable but was not observed during rare plant surveys.

Appendix D. Potential to Occur - Sensitive Species Table - Flora

Common Name (Scientific Name)	Sensitivity Status	Habitat	Verified On-Site	Potential to Occur	Rationale
Santa Catalina Island currant *(Ribes viburnifolium)*	CRPR 1B.2 SD County List A	Evergreen shrub. Chaparral and cismontane woodland; 30-305 m (98-1000 ft). Blooming period: February - April	No	Low	Marginally suitable habitat present. Large perennial shrub that would be readily detectable but was not observed during rare plant surveys.
Small-leaved rose *(Rosa minutifolia)*	SE CRPR 2B.1 SD County List B	Deciduous shrub. Chaparral and coastal scrub; 150-160 m (492-524 ft). Blooming period: January - June	No	Moderate	Appropriate habitat present. Perennial shrub that would be readily detectable but was not observed during rare plant surveys.
Munz's sage *(Salvia munzii)*	CRPR 2B.2 SD County List B	Evergreen shrub. Chaparral and coastal sage scrub; 120-1065 m (393-3493 ft). Blooming period: February - April	No	Moderate	Appropriate habitat present within study area and the study area is within the restricted range of this species. Large perennial shrub that would be readily detectable but was not observed during rare plant surveys.
Ashy spike-moss (*Selaginella cinerascens*)	CRPR 4.1 SD County List D	Perennial herb. Chaparral and coastal scrub. 20-640m	**Yes**	**Present**	Observed in the study area.
Chaparral ragwort *(Senecio aphanactis)*	CRPR 2B.2 SD County List B	Annual herb. Chaparral, cismontane woodland, coastal scrub, and alkaline flats; 15-800 m (49-2624 ft.). Blooming period: January - April	No	Moderate	Appropriate habitat present within study area.
Purple stemodia (*Stemodia durantifolia*)	CRPR 2B.1 SD County List B	Perennial herb. Population wide, along minor creeks and seasonal drainages, often in mesic, sandy soils in Sonoran Desert scrub. Within the coastal zone in streams and creeks, typically slow-moving rocky streams; 180-300 m (590-984 ft). Blooming period: January - December	No	Low	Restricted to creeks and seasonal drainages. No appropriate habitat present within the study area.
Laguna Mountains jewel-flower (*Streptanthus bernardinus*)	CRPR 4.3 SD County List D	Perennial herb. Chaparral and lower montane coniferous forest; 670-2500 m (2198-8202 ft). Blooming period: May - August	No	Not Expected	Montane species. Not expected in coastal areas.
Oil neststraw *(Stylocline citroleum)*	CRPR 1B.1 SD County List A	Annual herb. Clay soils in chenopod scrub, coastal scrub, and valley and foothill grassland, associated with oilfields; 50-400 m (164-1312 ft). Blooming period: March - April	No	Low	Marginally suitable habitat present within the study area.
Estuary seablite *(Suaeda esteroa)*	CRPR 1B.2 SD County List A	Perennial herb. Coastal salt marshes and swamps; 0-5 m (0-16 ft). Blooming period: May - January	No	Not Expected	Restricted to coastal salt marshes and swamps. No appropriate habitat present within the study area.
Parry's tetracoccus (*Tetracoccus dioicus*)	CRPR 1B.2 SD County List A	Deciduous shrub. Chaparral and coastal sage scrub; 165-1000 m (541-3280 ft). Blooming period: April - May	No	Low	Appropriate habitat present within study area, but outside of known range. Large perennial shrub that would be readily detectable but was

Appendix D. Potential to Occur - Sensitive Species Table - Flora

Common Name (Scientific Name)	Sensitivity Status	Habitat	Verified On-Site	Potential to Occur	Rationale
					not observed during rare plant surveys.

Legend:

Status:
Federal
FE - Listed as endangered under the federal Endangered Species Act.
FT - Listed as threatened under the federal Endangered Species Act.
FC – Candidate for listing under the federal Endangered Species Act.
State
SE - Listed as endangered under the California Endangered Species Act.
ST – Listed as threatened under California Endangered Species Act.
SR – Listed as rare under California Endangered Species Act.
CA Rare Plant Rank (CRPR) – Formerly known as CNPS List
1A. Presumed extirpated in California, and either rare or extinct elsewhere
1B. Rare, Threatened, or Endangered in California and elsewhere
2A. Presumed extirpated in California, more common elsewhere
2B. Rare, Threatened, or Endangered in California, more common elsewhere
3. Plants for which we more information is needed - Review list
4. Plants of limited distribution - Watch list
Threat Ranks
.1 - Seriously endangered in California
.2 – Fairly endangered in California
.3 – Not very endangered in California
San Diego County List
Plants
A – Rare, threatened or endangered in California and elsewhere
B – Rare, threatened or endangered in California but more common elsewhere
C – Maybe quite rare, but more information is needed to determine their status
D – Limited distribution and are uncommon but not presently rare or endangered

MSCP NE – San Diego Multiple Species Conservation Program Narrow Endemic Species

References:
Special Status plant information from CDFW 2019. Nomenclature and plant descriptions from: CNPS Online Inventory, Calflora.org, Baldwin 2012, Reiser 2001, Roberts 1989. Range information from CNDDB 2019, CNPS 2019, and SDNHM Plant Atlas Project 2019.

Appendix E
Observed Species List – Fauna

Appendix E Wildlife Species Detected

Scientific Name	Common Name	Special Status	
VERTEBRATES			
Reptiles			
Sceloporus occidentalis	Western Fence Lizard		
Uta stansburiana elegans	Western Side-blotched Lizard		
Birds			
Circus cyaneus	Northern Harrier	CSC	SDC Group I, MSCP
Accipiter cooperii	Cooper's Hawk		SDC Group I, MSCP
Buteo jamaicensis	Red-tailed Hawk		
Larus occidentalis	Western Gull		
Zenaida macroura	Mourning Dove		
Calypte anna	Anna's Hummingbird		
Falco sparverius	American Kestrel		
Empidonax difficilis	Pacific-slope Flycatcher		
Sayornis saya	Say's Phoebe		
Tyrannus vociferans	Cassin's Kingbird		
Vireo bellii pusillus	Least Bell's Vireo	FE, SE	SDC Group I, MSCP
Corvus corax	Common Raven		
Eremophila alpestris	Horned Lark		
Stelgidopteryx serripennis	Northern Rough-winged Swallow		
Petrochelidon pyrrhonota	Cliff Swallow		
Psaltriparus minimus	Bushtit		
Troglodytes aedon	House Wren		
Thryomanes bewickii	Bewick's Wren		
Polioptila californica californica	Coastal California Gnatcatcher	FT, CSC	SDC Group I, MSCP
Chamaea fasciata	Wrentit		
Mimus polyglottos	Northern Mockingbird		
Oreothypis celata	Orange-crowned Warbler		
Geothlypis trichas	Common Yellowthroat		
Pipilo maculatus	Spotted Towhee		
Aimophila ruficeps canescens	Southern California Rufous-crowned Sparrow		SDC Group I, MSCP
Melozone crissalis	California Towhee		
Melospiza melodia	Song Sparrow		

Scientific Name	Common Name	Special Status	
Zonotrichia leucophrys	White-crowned Sparrow		
Passerina caerulea	Blue Grosbeak		
Icterus cucullatus	Hooded Oriole		
Haemorhous mexicanus	House Finch		
Carduelis psaltria	Lesser Goldfinch		
Mammals			
Sylvilagus audubonii	Desert Cottontail		
Lepus californicus bennettii	San Diego Black-tailed Jackrabbit	CSC	SDC Group II
Thomomys bottae	Botta's Pocket Gopher		

Legend

*= Non-native or invasive species

Special Status:

Federal:
FE = Endangered
FT = Threatened

State:
SE = Endangered
ST =Threatened
CSC = California Species of Special Concern
CFP = California Fully Protected Species

County:
SDC Group I = includes animal species that have a very high level of sensitivity, either because they are listed as threatened or endangered or because they have very specific natural history requirements that must be met.
SDC Group II - includes animal species that are becoming less common, but are not yet so rare that extirpation or extinction is imminent without immediate action. These species tend to be prolific within their suitable habitat types.

MSCP = Multiple Species Conservation Program Covered Species

Appendix F
Potential to Occur Sensitive Species Table – Fauna

APPENDIX F. POTENTIAL TO OCCUR - SENSITIVE SPECIES TABLE - FAUNA

Common Name (*Scientific Name*)	Sensitivity Code & Status	Habitat Preference/Requirements	Potential to Occur	Rationale
INVERTEBRATES				
Globose Dune Beetle *(Coelus globosus)*	SDC Group I	Leaf litter under shrubs and perennial vegetation in coastal dunes.	Not expected	Restricted to coastal dunes in the immediate vicinity of the shore. No appropriate habitat is present within the study area.
Hermes Copper Butterfly *(Lycaena hermes)*	FC SDC Group I	Larvae utilize mature spiny redberry. Species normally occurs in areas of spiny redberry surrounded by California buckwheat.	Not expected	No suitable larval host plants present within the study area.
Monarch Butterfly – California overwintering population *(Danaus plexippus)*	SDC Group II	Migratory, may overwinter in California. Prairies, meadows and wetlands, but avoid thick forests. Winters in California in Eucalyptus and other large trees within the coastal zone.	Low	Species could move through the site but no Eucalyptus trees and no larval host plants observed within the study area.
Quino Checkerspot Butterfly *(Euphydryas editha quino)*	FE SDC Group I	Sunny openings within chaparral & coastal sage shrublands in parts of Riverside & San Diego counties. Hills & mesas near the coast. Need high densities of food plants *Plantago erecta* and *Castilleja exserta.*	Observed	Outside of the USFWS Recommended Survey Area for Quino (USFWS 2014). Incidentally observed in adjacent restoration area on April 12, 2019, outside of the study area.
Riverside Fairy Shrimp *(Streptocephalus woottoni)*	FE SDC Group I	Vernal swales, detention basins and deeper vernal pools. It occurs from Los Angeles County to Baja California.	Not expected	No suitable deep or long-inundation basins present within the study area.
San Diego Fairy Shrimp *(Branchinecta sandiegonensis)*	FE SDC Group I	Vernal pools. All known localities are below 701m (2,300 ft) and are within 64km (40 miles) of the Pacific Ocean.	Not expected	No suitable road rut or vernal pool habitat was present within the study area. Habitat assessment was conducted in January 2019 when ruts would have been readily observed.
Sandy Beach Tiger Beetle *(Cicindela hirticollis gravidai)*	SDC Group II	Coastal dunes.	Not expected	No appropriate habitat is present within the study area.
Senile Tiger Beetle *(Cicindela senilis frosti)*	SDC Group II	Estuaries, tidal mud flats.	Not expected	No appropriate habitat is present within the study area.
Thorne's Hairstreak *(Callophrys thornei)*	SDC Group I	Larvae host exclusively on Tecate cypress.	Not expected	No appropriate habitat is present within the study area.
Western Beach Tiger Beetle *(Cicindela latesignata latesignata)*	SDC Group II	Estuaries, tidal mud flats.	Not expected	No appropriate habitat is present within the study area.
Western Tidal-flat Tiger Beetle *(Cicindela gabbii)*	SDC Group II	Estuaries, tidal mud flats, salt marshes and sea beaches.	Not expected	No appropriate habitat is present within the study area.

APPENDIX F. POTENTIAL TO OCCUR - SENSITIVE SPECIES TABLE - FAUNA

Common Name (*Scientific Name*)	Sensitivity Code & Status	Habitat Preference/Requirements	Potential to Occur	Rationale
Wandering Skipper *(Panoquina errans)*	SDC Group I	Salt marshes. The host plant is *Distichlis spicata*; individuals overwinter as larvae in California. There are multiple flights each year.	Not expected	No appropriate salt marsh habitat is present within the study area.
AMPHIBIANS				
Arroyo Toad *(Anaxyrus californicus)*	FE SSC SDC Group I	Semi-arid regions near washes or intermittent streams, including valley-foothill and desert riparian, desert wash, etc. Rivers with sandy banks, willows, cottonwoods, and sycamores; loose, gravelly areas of streams in drier parts of range.	Not expected	No appropriate riparian habitat is present within the study area.
Western Spadefoot *(Spea (=Scaphiopus) hammondii)*	SSC Group II	Temporary pools with water temperatures between 9°C and < 30°C that last at least 3 weeks within areas of open vegetation.	Low	No suitable road rut or vernal pool habitat was present within the study area.
REPTILES				
Baja California Coachwhip *(Coluber fuliginosus)*	SSC	Open areas such as grassland, shrubland, and coastal sand dunes. Occurs in California only in a small area of southern San Diego County near the Baja California border.	Moderate	Suitable habitat occurs within the study area.
Belding's Orange-throated Whiptail (*Aspidoscelis hyperythra beldingi)*	CDFW WL	The habitat characteristics are poorly understood, however historically it was found in floodplains or terraces along streams. Closely tied to coastal sage scrub plants and some chaparral plants.	**High**	Suitable habitat occurs within the study area. Common in suitable habitat.
California Glossy Snake *(Arizona elegans occidentalis)*	SSC	Sandy habitat in grasslands, coastal sage scrub and chaparral.	Low	Suitable habitat occurs within the study area.
Coast Patch-nosed Snake *(Salvadora hexalepis virgultea)*	SSC SDC Group II	Inhabits semi-arid brushy areas and chaparral in canyons, rocky hillsides, and plains.	Moderate	Suitable habitat occurs within the study area.
Blainville's Horned Lizard *(Phrynosoma blainvillii)*	SSC SDC Group II	Grasslands, brushlands, and woodlands, with sandy or loose soil; requires abundant harvester ant colonies as a food source.	**High**	Suitable habitat occurs within the study area.
Coastal Whiptail *(Aspidocelis tigris stejnegeri)*	SSC SDC Group II	Deserts & semiarid areas with sparse vegetation and open areas. Also found in woodland & riparian areas. Ground may be firm soil, sandy, or rocky.	**High**	Suitable habitat occurs within the study area. Common in suitable habitat.
Coronado Skink (*Plestiodon skiltonianus interparietalis*)	CDFW WL SDC Group II	Forest, open woodland and grassy areas. Usually found under leaf litter, logs or rocks.	**High**	Not observed during surveys. Habitat is isolated.

APPENDIX F. POTENTIAL TO OCCUR - SENSITIVE SPECIES TABLE - FAUNA

Common Name (*Scientific Name*)	**Sensitivity Code & Status**	**Habitat Preference/Requirements**	**Potential to Occur**	**Rationale**
Green Sea Turtle *(Chelonia mydas)*	FT	Marine bay. Sea turtles have been reported in San Diego Bay since the 1850's	None	No marine habitat present within the study area.
Red Diamond Rattlesnake *(Crotalus ruber)*	SSC SDC Group II	Occurs from sea level to 914m (3000ft) in chaparral, woodland, and arid desert habitats with rocky areas and dense vegetation.	**High**	Suitable habitat occurs within the study area. Common in suitable habitat.
San Diego Ringneck Snake (*Diadophis punctatus similis)*	SDC Group II	Open, fairly rocky areas. Prefer areas with surface litter or herbaceous vegetation. Often in somewhat moist areas near intermittent streams.	Moderate	Suitable habitat occurs within the study area.
Southern California legless lizard *(Anniella stebbinsi)*	SSC	Occurs in moist loose soils under sparse vegetation in chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces.	Moderate	Suitable habitat occurs within the study area.
Two-striped Garter Snake *(Thamnophis hammondii)*	SSC SDC Group I	Inhabits perennial and intermittent streams with rocky beds and bordered by willow thickets or other dense vegetation.	Not Expected	No suitable riparian habitat occurs within the study area
BIRDS				
American Peregrine Falcon (*Falco peregrinus anatum*)	Delisted CDFW FP BCC SDC Group I	Nests on cliffs or in tall buildings. Feeds on waterfowl, bats, and rodents.	Nesting – None Foraging - low	No suitable breeding habitat at within study area. Not observed during surveys.
Belding's Savannah Sparrow (*Passerunculus sandwichensis beldingi*)	CE SDC Group I	Resident species that is restricted to coastal marshes dominated by pickleweed. It is known to occur within 5 general areas of coastal San Diego County (Unitt 2004).	Not expected	No suitable coastal marsh habitat present within the study area.
Bell's Sparrow *(Artemisiospiza belli)*	CDFW WL BCC SDC Group I	Sage scrub and open chaparral communities.	Moderate	Suitable habitat present. Not observed during focused California gnatcatcher surveys.
California Brown Pelican (*Pelecanus occidentalus californicus*)	Delisted CDFW FP SDC Group II	Coastal salt water, open ocean; rare vagrant inland. Nests on coastal bluffs or manmade structures. Non-breeding year-round visitor.	Low	No suitable foraging or nesting habitat present within the study area.

APPENDIX F. POTENTIAL TO OCCUR - SENSITIVE SPECIES TABLE - FAUNA

Common Name (*Scientific Name*)	Sensitivity Code & Status	Habitat Preference/Requirements	Potential to Occur	Rationale
California Black Rail *(Laterallus jamaicensis cotumicullus*)	CT CDFW FP BCC SDC Group II	Brackish freshwater marsh	Not expected	No suitable habitat within the study area. Not expected to occur due to local extirpation.
California Horned Lark (*Eremophila alpestris acta*)	CDFW WL SDC Group II	Open areas in coastal strand, grasslands, and sandy deserts. Forages in openings.	**Present**	Suitable foraging and nesting habitat present within the study area. Observed during surveys for California gnatcatcher.
California Least Tern (*Sternula antillarum browni*)	FE CE CDFW FP SDC Group I	Bays, estuaries, lagoons, shoreline. Resident. Migratory breeder in San Diego County that nests on beaches and dunes and forages over water (Unitt 2004). Silver Strand is known to support a breeding population that is regularly studied.	Low	No suitable foraging or nesting habitat present within the study area.
Cooper's Hawk *(Accipiter cooperii)*	CDFW WL SDC Group I	Nests in oak groves and mature stands of riparian woodland. This species has adapted well to development and is abundant in urban canyons with eucalyptus trees.	**Present – Foraging Nesting - Low**	Suitable foraging habitat present within the study area. No suitable nesting habitat present in the study area.
Coast (San Diego) Cactus Wren (*Campylorhynchus brunneicapillus sandiegensis*)	SSC BCC SDC Group I	Nests in cactus thickets of *Opuntia* or *Cylindropuntia* species, preferably over 1m tall. Coastal subspecies restricted to southern Orange County to extreme northwestern Baja California,	Low	Cactus within the study area were too small and short to support cactus wren nesting.
Coastal California Gnatcatcher (*Polioptila californica californica*)	FT SSC SDC Group I	Prefer open scrubby habitats such as coastal sage scrub. May forage in other areas particularly during the dry season.	**Present**	Observed during focused surveys for California gnatcatcher. Suitable foraging and nesting habitat present within the study area.
Double-crested Cormorant (*Phalacrocorax auritus)*	CDFW WL SDC Group II	Forages in fresh and salt water. Widespread foraging during breeding season, but only known breeding colonies are Sweetwater Reservoir and south San Diego Bay. Widespread and common throughout coastal slope during winter (Unitt 2004).	Foraging – None Nesting – None	No suitable foraging or nesting habitat present within the study area.
Elegant Tern *(Thalasseus elegans)*	SDC Group I	Nests in the salt works of south San Diego Bay. Elegant terns nesting in Isla Rasa in the Gulf of California migrate to southern California, and are abundant visitors to San Diego County's coast in late summer and early fall.	Foraging – None Nesting – None	No suitable foraging or nesting habitat present within the study area.
Least Bell's Vireo *(Vireo bellii pusillus)*	FE CE SDC Group I	Riparian thickets either near water or in dry portions of river bottoms; nests along margins of bushes and forages low to the ground; may also be found using mesquite and arrow weed in desert canyons.	**Present**	Observed outside of the study area during focused surveys for California gnatcatcher. Occupied nesting habitat present on the valley floor.

APPENDIX F. POTENTIAL TO OCCUR - SENSITIVE SPECIES TABLE - FAUNA

Common Name (*Scientific Name*)	Sensitivity Code & Status	Habitat Preference/Requirements	Potential to Occur	Rationale
Ridgway's Rail (*Rallus obsoletus*)	FE CE CDFW FP SDC Group I	Occurs in coastal salt marshes, especially where cordgrass dominates.	Not expected	No suitable habitat present within study area.
Northern Harrier (*Circus cyaneus*)	SSC SDC Group I	Grasslands and marshes. Nests are on the ground and typically concealed within a marsh or other dense, low-growing vegetation. The northern harrier is considered a breeding resident and a migrant species. Nesting harriers are now considered rare and the known breeding population in San Diego County is estimated at 25 to 75 pairs (Unitt 2004).	**Present – Foraging Nesting - High**	Observed foraging over the study area. Suitable breeding habitat exists within the study area.
Osprey (*Pandeon haliaetus*)	CDFW WL SDC Group I	Coast, lowland lakes, rarely foothills and mountain lakes. Uncommon fall/winter resident, rare in spring and summer. Fish are the primary prey item.	Low	Not suitable nesting or foraging habitat present within the study area.
Southern California Rufous-crowned Sparrow (*Aimophila ruficeps canescens*)	CDFW WL SDC Group I	Fairly common, widespread and generally fairly conspicuous resident of rocky grassland and patchy shrub habitats, often including areas with disturbance from fire, trash, soil compaction and non-native vegetation.	**Present**	Observed in Diegan coastal sage scrub during focused California gnatcatcher surveys.
Swainson's Hawk (*Buteo Swainsoni)*	CT BCC SDC Group I	Open country of the western US and Canada for breeding, from low to moderate elevations. Prairies, rangelands, meadows, open areas with scattered trees. Cultivated lands attract this hawk in some areas, where the human disturbance of agriculture causes concentrations of insects and rodents.	Low	Migratory routes are generally inland. No suitable nesting habitat within study area.
Southwestern Willow Flycatcher (*Empidonax traillii extimus*)	FE CE SDC Group I	Present as a summer breeder in brushy habitat within mature riparian forests. Other subspecies of willow flycatcher also migrate through southern California but do not nest here.	Not expected	No riparian habitat present on within study area.
Tricolored blackbird *(Agelaius tricolor)*	CE SSC BCC SDC Group I	Communal nests in large ponds or lakes dominated by cattails, bulrush, blackberries, and nettle. Forages in grasslands.	Not expected	No suitable breeding habitat present within the study area. Not expected in grasslands onsite because of lack of nearby nesting habitat.
Turkey Vulture (*Cathartes aura*)	SDC Group I	Breeding distribution not well known but thought to occur primarily in rugged rocky hills in mountain areas in recent decades. Turkey vultures migrate throughout San Diego County, occasionally even along the coast	**Foraging - High Nesting – Not expected**	Suitable foraging habitat present within the study area. Observed during 2018 surveys of TRVRP Campground (ICF 2018). No suitable nesting habitat present in study area.

APPENDIX F. POTENTIAL TO OCCUR - SENSITIVE SPECIES TABLE - FAUNA

Common Name (*Scientific Name*)	Sensitivity Code & Status	Habitat Preference/Requirements	Potential to Occur	Rationale
Western Snowy Plover (*Charadrius alexandrinus nivosus)*	FT SSC BCC SDC Group I	Sandy beaches, lagoon margins, tidal mud flats. Migrant and winter resident. Migratory breeder in San Diego County; uses beaches, dunes and salt flats for nesting. Silver Strand supports one of the two most concentrated nesting sites in San Diego County (Unitt 2004).	Low	No suitable foraging or nesting habitat present within the study area.
Western Burrowing Owl (*Athene cunicularia hypogaea*)	SSC BCC SDC Group I	Prairies, grasslands, lowland scrub, agricultural lands, coastal dunes, desert floors, and some artificial, open areas. They require large open expanses of sparsely vegetated areas on gently rolling or level terrain with an abundance of active small mammal burrows. They use rodent or other burrows for roosting and nesting cover and also known to use pipes, culverts, and nest boxes where burrows are scarce.	Low	Known breeding colony is nearby at NOFL Imperial Beach. A habitat assessment was conducted in January 2019 and found no ground squirrels or suitable burrow habitat within study area.
Western Yellow-billed Cuckoo *(Coccyzus americanus occidentalis)*	FT CE BCC SDC Group I	Summer breeder. Nests in dense cottonwood-dominated forests with larger rivers running through arid country. Few contemporary records from San Diego County.	Not Expected	No suitable dense riparian breeding habitat occurs on site. Not observed during focused surveys for least Bell's vireo.
White-tailed Kite (*Elanus leucurus*)	CFP SDC Group I	Nests in trees or large shrubs. Forages in grasslands and coastal sage scrub.	**High**	Suitable foraging and nesting habitat present within the study area. No nesting habitat present within the project site.
Yellow-breasted Chat *(Icteria virens)*	SSC SDC Group I	Nests and forages in riparian areas. Neotropical migrant present during the summer.	Moderate	Known from the Tijuana River Valley. No suitable breeding habitat present in the study area.
Yellow Rail *(Coturnicops noveboracensis)*	SSC BCC	Lives in dense marshes of grass and is extremely secretive. Has declined greatly, at least in its frequency as a winter visitor to California.	Not Expected	No suitable nesting habitat present within the study area. One record from San Diego in Santee in 1998; 3 total recent records from southern California.
Yellow Warbler (*Setophaga petechia*)	SSC BCC	Breeds in mature riparian woodland. Neotropical migrant present during the summer.	Moderate	Known from the Tijuana River Valley. No suitable breeding habitat present in the study area.
MAMMALS				
American Badger (*Taxidea taxus*)	SSC SDC Group II	Inhabits a diversity of habitats with principal requirements of sufficient food, friable soils, and relatively open, uncultivated ground. Grasslands, savannas, mountain meadows, and desert scrub. Declining in San Diego.	Moderate	Suitable habitat occurs on site. Species is rare throughout San Diego County.

APPENDIX F. POTENTIAL TO OCCUR - SENSITIVE SPECIES TABLE - FAUNA

Common Name (*Scientific Name*)	Sensitivity Code & Status	Habitat Preference/Requirements	Potential to Occur	Rationale
Big free-tailed Bat (*Nyctinomops (=Tadarida) macrotis*)	SSC SDC Group II	Inhabits arid, rocky areas of desert scrub or coniferous forests; roosts in crevices in cliffs. Insectivorous. Has been recorded in urban locations in San Diego County (CDFG 2005. Species is rare in California (CDFG 2005).	Roosting - Not Expected Foraging - Not Expected	Suitable roosting habitat not present within the study area..
Long-eared Myotis *(Myotis evotis)*	SDC Group II	Brush, woodland & forest habitats from sea level to about 9000 ft. prefers coniferous woodlands & forests. Nursery colonies in buildings, crevices, spaces under bark, & snags. Caves used primarily as night roosts.	Roosting - Not Expected Foraging - Not Expected	Suitable roosting habitat not present within the study area.
Mexican Long-tongued Bat (*Choeronycteris mexicana*)	SSC SDC Group II	Likes desert canyons, arid mountain ranges. Roosts by day in caves, mines or buildings. Records indicate only a summer resident in San Diego County (CDFG 2005). Feeds on nectar and pollen from agaves and cactus blossoms.	Roosting - Not Expected Foraging - Moderate	Suitable roosting habitat not present within the study area. Suitable foraging habitat present within the study area.
Pacific Pocket Mouse (*Perognathus longimembris pacificus*)	FE SSC SDC Group I	Coastal strand, coastal dunes, river alluvium and coastal sage scrub habitats within approximately 4 kilometers (2.5 miles) of the ocean in southern California. Feeds on seeds.	Not Expected	Historically documented from Los Angeles County to vicinity of Mexican border in San Diego County. Not one of the few known population locations. Now known only from Camp Pendleton and Dana Point (USFWS 2010).
Pallid Bat (*Antrozous pallidus*)	SSC SDC Group II	Throughout So. Cal. From coast to mixed conifer forest; grasslands, shrublands, woodlands, & forest; most common in open, dry habitats w/ rocky areas for roosting; yearlong resident in most of range. Roosts in rock crevices, caves, mine shafts, under bridges, in buildings and tree hollows.	Roosting - Not Expected Foraging - Moderate	Suitable roosting habitat not present within the study area. Suitable foraging habitat present within the study area.
Pocketed Free-tailed Bat (*Nyctinomops (=Tadarida) femorosaccus*)	SSC SDC Group II	Lives in deserts and sage scrub, roosts in rocky crevices, caves and man-made structures. Insectivorous.	Roosting - Low Foraging - Moderate	Suitable roosting habitat not present within the study area. Suitable foraging habitat present within the study area.
San Diego Black-tailed Jackrabbit (*Lepus californicus bennettii*)	SSC SDC Group II	Mostly found on the coastal side of local mountains in open habitats, usually avoiding dense stands of chaparral or woodlands.	**Present**	Observed utilizing open habitats on Spooner's Mesa.
San Diego Desert Woodrat (*Neotoma lepida intermedia*)	SSC SDC Group II	Variety of shrub and desert habitats primarily associated with rock outcroppings, boulders, cacti, or areas of dense undergrowth.	Moderate	Suitable habitat present within the study area. Not observed during surveys within scrub habitats.

APPENDIX F. POTENTIAL TO OCCUR - SENSITIVE SPECIES TABLE - FAUNA

Common Name (*Scientific Name*)	**Sensitivity Code & Status**	**Habitat Preference/Requirements**	**Potential to Occur**	**Rationale**
Townsend's Big-eared Bat (Corynorhinus townsendii)	SSC SDC Group II	Species can be found in a variety of habitats throughout the state where appropriate roosting habitat exists. Primarily roosts in caves and cavern-like spaces; also in abandoned buildings, mines, culverts, box-like spaces in bridges and other structures, and large hollows in trees. Very sensitive to human disturbances.	Roosting - Low Foraging - Moderate	Suitable roosting habitat present within the study area. Suitable foraging habitat present within the study area.
Western Mastiff Bat (*Eumops perotis californicus*)	SSC SDC Group II	Primarily a cliff-dwelling species for breeding. Found foraging in a variety of habitats, from dry desert washes, flood plains, chaparral, oak woodland, open ponderosa pine forest, grassland, montane meadows, and agricultural areas.	Roosting - Low Foraging - Moderate	Suitable roosting habitat not present within the study area. Suitable foraging habitat present within the study area.
Western Red Bat (*Lasiurus blossevillii*)	SSC SDC Group II	Usually among dense foliage, in forests and wooded areas, making long migrations from the northern latitudes to warmer climes for winter, sometimes hibernates in tree hollows or woodpecker holes. Insectivorous.	Roosting - Low Foraging - Moderate	Suitable roosting habitat not present within the study area. Suitable foraging habitat present within the study area
Western Small-footed Myotis (*Myotis ciliolabrum*)	SDC Group II	Wide range of habitats mostly arid wooded & brushy uplands near water. Seeks cover in caves, buildings, mines & crevices. Prefers open stands in forests and woodlands. Requires drinking water. Feeds on a wide variety of small flying insects.	Roosting - Not Expected Foraging - Moderate	Suitable roosting habitat not present within the study area. Suitable foraging habitat present within the study area.
Western Yellow Bat (*Lasiurus xanthinus*)	SSC	Rare visitor to San Diego County. Found in wooded areas and desert scrub. Roosts in foliage, particularly in palm trees.	Roosting - Not Expected Foraging - Moderate	Suitable roosting habitat not present within the study area. Suitable foraging habitat present within the study area.
Yuma Myotis *(Myotis yumanensis)*	SDC Group II	Optimal habitats are open forests and woodlands with sources of water over which to feed. Distribution is closely tied to bodies of water. Maternity colonies in caves, mines, buildings or crevices.	Roosting - Not Expected Foraging - Moderate	Suitable roosting habitat not present within the study area. Suitable foraging habitat present within the study area.

APPENDIX F. POTENTIAL TO OCCUR - SENSITIVE SPECIES TABLE - FAUNA

Common Name (*Scientific Name*)	Sensitivity Code & Status	Habitat Preference/Requirements	Potential to Occur	Rationale

LEGEND:

STATUS:
Federal
FE - Listed as endangered under the federal Endangered Species Act.
FT - Listed as threatened under the federal Endangered Species Act.
FC – Candidate for listing under the federal Endangered Species Act.

State
CE - Listed as endangered under the California Endangered Species Act.
CT- Listed as threatened under the California Endangered Species Act.
CFP – California Department of Fish and Wildlife (CDFW) Fully Protected species.
SSC – CDFW Species of Special Concern.
WL – CDFW Watch List

BCC - Federal Birds of Conservation Concern (USFWS 2008)

County
SDC Group I – San Diego County Group 1 Species includes animal species that have a very high level of sensitivity, either because they are listed as threatened or endangered or because they have very specific natural history requirements that must be met.
SDC Group II - San Diego County Group 2 Species includes animal species that are becoming less common but are not yet so rare that extirpation or extinction is imminent without immediate action. These species tend to be prolific within their suitable habitat types.

References
Special Status information from CDFW 2017. Nomenclature and invertebrate descriptions from Hogan 2005 and USFWS 1997. Nomenclature and vertebrate descriptions from AOU 1998 and supplements (Chesser *et al.* 2018), CDFW 2018, SSAR 2019, Bradley *et al.* 2014, and Unitt 2004.

Appendix G
California Gnatcatcher Survey Report

June 13, 2019

Stacey Love
Recovery Permit Coordinator
Carlsbad Fish and Wildlife Office
U.S. Fish and Wildlife Service
2177 Salk Avenue, Suite 250
Carlsbad, California 92008

Subject: **Coastal California Gnatcatcher 45-Day Summary Report for Tijuana River Valley Regional Park Spooner's Mesa Septic Project, San Diego County, California. Permit #TE063608-6**

Dear Ms. Love:

This report documents the results of the U.S. Fish and Wildlife Service (USFWS) protocol presence/absence surveys for coastal California gnatcatcher (*Polioptila californica californica*; CAGN) conducted by ICF in 2019 for the TRVRP Spooner's Mesa Septic Project near San Ysidro, San Diego County (Project).

Project Location and Description

The Project site is located on Spooner's Mesa in southern San Diego County near the International border along the Tijuana River Valley (Figure 1 and 2). The proposed Project exists within the Imperial Beach U.S. Geological Survey (USGS) 7.5 Minute Quadrangle, and ranges in elevation from 15 feet at the foot of the mesa, to 345 feet above mean sea level on top of the mesa. The Project consists of an approximately 3700-foot sewer alignment, with effluent disposal fields on top of the mesa. There is approximately 21.9 acres of suitable CAGN habitat within the project study area.

Habitat Description

The habitat within the study area consists of Diegan coastal sage scrub (CSS), with areas of ruderal/disturbed habitat, and developed areas in the form of unpaved roads. The CSS onsite is dominated by California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), lemonadeberry (*Rhus integrifolia*), deerweed (*Acmispon glaber*), bladderpod (*Peritoma arborea*), California encelia (*Encelia californica*) and laurel sumac (*Malosma laurina*). The disturbed/ruderal habitat is mostly concentrated on the top of the mesa, where there are signs of mowing and restoration activities. Crown daisy (*Glebionis coronaria*) is dominant in this area.

Methods

The Project study area exists within the County of San Diego's approved Multiple Species Conservation Program (MSCP) County Subarea Plan ("South County Plan"); thus, in accordance with USFWS (USFWS 1997) survey protocol, three surveys were conducted for the Project. The presence/absence focused survey for CAGN was conducted for the project between May 8 and May

23, 2019 under the authorization of permit holder Brian Lohstroh (TE063608-6). Recorded CAGN vocalizations were broadcast only to initially locate CAGN, and the surveys were conducted on foot with the aid of binoculars. The survey was conducted according to the schedule provided below in Table 1.

Table 1. Survey Dates and Conditions

Date	5/8/2019	5/15/2019	5/23/2019
Time on site	0700-1030	0650-1015	0715-1100
Temp (ºF)	55-63	63-64	59-63
Sky Cover (%)	100-95	100	95-50
Wind Speed (MPH)	1-6	0-3	2-7
Personnel	B. Lohstroh	B. Lohstroh	B. Lohstroh

Results

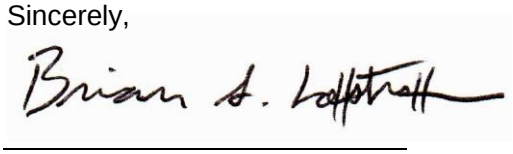
The survey area was determined to support at least four breeding CAGN territories during the protocol surveys. Three of the territories supported active family groups with adults tending to fledglings or juveniles during all three protocol surveys. The fourth CAGN territory supported an actively nesting pair, with one nest failing over the course of the first two surveys, and a second nesting attempt confirmed on the third survey visit. The cause of the nest failure is unclear; the nest was left intact but unattended during the second visit, and on the third visit the nest was still intact with one egg damaged and ants present. CAGN locations are included in Figure 2, with habitat usage indicated in Figure 3. Representative site photos are attached, along with a full list of wildlife species detected during the surveys.

A least Bell's vireo (*Vireo bellii pusillus*) was also detected on the lower slopes of Spooner's Mesa near the northwestern edge of the survey area. The calling individual was observed in the same general area on the May 8th and May 15th survey dates.

Certification

I certify that the information in this survey report fully and accurately represents my work. Please do not hesitate to contact me at (858) 750-9300 or brian@lohstrohbio.com with any questions.

Sincerely,



Brian Lohstroh
Senior Biologist
TE063608-6

References Cited

USFWS. 1997. Coastal California Gnatcatcher (*Polioptila californica californica*) Presence/Absence Survey Protocol. July 28, 1997.

Figures

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Figure 1
Regional Location
TRVRP Campground Spooner's Mesa Septic

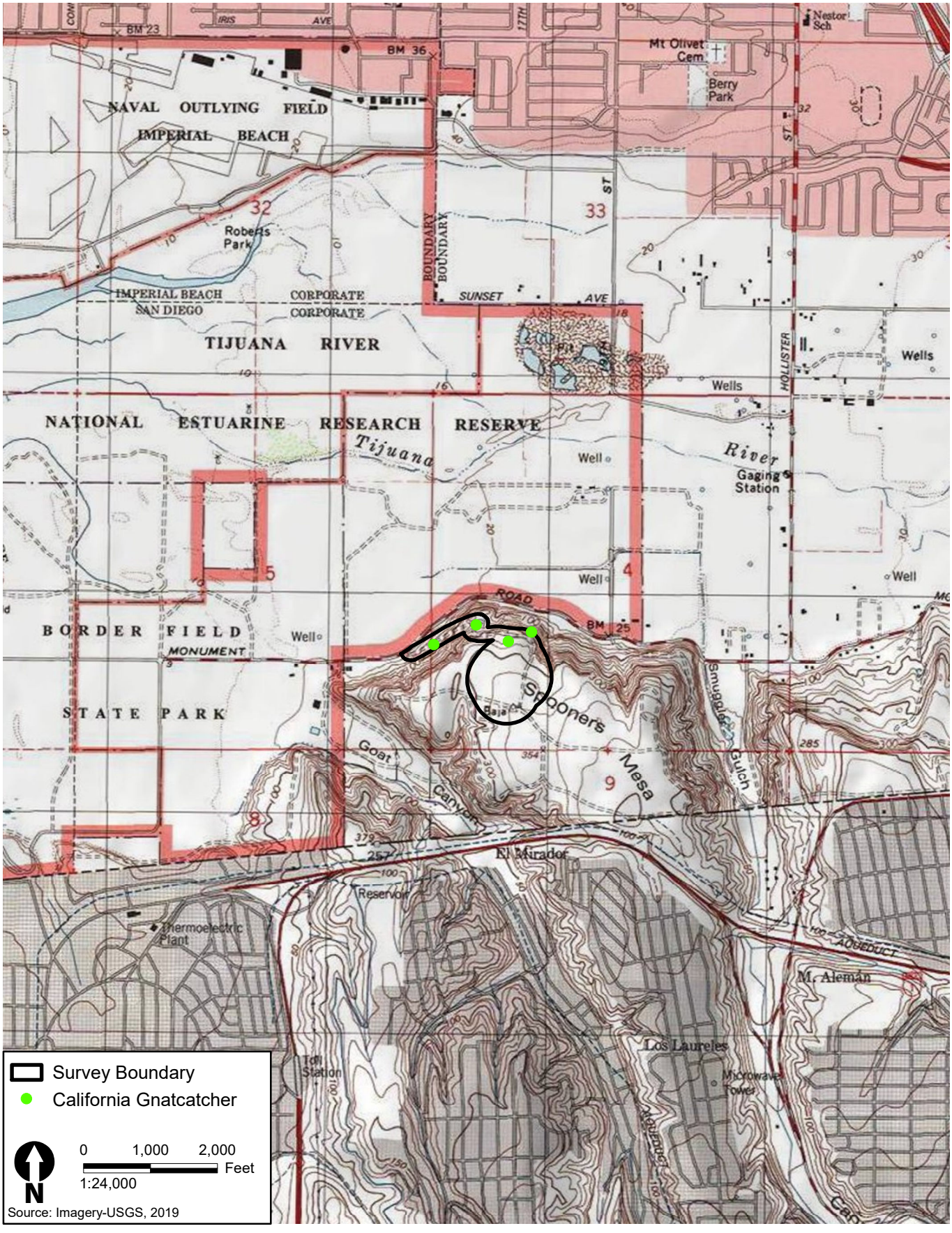


Figure 2
Project Vicinity
TRVRP Campground Spooner's Mesa Septic

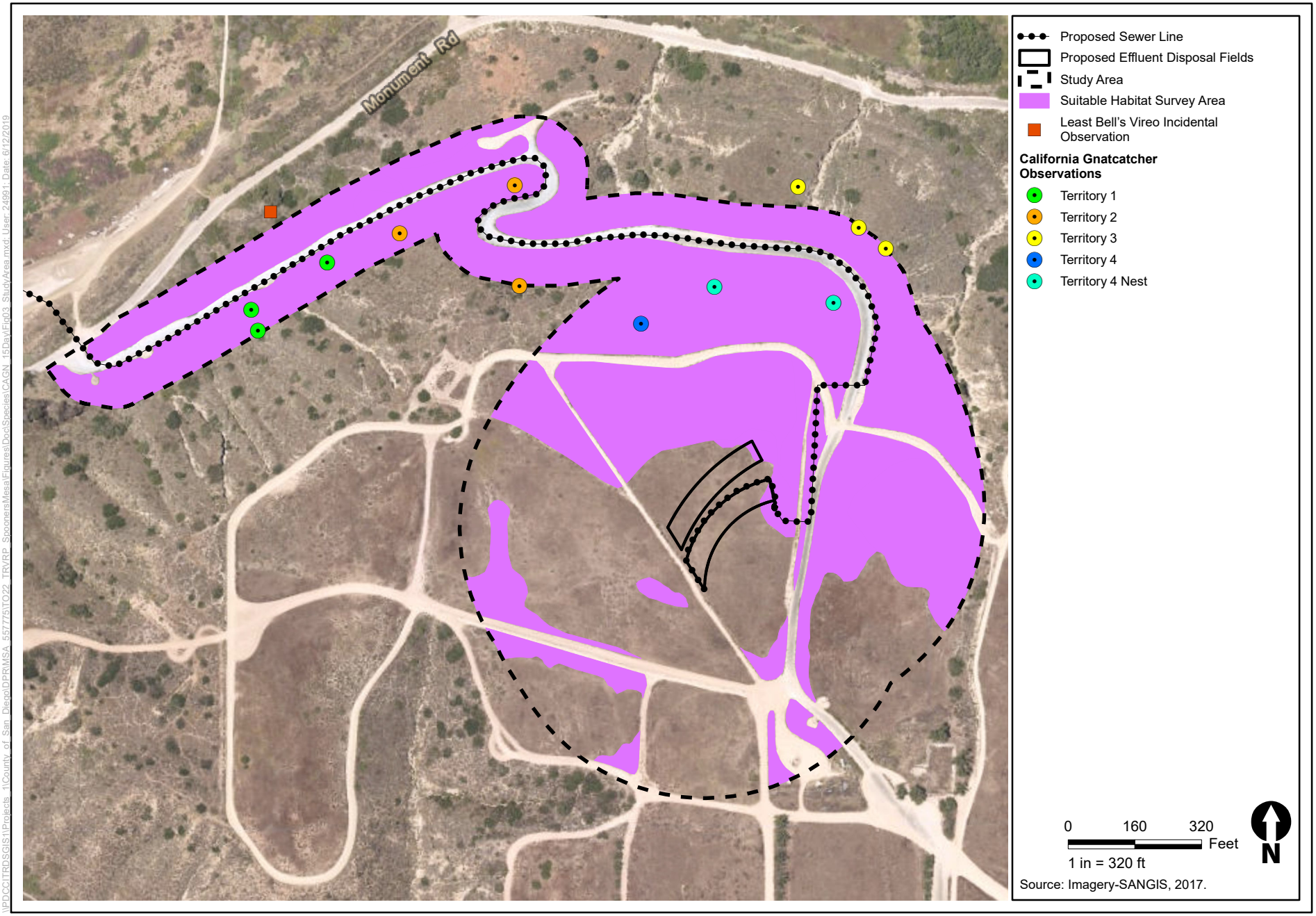


Figure 3
Study Area
TRVRP Campground Spooner's Mesa Septic

Photos

Photo 1. (5/8/19) View facing northwest from the northern portion of the survey area. CSS habitat and the access road are visible in the foreground. A CAGN family group was observed within the lower road loop at right.

Photo 2. (5/8/19) View facing northwest along the northern edge of Spooner's Mesa. A second CAGN family group was observed along the steep slopes in this area.

Photo 3. (5/15/19) View facing northwest from the access along the lower slopes of Spooner's near the northwestern edge of study area. A male CAGN from a third family group is visible at center.

Photo 4. (5/23/19) A failed nest within the fourth CAGN territory detected within the study area on the top of Spooner's Mesa. Two eggs appear to be still intact, but ants are present.

Wildlife Species List

Common Name	*Scientific Name*	Status
Mourning Dove	*Zenaida macroura*	
Anna's Hummingbird	*Calypte anna*	
Western Gull	*Larus occidentalis*	
Northern Harrier	*Circus cyaneus*	CA-SSC
Cooper's Hawk	*Accipiter cooperii*	CA-WL
Red-tailed Hawk	*Buteo jamaicensis*	
American Kestrel	*Falco sparverius*	
Pacific-slope Flycatcher	*Empidonax difficilis*	
Say's Phoebe	*Sayornis saya*	
Cassin's Kingbird	*Tyrannus vociferans*	
Least Bell's Vireo	*Vireo bellii pusillus*	CA-E, FE
Common Raven	*Corvus corax*	
Horned Lark	*Eremophila alpestris*	
Northern Rough-winged Swallow	*Stelgidopteryx serripennis*	
Cliff Swallow	*Petrochelidon pyrrhonota*	
Bushtit	*Psaltriparus minimus*	
House Wren	*Troglodytes aedon*	
Bewick's Wren	*Thryomanes bewickii*	
California Gnatcatcher	*Polioptila californica*	CA-SSC,FT
Wrentit	*Chamaea fasciata*	
Northern Mockingbird	*Mimus polyglottos*	
House Finch	*Haemorhous mexicanus*	
Lesser Goldfinch	*Spinus psaltria*	
Orange-crowned Warbler	*Oreothlypis celata*	
Common Yellowthroat	*Geothlypis trichas*	
Rufous-crowned Sparrow	*Aimophila ruficeps*	
California Towhee	*Melozone crissalis*	
Song Sparrow	*Melospiza melodia*	
Blue Grosbeak	*Passerina caerulea*	
Hooded Oriole	*Icterus cucullatus*	
CA-SSC: California Species of Special Concern		
CA-WL: California Watch List Species		
CA-E: California listed as Endangered		
FE: Federally Listed as Endangered		
FT: Federally Listed as Threatened		

Appendix H
Wetland Delineation Photo Log

Appendix H. Jurisdictional Delineation Photo Log

	Photograph # 4 Photo Date: March 18, 2019 Direction: West Comment: Feature 22, Figure 8c, facing upstream culvert. Channel is relatively unvegetated and contains upland vegetation on channel banks.
	Photograph # 8 Photo Date: March 18, 2019 Direction: North Comment: Feature 21, Figure 8c, standing on road looking down into the stream channel. Incised channel with cobble bottom and pipe culvert laying at bottom of channel. The culvert is likely damaged and flows are likely no longer contained within the culvert.

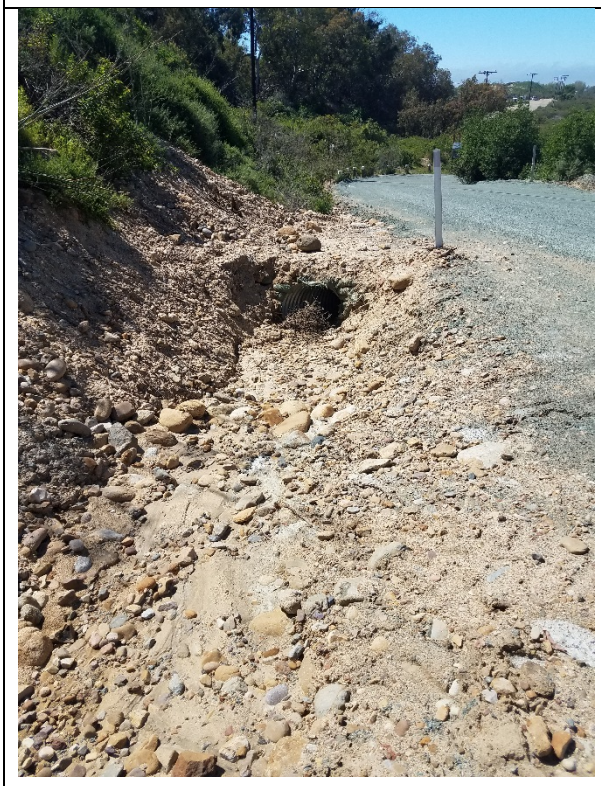
	Photograph # 9 Photo Date: March 18, 2019 Direction: West Comment: Feature 21, Figure 8d. Shallow channel occurring adjacent to gravel road and that receives flows from the mesa top. All flows enter a large culvert riser and likely connects to feature 21 located on the north side of the access road. Refer to photo 8.
	Photograph # 14 Photo Date: March 18, 2019 Direction: North Comment: Feature 6, Figure 8f. Non-jurisdictional road side ditch. The ditch appears to be constructed and compacted with gravel. Carries upstream flows occurring along the road. This feature does not appear to relocate or replace a previously jurisdictional feature.

	Photograph # 15 Photo Date: March 18, 2019 Direction: East Comment: Feature 3, Figure 8f. Ephemeral stream with silty channel bottom and banks of channel vegetated with upland vegetation. Channel flows east and becomes very steep.
	Photograph # 20 Photo Date: March 18, 2019 Direction: North-west Comment: Feature 2, Figure 8f. Erosional feature occurring along the north side of the existing dirt road.

	Photograph # 21 Photo Date: March 18, 2019 Direction: North Comment: Feature 1, Figure 8f. Swale feature. Vegetation is lacking at the bottom of the feature. Feature is very flat and no discernable OHWM indicators were observed. See OWHM Form 3 and 5 for OHWM cross-section.
	Photograph # 22 Photo Date: March 18, 2019 Direction: South Comment: Features 14 and 15, Figure 8d. Representative photo of steep non-jurisdictional erosional channels that occur along the eastern boundary of the survey area along the steep cliff.

	Photograph # 23 Photo Date: March 18, 2019 Direction: North Comment: Feature 20, Figure 8d. Erosional feature occurring north of the gravel access road.
	Photograph # 24 Photo Date: March 18, 2019 Direction: South Comment: Feature 25, Figure 8b. Looking up stream towards mesa top. Stream originates at the top of the mesa. Channel bottom consists of large cobbles and streambanks are vegetated with maritime succulent scrub.

	Photograph # 25 Photo Date: March 18, 2019 Direction: South Comment: Feature 28, Figure 8b. Looking up stream towards mesa top. Stream originates at the top of the mesa. Channel bottom consists of large cobbles and streambanks are vegetated with maritime succulent scrub. Flows enter a pipe culvert and then outlet into Feature 29.
	Photograph # 26 Photo Date: March 18, 2019 Direction: South Comment: Feature 8, Figure 8e. Swale like feature that is relatively flat and does not support any OHWM indicators. See OHWM #3 for a representative cross-section of Feature 8.

	Photograph # 27 Photo Date: March 18, 2019 Direction: North Comment: Feature 7, Figure 8d. Narrow ephemeral channel with steep channel banks. Feature runs along the northeastern boundary of the mesa top. See OHWM 4 for representative channel cross-section. Channel bottom is relatively unvegetated and channel banks support upland vegetation.
	Photograph # 28 Photo Date: March 18, 2019 Direction: West Comment: Feature 25 – road ditch, Figure 8b. Feature is shallow channel that occur along the southern side of the gravel access road. This road side ditch is considered jurisdictional as it redirects flows from and replaces existing stream channels

	Photograph # 29 Photo Date: March 18, 2019 Direction: North west Comment: Feature 29, Figure 8b. Shallow sandy stream that receives upstream flows from Features 25-28. Flows sheet flow across monument road to the parcel located to the north.

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Appendix B

TRVRP Campground, Spooner's Mesa Septic Project
Phase I Cultural Resources Report

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PHASE I CULTURAL RESOURCES SURVEY FOR TIJUANA RIVER VALLEY REGIONAL PARK CAMPGROUND, SPOONER'S MESA SEPTIC PROJECT, SAN DIEGO COUNTY, CALIFORNIA

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April 2019

ICF. 2019. Phase I Cultural Resources Survey for the Tijuana River Valley Regional Park Campground, Spooner's Mesa Septic Project, San Diego County, California. April. (ICF 00087.19.) San Diego, California. Prepared for County of San Diego Department of Parks and Recreation, San Diego, California.

National Archaeological Database Information

Author(s):	Karolina Chmiel, MA Timothy Yates, PhD, MA Nara Cox, BA Jordan Menvielle, BA
Consulting Firm:	ICF 525 B Street, Suite 1700 San Diego, CA 92101 (858) 578-8964
Client:	San Diego County Department of Parks and Recreation
Report Date:	April 2019
Report Title:	Phase I Cultural Resources Survey for the Tijuana River Valley Regional Park Campground, Spooner's Mesa Septic Project, San Diego County, California
Type of Study:	Phase I Survey
New Sites:	ICF-SPN-P-001, ICF-SPN-ISO-001, ICF-SPN-ISO-002, ICF-SPN-ISO-003, ICF-SPN-ISO-004
Updated Sites:	P-37-011095
USGS Quadrangle:	Imperial Beach, California: 7.5' series (1:24,000)
Acreage:	15.2 acres; 15.2 acres surveyed
Keywords:	Phase I Survey; CEQA Impact Assessment; Tijuana River Valley; lithic isolates; lithic scatter; Spooner's Mesa; San Diego County

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Contents

Tables and Figures

Acronyms and Abbreviations

BP	before present
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CHL	California Historical Landmarks
CHRIS	California Historical Resources Information System
CRHR	California Register of Historical Resources
DPR	Department of Parks and Recreation
GLO	General Land Office
GPR	ground penetrating radar
HRI	California Historic Resources Inventory
ITRFCP	International Tijuana River Flood Control Project
Local Register	San Diego County Local Register of Historical Resources
MLD	Most Likely Descendent
NAHC	Native American Heritage Commission
NRHP	National Register of Historic Places
PRC	Public Resources Code
SCIC	South Coastal Information Center
SWCA	SWCA Environmental Consultants
TFCP	Tijuana Flood Control Project
TRVRP	Tijuana River Valley Regional Park Campground

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Executive Summary

The County of San Diego Department of Parks and Recreation (DPR) retained ICF to perform a Phase I cultural resources survey of the study area for the Tijuana River Valley Regional Park Campground (TRVRP), Spooner's Mesa Septic project. DPR proposes to install a sewage tank, pump chamber, and associated piping and electrical conduit in the area of Monument Road and Spooner's Mesa to serve as an option for disposing of sewage from TRVRP campground.

This analysis is intended to support the DPR review process under the California Environmental Quality Act (CEQA) and other applicable local and state regulations. Specifically, this report consists of an inventory of the cultural resources present within the Project and preliminary recommendations regarding the importance of those resources. A preliminary design for sewer system has been proposed, and this report provides preliminary impact analysis should the current design move forward.

The Project site located on four parcels (APNs 662-020-120-0, 663-010-490-0, 663-010-480-0, and 663-010-510-0) and the paved access road which runs up the north side of Spooner's Mesa. The project is located just east of Border Field State Park, approximately 1.60 miles east of the Pacific Ocean. The survey area, which included the Project site, plus a 200-foot buffer, measured 15.2 acres. The pedestrian survey was conducted on March 21, 2019. Ground visibility was low during the survey due to dense vegetation.

The record search indicated that no cultural resources have been previously recorded within the survey area; however, nine prehistoric sites have been previously identified on Spooner's Mesa. One prehistoric lithic scatter and four isolated lithics were newly identified within the survey area, but outside of the Project site. Highly fragmented historic debris also was identified within the survey area, extending as far as 500 feet north of previously recorded site P-37-011095. These fragments appear to have been dragged to their current locations as a result of road maintenance and do not comprise a culturally sensitive resource. ICF revisited P-37-011095 and noted its presence, but did not update the resources as it was outside the survey area.

DPR has proposed a preliminary design concept for the sewer and leach field; therefore, preliminary recommendations, impact assessments, and mitigation measures based on that design are included in this study. The project would include ground disturbance between 1 and 3 feet deep. No direct impacts would occur to any of the archaeological sites; however, given the lack of ground visibility during survey and the large number of resources previously recorded on Spooner's Mesa, and in keeping with previous studies in the area, cultural resources and tribal monitoring of all ground-disturbing activities is recommended in order to reduce impacts to a less-than-significant level.

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Chapter 1
Introduction

The County of San Diego Department of Parks and Recreation (DPR) retained ICF to perform a Phase I cultural resources survey of the study area for the Tijuana River Valley Regional Park Campground (TRVRP), Spooner's Mesa Septic project. DPR proposes to develop a portion of the TRVRP, one of the largest parks in the County system, into a campground and education center. As part of this development, DPR proposes to install a sewage tank, pump chamber, and associated piping and electrical conduit in the area of Monument Road and Spooner's Mesa (the Project). The objective of the Phase I study was to identify any undocumented cultural resources in the Project area. To accomplish this objective, ICF cultural resources staff performed a records search, archival research, a Sacred Lands file search, and a pedestrian survey of the study area. This report summarizes the results of the cultural resources study and considers impacts and mitigation measures.

1.1 Project Description

The cultural resources study area for the proposed Project consists of a paved access road that runs up the north side of Spooner's Mesa and crosses three parcels (APNs 662-020-120-0, 663-010-490-0, 663-010-480-0). Also included is the northwestern quarter of a single parcel at the top of Spooner's Mesa (APNs 663-010-510-0). The project is located just east of Border Field State Park approximately 1.60 miles east of the Pacific Ocean (Figures 1-1 and 1-2).

The phrase *Project site* is used in this study to refer to the physical space encompassed by the proposed project elements, including the sewer line, septic tank, and leach field. For the purposes of the survey, a buffer of 200 feet was applied to the Project site to provide an extra area for construction activities and machinery movement. The project site and buffer make up the archaeological survey area. The entirety of the four parcels was used for the purposes of archival research and is referred to as the *study area.*

The Project site has been used historically for agricultural uses; however, coastal scrub and patches of nonnative invasive vegetation have appeared. The majority of the Project site is considered disturbed habitat.

The Project will include the installation of a 3,000-gallon sewage septic tank and pump chamber on Spooner's Mesa. The Project comprises the installation of the septic tank and pump, as well as the installation of approximately 3,300 feet of effluent transport piping and electrical conduit. The piping and conduit will be installed approximately 2 to 3 feet below the ground surface from Monument Road up to Spooner's Mesa, within the shoulder of an existing County-owned access road. The Project will also include a 32,000-square-foot leach field composed of an approximately 15,876-square-foot primary drip tube system and 15,876 square feet set aside for a reserve system. The drip tube will be buried 1 foot below ground surface.

The Project will serve as an option for disposing of sewage from the TRVRP campground and be located immediately south of the campground. The Project will include a pumping system and piping to carry sewage from the campground to the proposed septic leach field on the mesa. The top

of the system will be a minimum of 2 feet below ground surface and will have risers to access and maintain the tank.

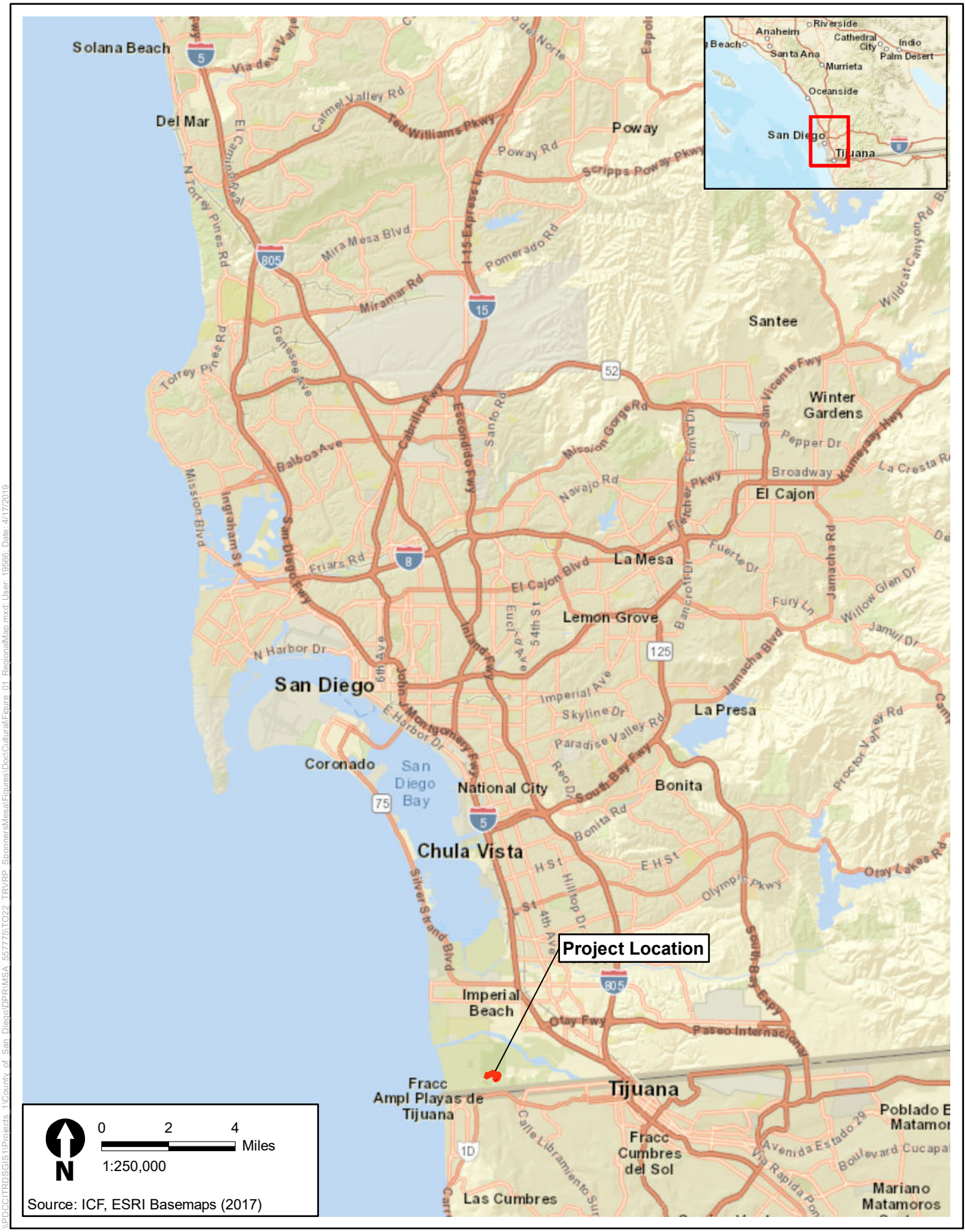


Figure 1-1
Regional Location Map
Tijuana River Valley Regional Park Campground, Spooner's Mesa Septic Project

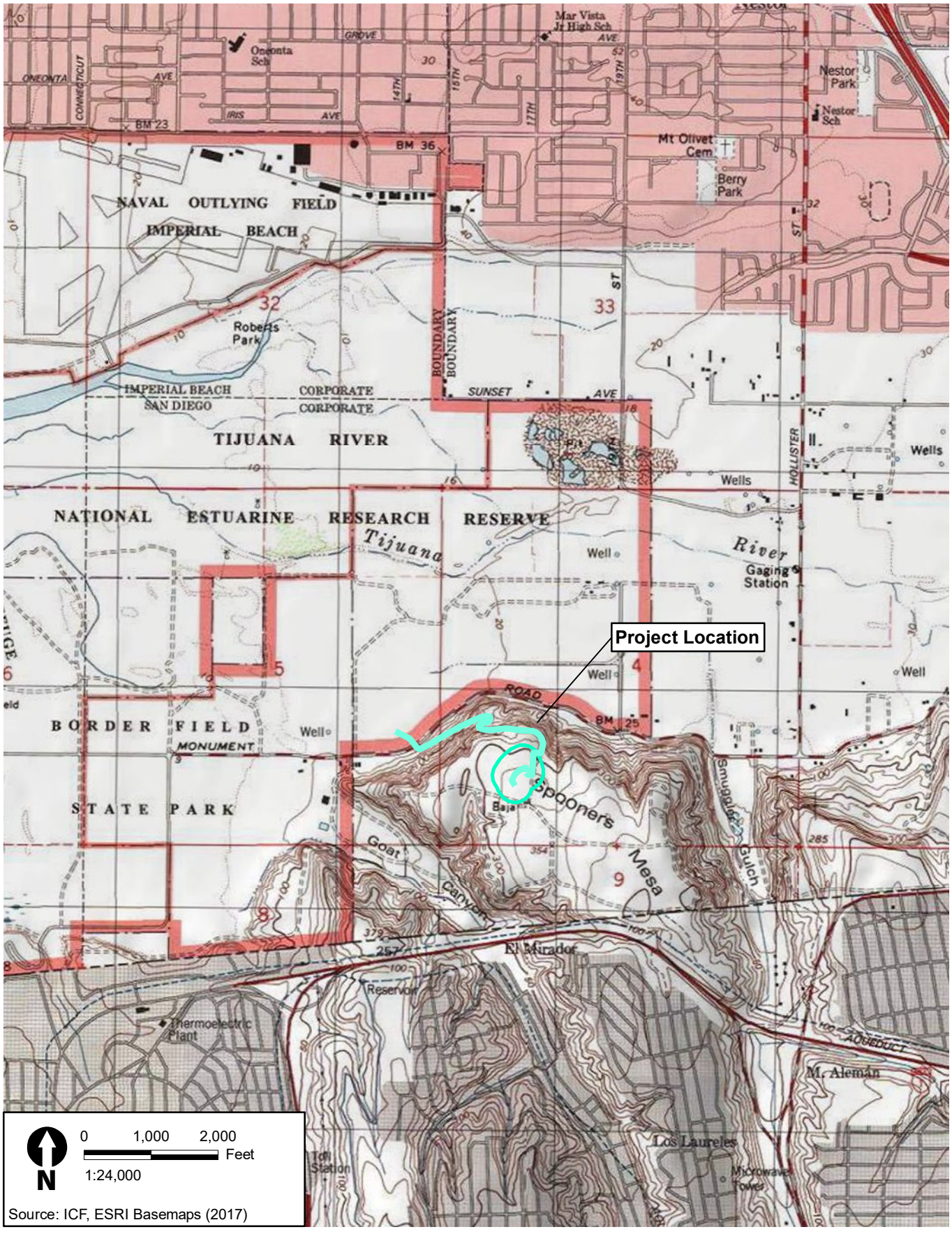


Figure 1- 2
Project Vicinity
Tijuana River Valley Regional Park Campground, Spooner's Mesa Septic Project

1.2 Existing Conditions

1.2.1 Environmental Setting

Natural Setting

The Project site is situated on Spooner's Mesa, along the western edge of the TRVRP, south of Monument Road, and approximately 1.60 miles east of the coast; elevation ranges from 24 to 335 feet above mean sea level. The proposed sewer and conduit lines would wind their way up the mesa from the river valley along an access road. In terms of geology, the river valley is underlain by young alluvial flood plain deposits dating to late Pleistocene and Holocene. The lowest level of Spooner's Mesa is underlain by the San Diego Formation (early Pleistocene and late Pliocene), with some landslide deposits (Holocene and Pleistocene) mid-slope. Very old paralic deposits (middle to early Pleistocene) are found on the mesa top (Kennedy and Tan 2008).

Historically, Tijuana River Valley has been subject to frequent flooding episodes, with floods recorded in 1891, 1895, 1916, and 1976 (Schoenherr 2015:15, SWCA 2004:11, City of San Diego and Page & Turnbull 2010:12–13). These periods of intense flooding have resulted in scouring of the valley and depositing deep alluvial sediments as water has surged and receded during frequent flood cycles. Spooner's Mesa was used for agriculture and ranching in the past hundred years which resulted in non-native and disturbed habitat. Non-native vegetation primarily consisted of Erodium sp. and Brassica sp.

Prehistorically, the Project site would have been comprised of coastal scrub habitat dominated by coyote brush (*Baccharis pilularis*), flax-leaf fleabane (*Erigeron bonariensis)*, mule fat (*Baccharis salicifolia*) and Menzies' goldenbush (*Isocoma menziesii*).

Prehistorically, wildlife within the Tijuana River Valley and coastline included desert cottontail rabbit (*Sylvilagus audubonii*), black-tailed jackrabbit (*Lepus californicus*), brush rabbit (*Sylvilagus bachmani*), mule deer (*Odocoileus hemionus*), badger (*Taxidea taxus*), mice (*Perognathus sp.*), gophers (*Thomomys bottae*), California ground squirrel (*Spermophilus beecheyi*), woodrat (*Neotoma fuscipes*), and marine mammals, such as California sea lions (*Zalophus californianus*) and harbor seals (*Phoca vitulina*). Bird species consisted of common loon (*Gavia immer*), ducks, geese, herons, willets, pied-billed grebe (*Podilymbus podiceps*), and red-tailed hawk (*Buteo jamaicensis*). Various species of shellfish and fish also would have served as resources to prehistoric populations in the area (Gallegos and Kyle 1988).

Cultural Setting

Prehistoric Setting

The Project site is located within the Southern California Coastal cultural region. Several cultural chronologies have been developed for the region (including, but not limited, to Moratto 1984, Bull 1987, and Warren 1987). The description that follows synthesizes these chronologies into a brief discussion of regional cultural trends over time, dividing the pre-contact cultural sequence into three periods. These periods are analytical constructs and do not necessarily reflect Native American views.

Paleoindian Period

Traditionally, it was thought that the earliest human inhabitants of North America were highly mobile terrestrial hunters. Commonly referred to as the Clovis, these people used intricate bone and stone technology. On the west coast of North America, Clovis assemblages are characterized by a wide, but sparse, distribution of isolated tools and caches dated to between 12,800 and 12,500 years before present (BP) (Meltzer 2004). However, over the last few decades, along the western coasts of North and South America, several archaeological sites and sets of human remains have been documented in island and mainland coastal contexts that date to the same period as the Clovis (i.e., Erlandson et al. 2007). These discoveries have forced researchers to reconsider how early humans migrated to the Americas, as well as their land-use strategies, and to place a greater emphasis on coastal environments.

In the south coastal region of California, the earliest evidence of human occupation has been found on the Channel Islands (Rick et al. 2005). For example, in addition to the set of human remains dated to around 13,000 years ago found on Santa Rosa Island, an archaeological site dating to around 11,600 BP has been documented on San Miguel Island. The site contains numerous fish and shellfish remains, indicating an emphasis on marine resources (Rick et al. 2001). At least two archaeological sites along the mainland coast have been dated to prior to 10,000 BP, as well (i.e., Glassow et al. 2007). Although no assemblages dated to earlier than 10,000 BP have been documented along the San Diego shoreline, it is inferred that the absence of sites is largely a function of long-term trends in sea level rise and shoreline erosion in the region. These trends are likely to have obscured and/or destroyed early coastal sites with datable materials.

Archaic Period

Evidence of human occupation of the San Diego region begins to appear at around 10,000 BP, in the form of lithic assemblages composed of scrapers, scraper planes, cobble choppers, large blades, large projectile points, and crescentic stones thought to be associated with waterfowl hunting and processing (Davis et al. 1969, Warren 1967, Moss and Erlandson 2013). These items are attributed to a cultural complex referred to locally as the *San Dieguito*. Based on the range of artifact types, artifact frequency, and distribution of archaeological sites, the people that used the San Dieguito complex are thought to have used a generalized terrestrial hunting and gathering land-use strategy (Davis et al. 1969).

Shortly thereafter, shell middens with millstone assemblages began to appear along sloughs and lagoons. Although this complex was originally considered to be a discrete cultural tradition (the La Jolla) several researchers have subsequently argued that La Jolla and Pauma (an inland lithic tradition indicative of inland resource collection and processing) complexes were created by the same group. The differences between the various complexes are thought to be a function of localized differences in the types of resources that were being collected and processed, rather than differences in cultural affiliation (True 1958, 1980; True and Beemer 1982; Gallegos 1987). Because the archaeological contents of early- to mid-Holocene coastal sites in the San Diego vicinity sites tend to differ from coastal sites located farther north and include items typically associated with early Great Basin cultures (i.e., crescentic stones [Moratto 1984]), researchers have argued that the Archaic period inhabitants of the San Diego region are descendants of groups that migrated out of the Great Basin region after the great Pleistocene lakes receded (Gallegos 1991).

After around 5500 BP, the archaeological record appears to indicate that upland hunting and gathering, particularly acorn processing, intensified relative to aquatic resource collection, as . This is evidenced by an increase in the frequency of dart points, mortars, and pestles during the latter portion of the Archaic period. This transition is thought to indicate a notable shift in the land use and subsistence patterns of the pre-contact peoples of the San Diego region (Warren et al. 1998).

Late Prehistoric Period

Starting at around 1300 BP, the archaeological record reflects the emergence of two cultural traditions in the San Diego region. The range and spatial distribution of site types, as well as site constituents for both traditions, is thought to reflect the ethnographically observed lifeways of the Kumeyaay and Luiseño peoples (Moratto 1984). Although these two groups have clear linguistic and cultural distinctions, both appear to have designed their land use around the intensive exploitation of a range of upland resources and established permanent to semi-permanent villages from the coast to the mountains and foothills. Both groups also adopted the use of small projectile points and pottery and intensified the use of acorns (True 1970).

Based on ethnographic data, the boundary between the lands of the Kumeyaay (to the south) and Luiseño (to the north) occurred in the vicinity of Agua Hedionda and Batiquitos Lagoon (Kroeber 1925). It is unknown, however, whether this boundary reflects a persistent spatial division between the two groups or the most recently recorded position of a boundary that fluctuated over time. Regardless, the Project site is located within an area inhabited by the Kumeyaay. Archaeological sites attributed to the Kumeyaay are characterized by a range of artifact types referred to as the *Cuyamaca complex*. The complex includes small, triangular, pressure-flaked projectile points, mortars and pestles, drilled stone ornaments, olivella beads, a steatite industry, ceramics, and urn cremations. Archaeological sites attributed to the Luiseño (termed the *San Luis Rey complex*) contain a similar range of artifact types, but tend to have lesser frequencies of side-notched projectile points, ceramics and ceramic forms, and milling stones; cremations tended to be ungathered (True 1970).

Ethnographic Background

The Project vicinity was traditionally inhabited by the Kumeyaay people (referred to by the Spaniards as the Diegueño), who spoke the Ipai dialect of the Yuman language. The Kumeyaay inhabited a region that contained southern San Diego County, west and central Imperial County, and the northern Baja peninsula (Spier 1923, Almstedt 1982). The Kumeyaay spoke two distinct dialects: Speakers of the Ipai dialect traditionally lived north of the San Diego River, while speakers of the Tipai dialect traditionally lived south of the it (Langdon 1975, Hedges 1975).

The Kumeyaay practiced a patrilocal type of social organization (i.e., married couples resided in the husband's community) with exogamy (i.e., marriage outside of one's band) (Kroeber 1925). Individual bands are thought to have been associated with specific locales, villages, or rancherías (Kroeber 1925, White 1963). The Kumeyaay used a wide range of environments for habitation and resource collection, including the coast, foothills, mountains, and desert (Almstedt 1982). In response to the wide-ranging conditions of these environments, the Kumeyaay used a variety of settlement strategies. For example, residential mobility was commonly practiced in desert environments, where resources were sparse and widely distributed (Hicks 1963), whereas large seasonal residential bases were established in the mountains and foothills (Almstedt 1982). In keeping with the extensive range of environments they inhabited, the Kumeyaay exploited an array of resources, including, but not limited to, terrestrial mammals, birds, fish, and marine invertebrates,

grasses, manzanita, sage, sunflowers, lemonade berry, chia, mesquite, agave, and acorns. Acorns were particularly important because they were abundant and could be processed and stored for long periods (Hicks 1963).

The Kumeyaay practiced many forms of spiritualism with the assistance of shamans (*kuessay*) and clan leaders. Spiritual leaders were not elected, nor did they inherit their positions; they achieved status because they knew all the songs involved in ceremonies (Shipek 1982) and had an inclination toward the supernatural. Important Kumeyaay ceremonies included male and female puberty rites, the Fire Ceremony, the Whirling Dance, the Eclipse Ceremony, the Eagle Dance, and the Cremation Ceremony, as well as the yearly mourning ceremony (Spier 1923). The primary ceremonial direction among the Kumeyaay is east, with rock art and entrances to ceremonial enclosures usually facing this direction (Kroeber 1925). The Kumeyaay are the only California tribe known to possess a color-direction system in which white represents the east, green-blue the south, black the west, and red the north (Kroeber 1925).

In 1979, Florence Shipek proposed that based on ethnographic evidence, the historic period Kumeyaay village of Milejo was located east of the Project site and would have been occupied during the Spanish era. The exact location of the village is currently unknown, and testing the parcels to the north and east of the Project site has failed to uncover evidence of large-scale occupation.

Historic Period Setting

By common convention, prehistory ended and historic cultural activities began within what is now San Diego County between the late 1500s and mid-1770s. These cultural activities provide a record of Spanish, Mexican, and American rule, occupation, and land use. An abbreviated history of the vicinity is presented to provide a background on the presence, chronological significance, and historical relationship of cultural resources within the study area.

Spanish Period

The historic period in California began with the early explorations of Juan Rodríguez Cabrillo in 1542. Cabrillo came ashore on what is now Point Loma to claim the land for Spain and gave it the name San Miguel. Sixty years passed before another Spanish explorer, Sebastían Vizcaíno, entered the bay on November 10, 1602, and gave it the name San Diego (Pourade 1960:49, 66). Both expeditions encountered native inhabitants, but there appears to have been little or no material exchange or social interaction between these Spanish explorers and the region's Native Americans.

The Spanish period lasted through the 1810s and encompassed early exploration and subsequent establishment of the Royal Presidio of San Diego (i.e., San Diego Presidio), as well as Missions San Luis Rey and Basilica San Diego de Alcalá (i.e., San Diego Mission), within today's San Diego County. The original Spanish settlement, begun on Presidio Hill in 1769, consisted of a presidio (fort) and a chapel that also served as Alta California's first mission; the chapel was subsequently relocated east into Mission Valley. Members of two separate expeditions that traveled overland to San Diego from the south, Fathers Juan Crespi and Junípero Serra logged the first written descriptions of the Tijuana River Valley in 1769. Moving north through Goat Canyon, immediately southwest of the study area, Crespi encountered "a large plain of good land with much green grass," writing, "We stopped near the village, where we had good water and pasture for the animals. Although firewood is scarce, the mountains, which are not far off, have it in abundance." Crespi noted that his party spent the night in the valley near a "populous village." Father Serra appears to have taken note of the same village

during a different expedition through the valley. Known as Milejo (purported to mean "meadow at the orifice of the hose") this Kumeyaay village also appears to have been referred to as Millejo, Melejo, Milijo, or Mel-lajo cerca de la Santo Domingo. The village seems to have been destroyed by floods around 1850 (Engelhardt 1920:60–64, Pourade 1960:137–38, SWCA Environmental Consultants [SWCA] 2004:9–10, quoted).

Mission San Diego fathers made use of the Tijuana River Valley for cattle grazing, despoiling lands long occupied by local Kumeyaay and undermining their subsistence patterns (SWCA 2004:10). Although some Kumeyaay engaged in violent resistance against San Diego's Spanish missionaries, many who inhabited the valley labored on behalf of the mission during the Spanish period. Resistance among the Kumeyaay would continue after the end of Spanish rule and result in violence within the Tijuana River Valley.

Mexican Period

The Mexican period began in 1821, when Mexico won independence from the decaying Spanish colonial empire, and lasted until 1848, when the Mexican-American War concluded. Throughout the 1820s, Spanish laws and practices largely endured; substantial change did not occur until the secularization of the missions in the 1830s. During the Mexican Period, many Presidio soldiers became civilian residents, the Pueblo of San Diego took shape, and transportation routes were expanded. The region's economic activity centered on agriculture and livestock-raising for subsistence and localized markets, as well as hide and tallow production for the international market (Pourade 1961:171, 182–186; Pourade 1963:11–16).

After years of political instability and several failed plans to secularize the missions, Governor José Figueroa issued an 1834 proclamation defining the terms of a secularization process that would be instituted over the following two years. Some large grants of land had been made prior to the secularization of mission lands, but those following secularization redistributed the missions' large grazing holdings, making numerous tracts available to well-positioned members of the Hispanic *Californio* population, namely politically connected officials and retired soldiers, and ushering in the Rancho Era. Provisions for ensuring that Native Americans would receive mission lands proved of little or no practical benefit to the region's indigenous peoples. Limits on the slaughter of mission cattle were often ignored by priests who sought immediate profit on the hide market. Approximately 500 private rancho land grants were made under Mexican rule, with Governors Juan Batista Alvarado, Manuel Micheltorena, and Pío Pico making the most of California's rancho grants after the 1834 secularization proclamation (Bean and Rawls 2003:58–63).

Several ranchos were established in the Tijuana River Valley during the Mexican Period. In 1829, Governor José María de Echeandía granted the largest of these, the 26,000-acre Rancho Ti Juan, to Santiago Arguello. Other early-valley ranchos included vintner Don Jose Lopez's Rancho Jesus Maria and Juan Ybarra's Rancho de San Ysidro. Governor Figueroa granted the Rancho Melijó to Santiago Emigdio Arguello (Santiago Arguello's son), in 1833. Subsequently known as Rancho La Punta, Emigdio Arguello's land included the Project site and what would later become Otay, Palm City, Nestor, and San Ysidro. He constructed a substantial adobe that is no longer extant; the exact location of this adobe is unclear as a result of conflicting evidence in the historical record (Corona 2004:32–34, SWCA 2004:10).

Local Native Americans, who found it increasingly difficult to subsist independent of the rancho economy, engaged in violent resistance within the Tijuana River Valley during the late 1830s. Native

parties attacked two of the valley's ranchos in 1837, killing Juan Ybarra and two San Ysidro ranch hands. During these raids, two of Ybarra's daughters were taken captive. Their fates remain lost to the historic record (SWCA 2004:10).

American Period

Nineteenth Century

In 1848, Mexico's defeat in the Mexican-American War initiated the American period, with Mexico ceding California to the United States under the Treaty of Guadalupe Hidalgo. The treaty protected *Californio* property in principle. In practice, however, the legal process for vetting land claims set into motion by California's Land Commission, established in 1851, and the mounting debts of many rancho owners allowed American newcomers to acquire most of the new state's rancho lands over time. As a consequence of legal costs and a lack of what Americans considered sufficient evidence to substantiate title claims, few Mexican ranchos remained intact. Indeed, documentation considered insufficiently detailed caused Emigdio Arguello to lose the portion of Rancho Melijó on the north side of the border between the U.S. and Mexico. Most land that once constituted rancho holdings became public land and was increasingly homesteaded by American settlers (Bean and Rawls 2003:145–147).

From 1849 to 1851, a joint U.S. and Mexican Boundary Commission surveyed and established the border, after which the Commission arranged for construction and placement of 42 boundary monuments. An Italian marble obelisk, Boundary Marker No. 1 was placed near the ocean at the location of today's Border Field State Park; the boundary would be resurveyed in the 1890s, after which 257 new monuments would be placed along the border. During the late nineteenth century, Boundary Marker No. 1 became a San Diego-area tourist attraction, necessitating the establishment of a stagecoach road to transport visitors between Boundary Marker No. 1 and Old Town San Diego (Zaragoza 2015:1–2). This road became Monument Road. The current alignment of Monument Road runs along the edge of the Tijuana River Valley flats north of the Project site.

Devastating drought during the early 1860s and the introduction of the "No-Fence Law" in 1872 reduced the number of grazing cattle, marking the decline of ranching and the rise of agriculture as the primary economic enterprise in the Tijuana River Valley (and elsewhere in California). Charles Mansir was one of the first Americans to settle in the immediate vicinity of the Project site. Born in Boston, Mansir moved to the Tijuana River Valley with his wife, Mary Ann, and seven children. In 1871 the *San Diego Union* described his farm as "one of the best in the valley, with some of the finest specimens of tomatoes." Charles's son, Harry, established a ranch on the northern portion of Spooner's Mesa and regularly drove cattle there from Mexico (Schoenherr 2015:16, quoted).

During the late 1870s, National City's Frank Kimball persuaded the Atchison, Topeka, and Santa Fe Railway, referred to commonly as the "Santa Fe," to support development of the California Southern Railroad, connecting San Diego with San Bernardino, the terminus of the Santa Fe line that would provide Southern California with its second transcontinental railroad connection (the Southern Pacific developed the first during the early part of that decade). Completed during the early 1880s, the California Southern was eventually acquired by the Santa Fe. By the end of 1888, two new lines, the National City and Otay Railroad (an interurban commuter line) and the Coronado Railroad, reached areas south of San Diego and National City and around the bay to the Coronado Peninsula. The arrival of this second transcontinental railroad led to a Southern California land boom that spread to San Diego. Railroad development helped to swell the population with newcomers and

dramatically raise property values, which eventually created a real estate bubble. With the rising tide of incoming migration during the boom, San Diego's population reached 40,000 in 1888. But after the bust, the ebb of outmigration left the city with 16,000 residents in 1890 (ICF International 2016:15; McDrew 1922:380–81, 383, 392; Pourade 1964:210–211; Webster 1986:6–7).

Several towns and settlements took shape in the Tijuana River Valley during the boom years of the 1880s. Established in the valley in 1869, the Monument School was relocated and reconstructed near the intersection of Monument Road and Hollister Street in 1889. In an attempt to capitalize on the tourist traffic to Boundary Monument No. 1, developers laid out the town of Monument City west of the Project site (also referred to as "International City"). Earning a poor reputation early its short existence, Monument City was destroyed by flooding in 1891. The town of Oneonta was created in 1887, approximately 1.3 miles north of the Project site. Initially consisting of a post office, a sanitarium, a school, and a general store run by Charles E. Smith, morally upright Oneonta was promoted as the "Pasadena of San Diego County" and attracted prohibitionist settlers. As with Monument City, flooding destroyed Oneonta in 1895, but Oneonta survived. Well east of the Project site, Tia Juana City was established on the north side of the United States-Mexico border in 1887; newcomers also homesteaded land in and around San Ysidro along the National City and Otay Railroad. In contrast to Oneonta, Tia Juana City had a saloon, as well as a drug store and hotel, and it catered to tourists seeking leisure activities on the Mexican side of the border, in the emerging city of Tijuana, including horse races, bullfights, cockfights, and the Tijuana Hot Springs Hotel at Agua Caliente. The floods of 1891 and 1895 forced settlers to abandon Tia Juana City (Schoenherr 2015:15, SWCA 2004:11, City of San Diego and Page & Turnbull 2010:12–13).

Twentieth Century through World War II

After the turn of the century, the nutrient-rich soil of the Tijuana River Valley continued to lure farmers, and periodic flooding continued to wreak havoc. Despite inundations that proved disastrous for Monument City, Oneonta, and Tia Juana City, the agricultural productivity of valley land continued to attract community builders.

In 1908, agricultural reformer, irrigation promoter, journalist, and historian William E. Smythe established the Little Landers Colony at San Ysidro along with George P. Hall, the former Chairman of California's State Board of Horticulture. Reflecting the "back to the land" movement, just one response to turn-of-the-century urbanization and industrialization, Smythe and his cooperative agricultural community promoted the notion that a $250 town lot and a single $350–$450 acre of farmland on the mesa or near the river could support a family. Within weeks of the colony's opening in 1909, 20 families had joined. In 1910, Little Landers, Incorporated, formed to take over management of the growing colony. An improvement fund was established to create infrastructure, beginning with a pump system to supply domestic water. The new corporation enabled the creation of the San Ysidro Irrigation District, which made use of underground Tijuana River flows. Still, most the colony's agriculturally productive lots were situated near the river, rather than on the colony's mesa lands. Elderly migrants from the East, many with insufficient energy for the labor required to build the kind of community originally envisioned by Smythe, were overrepresented among the 500 people who called the colony home by 1915 (City of San Diego and Page & Turnbull 2010:17–18, 20; Lee 1975).

Named for Charles Hatfield, who in 1915 brought the "fume theory" that explosions could cause rain to a San Diego suffering from drought, the Hatfield flood of 1916 spelled the end of the Little Landers Colony. Flooding destroyed the community's domestic water system, along with 25 homes.

Agricultural lots along the river proved too soggy for immediate re-cultivation, and the disaster forced Little Landers, Incorporated, into bankruptcy (City of San Diego and Page & Turnbull 2010:21, Patterson 1970).

Although the Little Landers colony never recovered, San Ysidro would survive as a border town that facilitated tourist travel to Tijuana, and agricultural enterprise in the Tijuana River Valley would survive the floods of 1916. From the mid-1910s through the 1920s, the moralistic reforms of the Progressive Movement north of the border—alcohol prohibition, anti-prostitution laws, and bans on prize fighting and gambling, including gambling on horse races—provided new economic opportunities for both American and Mexican entrepreneurs south of the border. Tijuana became a destination where San Diego-area residents and tourists could access forms of leisure targeted by Progressive reformers. New cantinas, casinos, and brothels opened, along with the Lower California Jockey Club, at a location southwest of the Project site, where 10,000 people attended opening day horse races in 1916. Many Americans were employed at these new, leisure-oriented Tijuana businesses, but lived in San Ysidro or other communities north of the border (City of San Diego and Page & Turnbull 2010:32, SWCA 2004:12).

World War I influenced Tijuana River Valley land use in several ways. According to geographer Serge Dedina, the war prompted the Navy to use the far western portion of the valley as an "airfield, gunnery range, and auxiliary training base. Fortifications were constructed after World War I in the southwest corner of the valley to defend against potential enemy attack from Mexico and the Pacific Ocean" (Dedina 1991:56–57). Identified as "Emergency Landing Field" in a 1943 topo map, this fortified western portion of the valley west of the Project site would later become Border Field State Park. Located southeast of the Project site and Goat Canyon, Bunker Hill acquired its name during World War II, when the military constructed unarmed bunkers, known as base end stations, for coastal surveillance. Approximately 1.3 miles north of the Project site, the Navy established the World War I-era Oneonta Gunnery School in 1918. Also known as Ream Field, the Navy acquired the gunnery site during the following decade and, in the World War II year of 1943, established the Naval Auxiliary Air Station there (later named Outlying Field) (Schoenherr 2015:2, South Bay Historical Society 2014:3, USGS 1943).

Population growth associated with both World War I and federal investment in San Diego-area military development during the 1920s increased demand for local agricultural production. After Italian-Swiss, French, and Scottish immigrants operated dairy farms in the valley as early as the late nineteenth century, the number of dairy farms in the valley increased during the 1920s and 1930s. Despite the ongoing threat of flooding, the Tijuana River Valley's fertile soil and ample groundwater continued to attract farmers seeking to capitalize on demand for agricultural production. Truck farms also flourished in the valley until the 1930s, when agricultural production declined, likely a result of the Great Depression economy, as well as growth in the amount of produce shipped to the San Diego area from other parts of California and from Latin America. Also related to the ailing economy, a shanty town of shacks known as "Depression Town" took shape at the mouth of the Tijuana Estuary. Floods swept away this unfortunate settlement in 1939 (Dedina 1991:56, Schoenherr 2015, SWCA 2004:13).

Post World War II

Farming activity increased again in the Tijuana River Valley after World War II. Dramatic growth in San Diego's urban density, peripheral suburbanization, and population from 1946 to the mid-1960s coincided with a period of drought. Fading memory among longtime residents and lack of

experience among newcomers limited awareness of flood potential in the Tijuana River Valley and elsewhere in the region, and farmers had cultivated half of the valley's land by 1957. Celery proved to be one of the leading crops, but Valley farmers also produced olives, tomatoes, cucumbers, and other fruits and vegetables. By the 1960s, however, farmers' pumps and years of low rainfall had depleted the water supply. Saltwater intrusion into the groundwater table drove farmers away from the western portions of the valley, and cultivated land within the Tijuana River Valley decreased first to 30 percent in 1965, and then to 20 percent in 1976, with another 1,000 acres used to graze stock (Dedina 1991:56, SWCA 2004:15).

As post-World War II farming declined in the Tijuana River Valley, and as government officials and engineers initiated plans for extensive flood control works on both sides of the border, developers and speculators increasingly bought up the valley's floodplain lands. As part of that planning, Congress approved the Tijuana Flood Control Project (TFCP) in 1966. A concrete channel planned to carry river flows through Tijuana, across the border, and on to the ocean promised to open the floodplain to residential, commercial, and industrial development, including a yacht marina at the river's outlet. Although Mexico constructed 2.7 miles of concrete channel through the city of Tijuana, implementation of the TFCP on the north side of the border stalled. Severe flooding in 1976 increased opposition to concrete channelization of the 8-mile river course on the U.S. side of the border. More and more observers feared the potential costs of flooding in a highly developed version of the Tijuana River Valley. As a result, the TFCP was re-planned as the International Tijuana River Flood Control Project (ITRFCP), which replaced the TFCP plan for a continuous concrete channel with a "stilling basin" system of stone-lined surfaces, floodplain vegetation, and levees. The U.S. Army Corps of Engineers completed the ITRFCP in 1979 (SWCA 2004:15–16).

New possibilities for protecting estuary wetland emerged as former farmland lay vacant, particularly in the western portion of the valley, and as speculators and developers who had bought up floodplain land grew eager to sell. The Tijuana River Valley was designated a National Estuarine Sanctuary in 1986 by various federal, state, and local agencies, including the County of San Diego. Border Field State Park, which had been established in 1971 to the west of the Project site, increasingly became an estuary-oriented recreation facility (Shoenherr 2015:2, SWCA 2004:16).

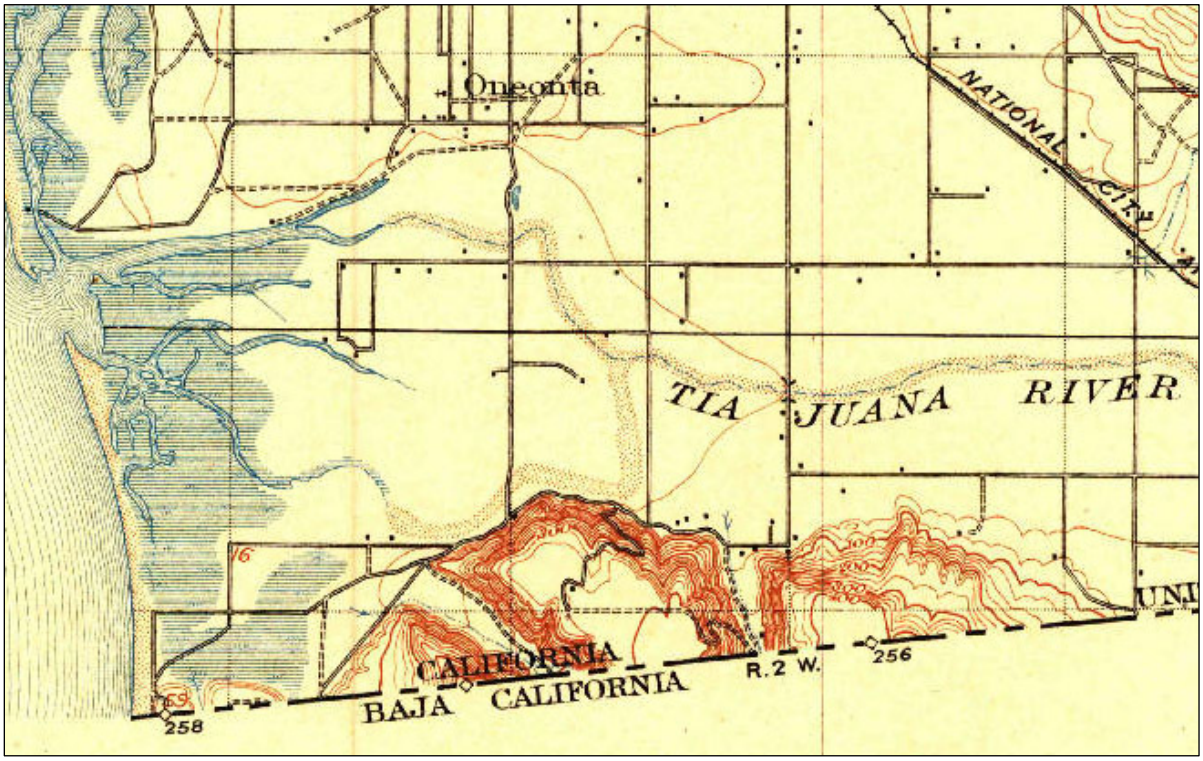
Historical Overview of the Study Area

As noted above, large numbers of people began to travel through the Project vicinity during the late nineteenth century to visit Boundary Monument No. 1. As visitors traveled from San Diego to the boundary monument and newcomers began to settle in the western reaches of the Valley, Monument Road, north of the Project site, took shape, running east-west along the southern edge of the Tijuana River Valley. Its importance to the area was punctuated by construction of the second Monument School farther west than the first Monument School building, at a location near the intersection of Monument Road and today's Hollister Street (Schoenherr 2015:15, Zaragoza 2015:1).

Roads were developed to connect Monument Road to communities across the river channel to the north. During the early 1890s, a proposed railroad line would have extended from the National City and Otay Railroad line southwest to Oneonta, and then south to Goat Canyon on an alignment just west of the Project site. Although never developed, this proposed line reflected high hopes for agricultural development and settlement in the western Tijuana River Valley and was indicated in a map of San Diego Bay and surrounding areas published in an 1891 issue of *The Great Southwest, a Monthly Journal of Horticulture*). By 1902, several improved roads extended south from Oneonta and Nestor to Monument Road, and an improved winding road traversed the hill northeast of the

Project site to connect Spooner's Mesa to Monument Road. That road had been abandoned by 1941; by 1950, however, a new road connected to Monument Road and entering Spooner's Mesa from the northwest had been developed. That road is the current County road to the mesa. The Project sewer line would be installed in the shoulder of this road (USGS 1904, 1943, 1953)(see Figure 1-3).

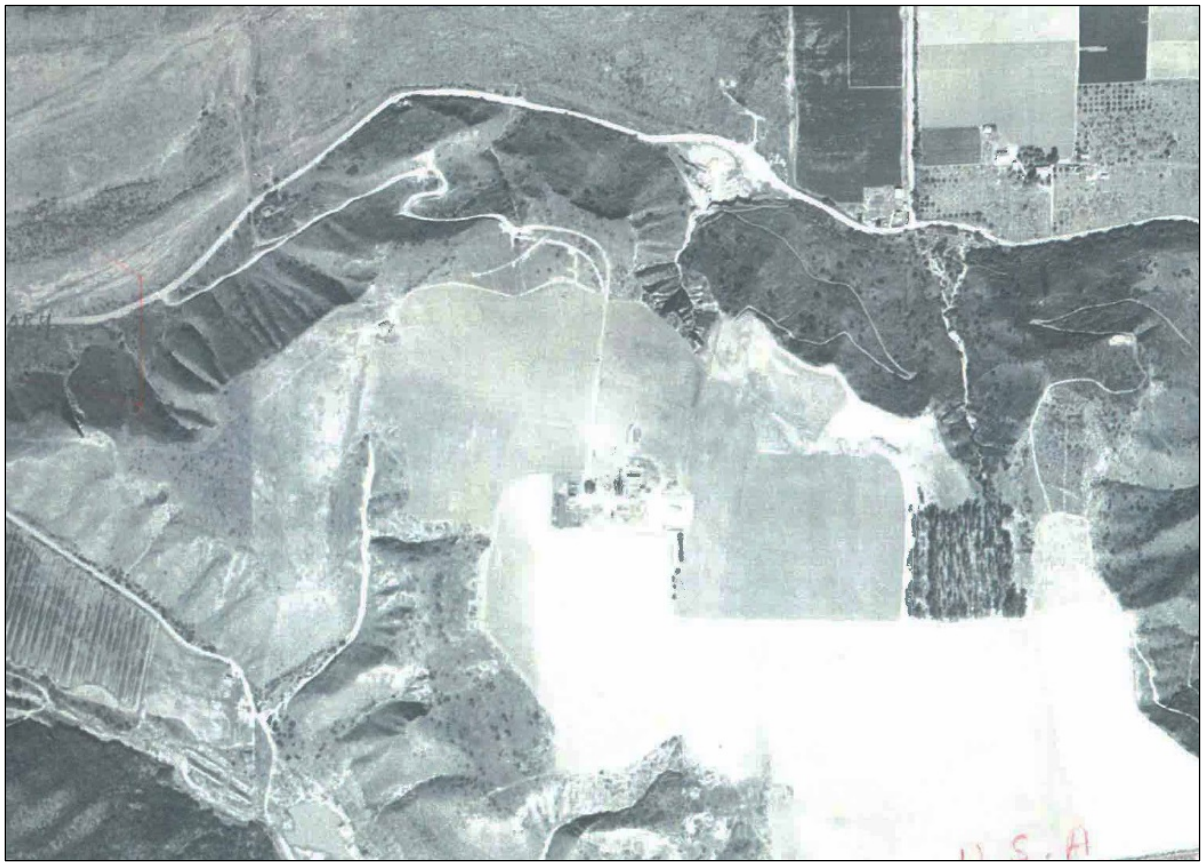
Figure 1-3. 1904 Topo Map Showing Roads Connecting to Monument Road, Including Improved Road from Monument Road to Spooner's Mesa at Lower Center



Source: USGS, *San Diego, California*, Topographic Quadrangle Map, 1904, Surveyed 1902.

The Project site is located in the southwest quarter of Section 4, in Township 19 South, Range 2 West. The General Land Office (GLO) issued patents in 1882 and 1891 for land homesteaded respectively by Charles G. Mansir in the northern half of Section 4's southwest quarter and by Gumesindo Yorba in the southern half Section 4's southwest quarter, where, by 1902, he may have constructed a building present (see Figure 1-4). A San Diego Plat Book shows that by 1912, Ralph A. Mecker had acquired Yorba's land, and J. A Mansir, one of seven children born to Charles and his wife, Mary Ann, had acquired his father's land, by then one of the most productive farms in the Tijuana River Valley. The Mansir family appears to have constructed a building (likely a home) present by 1902 at the southwest corner of their land in Section 4, but which since has been demolished (County of San Diego 1912; GLO 1882, 1891; Schoenherr 2015:12, 16; USGS 1904).

Figure 1-4. 1949 Aerial Photograph that Includes Project Site



Source: 1949 US Navy Aerial Survey, Photo AXN-ZF-20, on file at County of San Diego Cartographic Services

Spooner's Mesa was named for C.R. Spooner, who established a ranch there. Research for this study has yielded somewhat contradictory information on Spooner. While at least one secondary source identifies Spooner and his wife as "Charles and Marion" (Zaragoza 2015:14), a 1967 obituary published in the *Chula Vista Star* identifies the person who established the ranch at Spooner's Mesa as Cornelius R. ("Al") Spooner; County Assessor-Recorder records indicate that Cornelius Ross Spooner owned the entirety of the Project site during the years 1950 to 1966. A 1959 city directory listing incorrectly listed his middle initial as "L," but identified Cornelius Spooner as a rancher residing with his wife, Olive, at 490 Monument Road. According to the obituary, Spooner came to the area in 1942 and purchased 260 acres to establish a cattle ranch. He served as director of the Tijuana Valley Water District, and allowed Easter sunrise masses, Boy Scout events, and horsemen's breakfasts to be held at his ranch. An aerial photograph shows that the ranch had at least three buildings by 1949, none of which remain present today. C. R. Spooner relocated to Central California by the early 1960s and died in Arroyo Grande in 1967 (County of San Diego 1969; *Chula Vista Star* 1967; U.S. City Directories Database 1959; U.S. Navy 1949).

1.2.2 Records Search Results

The records search and literature reviews were undertaken to identify previously documented archaeological, historic, and architectural resources within and near the Project site. This background information is also useful in developing a context for assessing resource significance.

ICF archaeologist Nara Cox, BA, conducted a records and literature search at the South Coastal Information Center (SCIC) at San Diego State University on November 3, 2017, for the TRVRP Campground project; no additional record search was conducted for the current Project site, as it was encompassed by the 2017 search. The SCIC is the branch of the California Historical Resources Information System (CHRIS) that houses information on historical resources in San Diego and Imperial Counties. A repository of information on recorded historical resources, among other historical information, CHRIS is maintained by the California Office of Historic Preservation. The objective of the request was to identify studies and archaeological and built-environment resources in or within 0.5 miles of the survey area. The SCIC records search involved a review of the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), California Historic Resources Inventory (HRI), California Historical Landmarks (CHL), and local historical maps. The results from the records search can be found in Appendix A.

Previous Studies

The SCIC records that 24 cultural resources studies have been conducted for areas inside or within 0.5 miles of the survey area (Table 1-1). Four of these studies encompassed the survey area (see shaded studies on Table 1-1), but because these studies were conducted more than five years ago, no portion of the survey area was excluded from pedestrian survey. The previous studies conducted within the survey area consist of three archaeological inventory reports: Polan 1981, Polan 1981, and ASM Affiliates 1989 (Higgins et al. 1993), as well as one environmental assessment (USAC03 1991).

Table 1-1. Cultural Resource Studies within a 0.5-mile Radius of the Survey Area

NADB #	Date	Author	Report Title
1120790	1987	Cheever, Dayle, and Dennis Gallegos	Cultural Resource Survey for the Smuggler Gulch Surface Flow Collection Facility, San Diego, California
1121342	1981	Polan, H. Keith	An Archaeological Reconnaissance of Border Highlands San Diego, California.
1122107	1987	International Boundary and Water Commission	Draft Environmental Assessment International Surface Flow Collection Facility at Smuggler Gulch Baja California, Mexico and San Diego County, California
1122885	1994	Higgins, Howard C.	Archaeological Investigations at the Proposed International Wastewater Treatment Plant Site: Cultural Resource Identification and Geotechnical Test Monitoring
1122886	1994	Higgins, Howard	Archaeological Monitoring of the International Wastewater Treatment Plant Land Outfall Trench. San Diego County, California
1122955	1994	Adams, Kathleen and Christopher A. Turnbow	Supplemental Report: Archaeological Survey and Geotechnical Test Monitoring of the International Wastewater Treatment Plant Ocean Outfall Tunnel
1123282	1993	Manley, William	Historic Assessment of Properties on 3 Parcels on Monument Road, San Diego California

NADB #	Date	Author	Report Title
1123646	1994	Higgins, Howard C., Richard W. Coleman, Gary M. Brown, Richard A. Anduze, and Meade F. Kemrer	Archaeological Investigations at South Bay International Wastewater Treatment Plant Site and Outfall Facilities, Cultural Resource Identification and Geotechnical Test Monitoring. Submitted To: International Boundary and Water Commission
1123709	1993	Higgins, Howard C., Christopher A. Turnbow, Gary M. Brown, Richard W. Coleman, Russell O. Collet, Christopher R. Lintz, and Peter B. Mires	Archaeological Monitoring of the South Bay Land Outfall Trench, San Diego County, California
1123713	1995	Turnbow, Christopher A., Kathleen A. Adams, John A. Evaskovich, and Howard C. Higgins	Archaeological Testing of Three Sites for the International Wastewater Treatment Plant Project San Diego County, California
1124225	1989	ASM Affiliates	Archaeological Survey and Significance Evaluation Program for the Border Highlands Project
1124608	1994	City of San Diego	Public Notice of Proposed Negative Declaration
1124718	1994	Mariah Associates	Supplemental Report Archaeological Survey & Geotechnical Test Monitoring of the International Wastewater Treatment Plant Ocean Outfall Tunnel Volume II
1125507	1990	Wade, Sue	Historic Properties Inventory for Secondary Treatment Clean Water Program for Greater San Diego: Confidential Appendices
1125933	1992	USAC03	Draft Environmental Assessment for the Joint Task Force Six Operation JT (154D-91) Border Fence Construction
1125934	1981	Polan, Keith	An Archaeological Reconnaissance of Border Highlands San Diego
1125935	1986	Gallegos, Dennis	Cultural Resource Survey and Significance Testing for the International Waste Water Project
1126635	1996	Rosen, Martin	Historic Property Survey-Bailey Bridge Hollister Street
1127136	2004	SWCA Environmental Consultants	Final Cultural and Paleontological Resource Study for the TRVRP Trails and Habitat Restoration Enhancement Project, San Diego County, California
1129177	2004	Underwood, Jackson and Carrie Gregory	Cultural Resources Survey of the Tijuana River Wetland Mitigation Project San Diego County, California
1129316	2002	Pigniolo, Andrew	Archaeological Inventory and Trenching Program For the Goat Canyon Enhancement Project Off-Site Biological Mitigation Area, City of San Diego, California

NADB #	Date	Author	Report Title
1130423	2006	Hector, Susan M.	Cultural Resources Survey of the Tijuana River Valley Channel Dredging Project
1131503	2007	Dudek	Initial Study for the Tijuana River Valley Wetlands Mitigation Project
1133006	2011	Robbins-Wade, Mary	Master Storm Water System Maintenance Program

Notes:
*Shaded reports encompassed portions of the current survey area.

Previously Recorded Sites in the Survey Area

A total of 44 previously recorded cultural resources are present within a 0.5 mile radius of the survey area (Table 1-2); of these 44 previously identified resources, none have been recorded within the survey area. However, nine prehistoric sites (lithic scatters and shell scatters) and three prehistoric isolates have been previously recorded on Spooner's Mesa. Previously identified resources outside the survey area, but within a 0.5 mile radius, include 21 prehistoric sites (mostly consisting of shell middens, fire-affected rocks, grounds and the ethnographically recorded Kumeyaay village of Milejo). Also present are seven multi-component sites consisting of both prehistoric and historic aspects, six historic WWII era or early twentieth-century agricultural resources, one standing building complex, seven prehistoric isolates, and two historic isolates.

Table 1-2. Cultural Resources Recorded within a 0.5-mile Radius of the Study Area

Primary (P-37-)	Trinomial (CA-SDI-)	Type/Description	Dimensions	Site Form Reference
002611	002611	Prehistoric–medium density: Flaked stone, cores, and debitage	None given	Moriarty, 1973
003627	003627	Combination–medium density: Prehistoric quarry or lithic manufacturing site, WWII era base-end stations and Adobe structure	100 x 250 m	a. Moriarty, 1974 b. Hines et al., 1986 c. Buysse et al., 1998
007456	007456	Prehistoric–medium density: Midden soil, flaked stone, FAR.	10 x 10 m	a. Van Wormer, 1980 b. Polan, 1981
008595	008595	Historic–low density: WWII Refuse scatter	475 x 100 m	a. Polan, 1981 b. Buysse et al., 1998
008596	008596	Combination–low density: Flaked stone, shell, and historic bone fragments	None given	a. Polan, 1981 b. Buysse et al., 1998
008597	008597	Combination–medium density: Flaked stone and historic bone fragments	None given	Polan, 1981
008598	008598	Prehistoric–medium density: Shell and flaked stone	None given	Polan, 1981

Primary (P-37-)	Trinomial (CA-SDI-)	Type/Description	Dimensions	Site Form Reference
008599	008599	Combination–medium density: Flaked stone, percussion tools, and historic bone fragments	None given	Polan, 1981
008600	008600	Prehistoric–medium density: Flaked stone and percussion tools	None given	Polan, 1981
008601	008601	Prehistoric–medium density: Flaked stone, ground stone, percussion tools	None given	Polan, 1981
008602	008602	Prehistoric–medium density: Flaked stone and percussion tools	None given	Polan, 1981
008603	008603	Prehistoric–medium density: Flaked stone and percussion tools	None given	Polan, 1981
008604	008604	Prehistoric–high density: Possible lithic quarry, flaked stone and percussion tools	400 x 120 m	a. Polan, 1981 b. Gallegos, 1986 c. Coleman, 1992 d. Buysse et al., 1998 e. Pigniolo, 2000
008605	008605	Prehistoric–high density: Possible lithic quarry, flaked stone, and percussion tools	250 x 50 m	a. Poe, 1970 b. Polan, 1981 c. WESTEC, 1986 d. RECON, 1990 e. Coleman, 1992 f. Buysse et al., 1998
008773	008773	Combination–low density: Historic adobe structure and possible prehistoric artifacts	None given	a. Campbell, 1981 b. Buysse et al., 1998
010669	010669	Ethnographically recorded Kumeyaay village of Milejo	1785 x 625 m	a. Shipek, 1970 b. RECON, 1990 c. Perry, 1992 d. Coleman and Bilsbarrow, 1992 e. BFSA, 2008 f. AECOM, 2014
010967	010967	Prehistoric–high density: Resource processing site–Shell midden, faunal bone, debitage, groundstone	36 x 120	a. Roeder, 1980 b. Gregory, 2002 c. BFSA, 2008 d. AECOM, 2014
011095	011095	Historic–medium density: 19th c. structural remains, bottle glass and architectural debris	5 x 3 m	Van Wormer, 1989
011096	011096	Historic–low density: 19th c. structural remains	35 x 35 m	a. Van Wormer, 1989 b. Coleman, 1994
011097	011097	Prehistoric–medium density: Flaked stone	15 x 10 m	Cook, 1989

Primary (P-37-)	Trinomial (CA-SDI-)	Type/Description	Dimensions	Site Form Reference
011100	011100	Prehistoric–high density: Flaked stone	6 x 4 m	Cook, 1989
011101	011101	Prehistoric–low density: Flaked stone	8 x 6 m	Cook, 1989
011544	011544	Prehistoric–high density: Flaked stone	130 x 30 m	a. unknown, 1989 b. RECON, 1990
011947	011947	Historic–medium density: Structural remains, car parts, saw cut faunal bone	100 x 50 m	a. RECON, 1990 b. Coleman, 1992 c. Buysse, 1998
011948	011948	Historic–medium density: Concrete slabs, 14+ cobble walled terraces	100 x 50 m	a. RECON, 1990 b. Coleman, 1992
013485	013485	Combination–high density: Subsurface stratified sequence of prehistoric occupational surfaces and historic dairy barn	180 x 290 m	a. RECON, 1992 b. Triurnbow, 1995 c. Pigniolo, 2000 d. Underwood, 2003
013487	013487	Prehistoric–medium density: Flaked stone, shell, and hearth features	120 x unknown	a. Dibble, 1991 b. AECOM, 2014
013488	013488	Prehistoric–high density: Flaked stone, ground stone, shell, and hearth features	120 x unknown	Dibble, 1991
024059	016047	Combination–high density: Prehistoric occupational horizons, hearth features, flaked stone, and shell; Historic cement water conveyance features	17 x 7 m	Dietler et al., 2001
024061		Prehistoric–(isolate): Flaked stone	N/A	Dietler et al., 2000
024563	016293	Prehistoric–high density: Shell midden with flaked stone, FAR, bone, and charcoal	200 x 375 m	Pigniolo, 2002
025703	017098	Prehistoric–low density: Flaked and ground stone tools	3 x 17 m	a. Gregory, 2002 b. AECOM, 2014
025704		Historic–low density: Pumphouse, well, and water storage tank circa 1920s	None given	a. Gregory, 2002 b. BFSA, 2008 c. AECOM, 2014
025705		Built Environment–Historic ranch complex	None given	a. Underwood, 2002 b. BFSA, 2008 c. AECOM, 2014
025918	017237	Prehistoric–high density: Flaked and ground stone and FAR	52 x 25 m	SWCA, 2004
025919	017238	Prehistoric–medium density: Flaked and ground stone and FAR	44 x 36 m	a. SWCA, 2004 b. AECOM, 2014
025920		Historic–(isolate): Inscribed and cut stone brick	N/A	a. SWCA, 2004 b. AECOM, 2014

Primary (P-37-)	Trinomial (CA-SDI-)	Type/Description	Dimensions	Site Form Reference
025921		Prehistoric–(isolate): Flaked stone	N/A	a. SWCA, 2004 b. AECOM, 2014
025922		Prehistoric–(isolate): Flaked stone	N/A	SWCA, 2004
033838		Historic–(isolate): Inscribed knife handle "U.S.N."	N/A	AECOM, 2014
033839		Prehistoric–(isolate): Shell fragments	N/A	AECOM, 2014
033840		Prehistoric–(isolate): Flaked stone	N/A	AECOM, 2014
033841		Prehistoric–(isolate): Flaked stone	N/A	AECOM, 2014
034103		Prehistoric–(isolate): Shell fragment	N/A	ASM Affiliates, 2013

Notes:
* FAR = fire affected rock; m = meter; N/A = not available.

1.3 Applicable Regulations

Resource importance is assigned to districts, sites, buildings, structures, and objects that possess exceptional value or quality in illustrating or interpreting the heritage of San Diego County in history, architecture, archaeology, engineering, and culture. A number of criteria are used in demonstrating resource importance, specifically, criteria outlined in the California Environmental Quality Act (CEQA) and the San Diego County Local Register of Historical Resources (Local Register) provide the guidance for making such a determination. The following sections detail the criteria that a resource must meet in order to be determined important.

1.3.1 California Environmental Quality Act

According to CEQA (Section15064.5a), the term "historical resource" includes the following:

(1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code SS5024.1, Title 14 CCR. Section 4850 et seq.).

(2) A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements of section 5024.1(g) of the Public Resources Code, shall be presumed to be historically of culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

(3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be

considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code SS5024.1, Title 14, Section 4852) including the following:

(A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

(B) Is associated with the lives of persons important in our past;

(C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

(D) Has yielded, or may be likely to yield, information important in prehistory or history.

(4) The fact that a resource is not listed in, or determined eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in section 5024.1(g) of the Public Resource Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code section 5020.1(j) or 5024.1.

According to CEQA (Section 15064.5b), a project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. CEQA defines a substantial adverse change as follows:

(1) Substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.

(2) The significance of an historical resource is materially impaired when a project:

(A) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or

(B) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

(C) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

Section 15064.5(c) of CEQA applies to effects on archaeological sites and contains the following additional provisions regarding archaeological sites:

(1) When a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource, as defined in subsection (a).

(2) If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code, and this section, Section 15126.4 of the Guidelines, and the limits contained in Section 21083.2 of the Public Resources Code do not apply.

(3) If an archaeological site does not meet the criteria defined in subsection (a), but does meet the definition of a unique archaeological resource in Section 21083.2 of the Public Resources Code, the site shall be treated in accordance with the provisions of section 21083.2. The time and cost limitations described in Public Resources Code Section 21083.2 (c–f) do not apply to surveys and site evaluation activities intended to determine whether the project location contains unique archaeological resources.

(4) If an archaeological resource is neither a unique archaeological nor an historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment. It shall be sufficient that both the resource and the effect on it are noted in the Initial Study or EIR, if one is prepared to address impacts on other resources, but they need not be considered further in the CEQA process.

Section 15064.5 (d) and (e) contain additional provisions regarding human remains. Regarding Native American human remains, paragraph (d) provides the following:

(1) When an initial study identifies the existence of, or the probable likelihood, of Native American human remains within the project, a lead agency shall work with the appropriate Native Americans as identified by the Native American heritage Commission as provided in Public Resources Code SS5097.98. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any items associated with Native American burials with the appropriate Native Americans as identified by the Native American heritage Commission. Action implementing such an agreement is exempt from:

(A) The general prohibition on disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery (Health and Safety Code Section 7050.5).

(B) The requirement of CEQA and the Coastal Act.

1.3.2 San Diego County Local Register of Historical Resources

The County requires that resource importance be assessed not only at the state level as required by CEQA, but at the local level, as well. If a resource meets any one of the following criteria as outlined in the Local Register, it will be considered an important resource.

(1) Is associated with events that have made a significant contribution to the broad patterns of San Diego County's history and cultural heritage;

(2) Is associated with the lives of persons important to the history of San Diego County or its communities;

(3) Embodies the distinctive characteristics of a type, period, San Diego County region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

(4) Has yielded, or may be likely to yield, information important in prehistory or history.

1.4 Guidelines for Determining Significance

1.4.1 County Guidelines

Pursuant to the County of San Diego Guidelines for Determining Significance–Cultural Resources (County of San Diego 2007), any of the following will be considered a significant impact to cultural resources:

(1) The project, as designed, causes a substantial adverse change in the significance of a historical resource as defined in §15064.5 of the State CEQA Guidelines. This shall include the destruction, disturbance or any alteration of characteristics or elements of a resource that cause it to be significant in a manner not consistent with the Secretary of Interior Standards.

(2) The project, as designed, causes a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5 of the State CEQA Guidelines. This shall include the destruction or disturbance of an important archaeological site or any portion of an important archaeological site that contains the potential to contain information important to history or prehistory.

(3) The project, as designed, disturbs any human remains, including those interred outside of formal cemeteries.

Chapter 2
Research Design

The objectives of this study were to relocate any previously documented archaeological sites and to identify previously undocumented archaeological and historic resources. Previous research conducted in the area, as well as in the San Diego region in general, provides the basis for understanding the cultural resources present within the study area. It also provides criteria for assessing the significance of these resources and the answers they may provide to unresolved historical and archaeological research questions. These questions are generally delineated into research topics, such as questions on subsistence, settlement patterns, site function, chronology, or technology, that help archaeologists understand past life ways. Typical questions include those about chronological issues, i.e., how specific sites fit, or do not fit, into the regional prehistoric settlement pattern as it is currently understood. How are they located relative to their environmental setting and changes in environmental conditions through time? Do any sites represent more substantial habitation locations, such as villages or major campsites, rather than specialized, short-term resource procurement locales? Larger habitation sites often contain the greatest variety of associated cultural materials, and thus receive greater focus. Can sites with ceremonial or ritual content be identified? Are special-use sites present, such as quarries, lithic workshops, milling stations, and seed storage areas? Do any sites contain exotic artifacts or materials that may indicate trade with other areas? These research topics allow for site type and content to be understood and evaluated within the framework of the local area, as well as in the broader context of the region.

Laylander (1997) and Christenson (1990) have developed extensive research designs for different approaches to analyzing settlement and subsistence patterns in the San Diego County. Regionally, Christenson proposed and implemented a systems approach for the analysis of settlement and subsistence patterns in the San Diego County area during the Late Prehistoric period. In her study (1990), Christenson made use of various environmental and cultural variables, many of which are frequently contained within topic areas or realms often proposed to assess site potential to provide important research information. Laylander discussed and critiqued the use of some settlement systems approaches in analyzing the prehistoric hunter-gatherers of the San Diego region (1997). He proposed an alternative approach, similar to that used by Christenson, that would utilize the correlation of archaeological variables at the regional, site, and artifact/ecofact feature levels with settlement system dimensions (ICF Jones & Stokes 2008).

Specific research topics for this Project focus primarily on site function, settlement patterns, and subsistence. Questions of site function by necessity are tied to questions of settlement and subsistence patterns. What kinds of sites are located within the study area—do they represent temporary camps, food procurement areas, or food processing sites? Are any of the sites permanent villages or are inland groups visiting this coast for seasonal food gathering? What are upland areas, such as Spooner's Mesa, traditionally used for? Information to answer such questions would require the identifications of lithics, shell, bone, ceramics, charcoal, or archaeological features such as hearths.

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Chapter 3
Methods and Results

3.1 Methods

3.1.1 Historical Background Research

To gather basic background information on the Project vicinity, ICF made use of previous cultural resources studies of properties within the Tijuana River Valley, including reports on file at the County DPR History Office, which ICF cultural resources staff visited on December 12, 2017, and March 11, 2019. Secondary sources were also gathered from the online offerings of the *Journal of San Diego History* and the *South Bay Historical Society Bulletin.* The 1912 County of San Diego Plat Book was accessed through the digital online holdings of the Library of Congress. Additional primary-source research included analysis of master property records, parcel maps, and other readily accessible information on land ownership and use within the study area at the San Diego County Recorder-Clerk Main Office. Historic topo maps were gathered at the USGS Topoview website. ICF cultural resources staff gathered historic aerial photographs from the National Environmental Title Research's website, Historic Aerials (historicaerials.com), and the Cartographic Services desk of San Diego County Planning and Development Services. Digital historical newspaper searches for individuals who owned land in the study area and for events and themes involving the Project site were conducted using two database services to which ICF subscribes: Newspapers.com and Genealogybank.com.

3.1.2 Survey Methods

On March 21, 2019, ICF archaeologists Nara Cox, BA, and Karolina Chmiel, MA, and Red Tail Monitoring & Research's Native American monitor Banning Taylor IV performed an intensive pedestrian survey. The survey area consisted of the Project site and a 200-foot buffer to account for any disturbances during construction; the total survey area measured 15.2 acres. All field investigations were overseen by Karolina Chmiel, MA, who served as principal investigator for the Project. For the purposes of this study, the intensive pedestrian survey consisted of walking transects spaced at 15-meter intervals and carefully inspecting the ground surface to identify surface-exposed artifacts, features, and infrastructure, where vegetation permitted. Across much of the survey area, ground surface visibility was poor (ranging from 0 to 25%), due to thick vegetation. Ground surface visibility was significantly better (75 to 100%) on and around maintained dirt roads, ant colonies, and rodent burrows, and within areas lacking vegetation. Therefore, these areas were inspected thoroughly, whenever present.

The northern end of the proposed sewer alignment was not surveyed because it is located within the proposed TRVRP Project area and was surveyed in 2017 by ICF. The rest of the proposed sewer alignment was visually inspected as it is located within the County-owned paved access road. The road is deeply cut within the side of the mesa and does not contain the original ground surface with potential for intact cultural resource deposits. Figure 3-1 depicts survey coverage of the survey area.

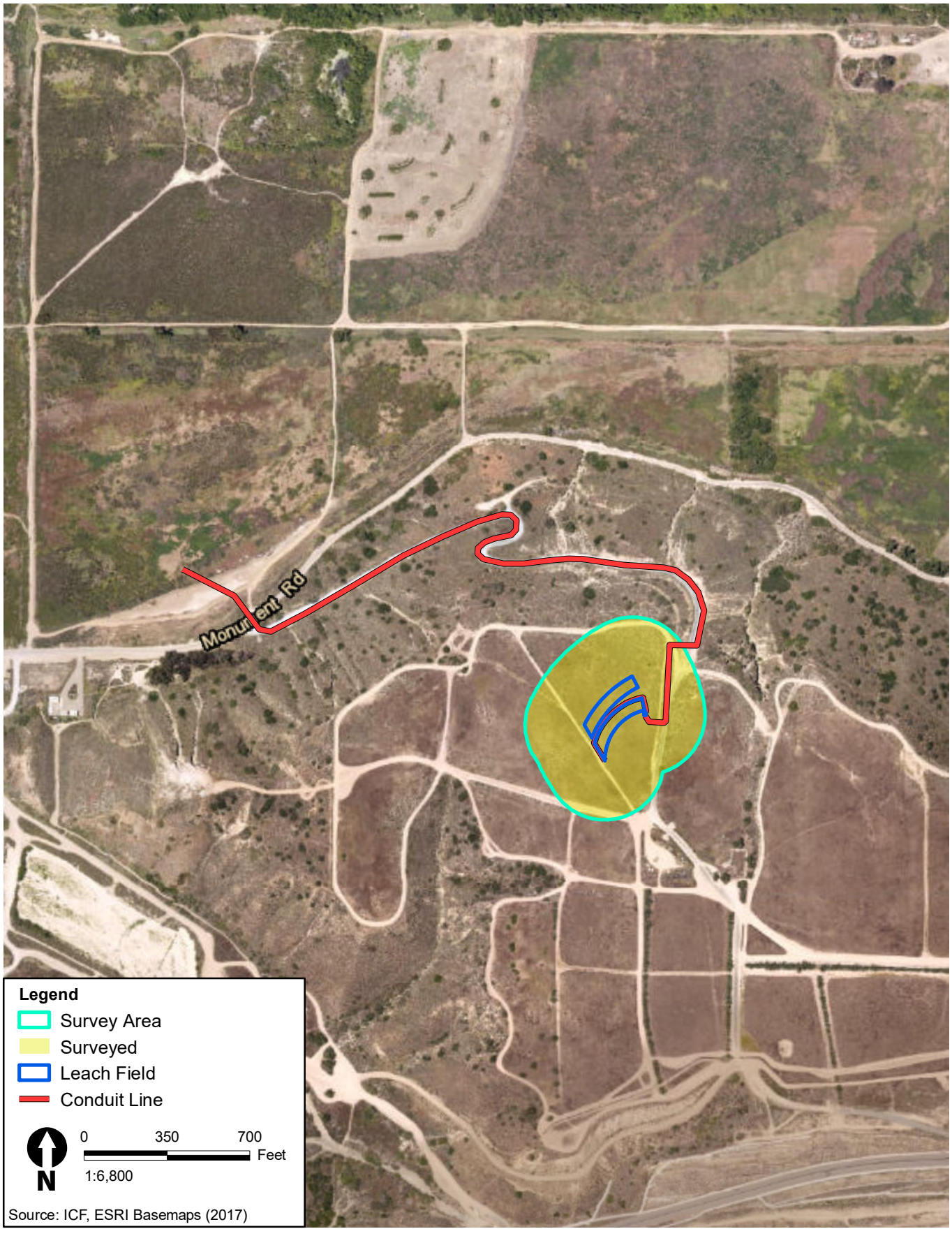

Figure 3-1
Survey Coverage
Tijuana River Valley Regional Park Campground, Spooner's Mesa Septic Project

In instances where artifacts, features, or infrastructure were identified outside of the boundaries of previously documented resources, the pedestrian survey would halt at the location of the discovery, and systematically inspect the surrounding area by walking transects spaced at 5-meter intervals until no additional artifacts, features, or infrastructure were identified within 20 meters of the outermost edge of the discovery. In instances where artifacts, features, or infrastructure were located within a previously documented resource boundary, the discovery would be described, photographed, and mapped, but no additional survey performed. If no discoveries occurred within the boundaries of previously documented resources, those areas were revisited and inspected thoroughly.

An Apple iPad equipped with an integrated Global Positioning System and the ArcGIS Collector application was used to track and record transects and any identified cultural deposits. All field observations, photographs, and information about any resources or important landscape features were collected using the ArcGIS Collector application. All information was collected in accordance with the guidelines outlined in the California Archaeological Inventory Handbook for Completing Archaeological Site Records (Office of Historic Preservation 1989).

3.1.3 Native American Participation and Consultation

On March 13, 2019, ICF contacted the Native American Heritage Commission (NAHC) for a review of its Sacred Lands Files. The NAHC responded on March 26, 2019, stating that the Sacred Lands File search was positive and indicating that Kwaaymii Laguna Band of Mission Indians and other culturally affiliated tribes should be contacted for information about the Sacred Lands. On April 10, 2019, ICF sent outreach letters to 20 tribes or individuals identified by the NAHC. The contacted persons include:

- Edwin Romero, Barona Group of Capitan Grande
- Ralph Goff, Campo Band of Mission Indians
- Robert Pinto, Ewiiaapaayp Tribe
- Michael Garcia, Ewiiaapaayp Tribe
- Virgil Perez, Iipay Nation of Santa Ysabel
- Clint Linton, Iipay Nation of Santa Ysabel
- Rebecca Osuna, Inaja Band of Mission Indians
- Erica Pinto, Jamul Indian Village
- Carmen Lucas, Kwaaymii Laguna Band of Mission Indians
- Gwendolyn Parada, La Posta Band of Mission Indians
- Javaughn Miller, La Posta Band of Mission Indians
- Angela Elliott Santos, Manzanita Band of Kumeyaay Nation
- Mario Morales, Mesa Grande Band of Mission Indians
- Michael Linton, Mesa Grande Band of Mission Indians
- Allen E. Lawson, San Pasqual Band of Mission Indians
- John Flores, San Pasqual Band of Mission Indians

- Lisa Haws (sent to Kristie Orosco), Sycuan Band of Kumeyaay Nation
- Cody J. Martinez, Sycuan Band of the Kumeyaay Nation
- Robert Welch, Viejas Band of Kumeyaay Indians
- Julie Hagen (sent to Ray Teran), Viejas Band of Kumeyaay Indians

An email response was received from Clint Linton, Iipay Nation of Santa Ysabel, on April 12, 2019. Mr. Linton requested the presence of a Native American monitor present for all ground-disturbing activities related to this project. No other responses have been received to date.

3.2 Results

No cultural resources have previously been recorded within the survey area; however, the remains of a historic structure and a concentration of historic fragmented artifacts (P-37-011095) are located approximately 250 feet southeast of the southern edge of the Project site and 84 feet south of the survey area. The structural remains were photographed, and the record will be updated to verify its continued presence in the area. It should be noted that highly fragmented historic debris was identified within the survey area extending as far as 500 feet north of P-37-011095. These fragments appear to have been dragged to their current locations as a result of road maintenance and do not comprise a culturally sensitive resource.

One newly identified prehistoric site (ICF-SPN-P-001) and four prehistoric isolates (ICF-SPN-ISO-001, ICF-SPN-ISO-002, ICF-SPN-ISO-003, ICF-SPN-ISO-004) were recorded within the survey area, but outside the Project site. Table 3-1 summarizes the cultural resources identified during the survey. Figure 3-2 in Confidential Appendix C depicts the location of each resource within the survey area, and each is discussed in greater detail below.

DPR 523 site records can be found in Confidential Appendix D. Upon completion of the survey, ICF staff submitted site records with temporary designations to the SCIC for issuance of permanent trinomials.

Table 3-1. Documented Cultural Resources within the Survey Area

Resource #	Description	Status	Maximum Dimensions
ICF-SPN-P-001	Three flaked stone artifacts	Newly identified	9 m (L) x 4 m (W)
ICF-SPN-ISO-001	Isolated expedient flaked tool	Newly identified	N/A
ICF-SPN-ISO-002	Isolated modified secondary flake	Newly identified	N/A
ICF-SPN-ISO-003	Isolated edge modified core fragment	Newly identified	N/A
ICF-SPN-ISO-004	Isolated expedient flaked tool	Newly identified	N/A
P-37-011095	Remnants of historic structure and a concentration of fragmented historic artifacts	Relocated	15 ft. x 9 ft.

Notes: m=meter; ft.=feet; N/A = Not Applicable

ICF-SPN-P-001: This resource consists of three flaked stone artifacts (A6: 1 core, A5: 1 core fragment, and A4: 1 expedient flake tool). The material ranges from fine to medium-grained, and is

composed of light-grey, grey-banded, and green metavolcanic. The site measures 9 m N/S x 4 m E/W.

- **A4**: This artifact is an expedient flaked tool formed from a primary flake (10 cm x 4.2 cm x 3.4 cm.). The material is a grey-banded medium-grained metavolcanic. The tool exhibits at least seven removals, forming a sharp cutting edge. Other attributes include 20% cortex and minimal patination.
- **A5:** This artifact is a medium-grained green metavolcanic core fragment (10.7 cm x 6.2 cm x 6 cm). Nine removals were noted; no use wear or modification was identified. At least six removals were recorded. One strip of cortex along the dorsal surface remains, covering approximately 20% of the artifact overall.
- **A6:** This artifact is a small exhausted core (5 cm x 5 cm x 4 cm). The material is a fine-grained light-grey mottled metavolcanic. No cortex remains, and moderate patination has developed. Nine removals were noted.

ICF-SPN-ISO-001: This resource consists of an isolated expedient flaked tool formed from a primary flake and displays modification along two margins. The material is medium-grained green metavolcanic and appears to have been taken from a sub-rounded river cobble. Two removals from the distal end of the dorsal surface are noted: These form one of the retouched margins. The flake is approximately 40% cortical, unpatinated, and measures 10.6 cm x 6.7 cm x 3.4 cm.

ICF-SPN-ISO-002: This resource consists of an isolated modified secondary flake. The material is medium-grained green metavolcanic; the flake was taken from a cobble, which appears to have been broken previously along a natural fracture plane. The flake is wedge-shaped, creating a perfect handheld cutting blade, although no use wear was observed in the field. The flake displays one removal from the ventral surface, which thins the bulb of percussion; this was possibly intended as a comfort feature. The flake is approximately 18% cortical, somewhat patinated, and measures 18 cm x 8.2 cm x 3.7 cm.

ICF-SPN-ISO-003: This resource consists of an isolated edge modified core fragment. The material is fine-grained black metavolcanic, and the core displays at least seven removals. The dorsal surface maintains approximately 18% cortex, and no patination was noted. The distal margin exhibits modification that creates a somewhat-serrated edge. The core fragment measures 9.3 cm x 4.2 cm x 3.5 cm.

ICF-SPN-ISO-004: This resource consists of an isolated expedient flake tool. The material is a heavy, dense blue grey quartzite. The tool displays at least eight removals as well as pressure flaking and crushing along one margin. The flake tool measures 7.2 cm x 4.5 cm x 4 cm.

CA-SDI- 011095: The site was originally recorded by Van Wormer in 1989 and described as a historic artifact scatter to the west of a small cinderblock structure. The age of the cinderblock has not been determined. ICF archaeologists observed the site and cinderblock structure just outside of the 2019 survey area. Sparse historic domestic debris were also observed within the dirt roads crossing Spooner's Mesa, up to 500 feet north of the site boundary, indicating that the cinderblock appears to have been dragged along the roads as a result of grading activities. Types of historic fragments observed include milk glass, cobalt glass, sun colored amethyst glass, colorless glass, white ware, and porcelain. Despite the fragments migrating outside the original site boundary, no changes were made to the site boundary. As the resource is outside of the survey area, no research was conducted to determine the age of the cinderblock.

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Chapter 4
Interpretation of Resource Importance and Impact Identification

4.1 Resource Importance

No cultural resources were identified within the survey area during background research. The 2019 pedestrian survey resulted in the identification of one prehistoric site, as well as four prehistoric isolates within the survey area, but outside the Project site. A previously recorded historic resource was observed and photographed, although it lies outside the survey area and will be avoided by the project. For planning purposes, the County requests a statement regarding the significance (i.e., CRHR and/or NRHP eligibility) of all resources identified during the survey. As resource evaluations were not performed as part of this study, the following are preliminary inferences based on the resource types identified and the precedent used for determining the significance of similar resource types in the survey area vicinity. However, it is important to note that additional investigations would be necessary in order to evaluate these resources formally for their CRHR and/or NRHP eligibility. Therefore, none of the inferences provided below should be considered formal recommendations. Table 4-1 summarizes significance inferences for the resources identified during the current study.

Table 4-1. Potential Significance of Identified Cultural Resources within the Survey Area

Resource	Description	Inferred Significance	Reasoning	Preliminary Recommendation
ICF-SPN-P-001	Three flaked stone artifacts	Low	Resource consists of three flaked stone artifacts in a somewhat disturbed context. Limited data potential.	Avoidance and preservation
ICF-SPN-ISO-001	Isolated expedient flaked tool	Low	Resource consists of a single isolated artifact. Limited data potential.	No mitigation measure required.
ICF-SPN-ISO-002	Isolated modified secondary flake	Low	Resource consists of a single isolated artifact. Limited data potential.	No mitigation measure required.
ICF-SPN-ISO-003	Isolated edge modified core fragment	Low	Resource consists of a single isolated artifact. Limited data potential.	No mitigation measure required.
ICF-SPN-ISO-004	Isolated expedient flaked tool	Low	Resource consists of a single isolated artifact. Limited data potential.	No mitigation measure required.

Resource	Description	Inferred Significance	Reasoning	Preliminary Recommendation
P-37-011095	Remnants of a historic structure and a concentration of fragmented historic artifacts	-	Resource consists of highly fragmented historic artifacts in a somewhat disturbed context. Outside the project area.	Avoidance and Preservation

Resource ICF-SPN-P-001 consists of three flaked artifacts within a 9 meter by 4 meter area. No additional resources or features were identified within the vicinity of this find. Based on the limited number of artifacts and their limited data potential, ICF is preliminarily recommending that ICF-SPN-P-001 is considered not eligible for CRHR.

Isolated historic artifacts associated with resource P-37-011095 were noted within the survey area. These appear to have been dragged out of situ during road-grading activities. These artifacts are not diagnostic, nor do they contain integrity, and therefore are recommended as not eligible for CRHR. Resource P-37-011095 was briefly visited to ascertain its continued existence, but was not updated or researched formally to ascertain age of features because it is located outside of the survey area. The project activities will avoid resource P-37-011095, and therefore no preliminary recommendation is provided.

During the survey, four isolates were identified within the survey area. Intensive pedestrian survey in the vicinity of the isolates revealed no additional artifacts or features. Although it is unknown whether there are buried archaeological deposits associated with these isolates, it is inferred that these isolates would have limited potential for being eligible for listing in the CRHR and/or NRHP because of a paucity of associated artifacts and features.

4.2 Impact Identification

DPR has proposed the installation of a septic tank and pump, as well as the installation of approximately 3,300 feet of effluent transport piping and electrical conduit. The piping and conduit will be installed approximately 2 to 3 feet below ground surface from Monument Road up to Spooner's Mesa within the shoulder of an existing County-owned access road. The Project will also include a 32,000-square-foot leach field composed of a primary drip tube system and a reserve system. The drip tube will be buried 1 foot below ground surface.

4.2.1 Direct Impacts

Potential direct impacts from the Project could result from the construction of the septic tank, pump, piping, and electrical conduit and excavation of the leach field. These activities will involve excavation from 1 to 3 feet below ground surface. No cultural resources have been recorded within the proposed Project site, although one prehistoric cultural resource and four isolates have been identified within the survey area.

The proposed Project would not result in direct impacts to ICF-SPN-P-001, as it is located 41 meters east of the proposed conduit location and 30 meters east of the access route used for construction.

ICF-SPN-P-01 is located at the very edge of the 200-foot buffer to the survey area, and the current project design shows that project activities will avoid this resource.

No direct impacts will occur to P-37-011095, as the resource is located approximately 250 feet southeast of the southern edge of the proposed Project site and 84 feet south of the survey area. Current project design shows that project activities will avoid this resource.

Direct impacts would occur to ICF-SPN-ISO-003, as it is located in the access route to the proposed Project. No direct impacts would occur to the other three isolates, as they are located outside of the proposed Project site. Isolates by definition do not meet the standards for listing in the CRHR, and therefore no mitigation is required to avoid or lessen significant impacts on the four isolates.

4.2.2 Indirect Impacts

Foreseeable indirect impacts associated with the Project would result primarily from leach field and conduit maintenance. Indirect impacts would not occur to any of the cultural resources located within the survey area because they are all located far enough away so as not to be impacted by maintenance activities.

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Chapter 5
Management Considerations—Mitigation Measures and Design Considerations

Previous investigations in the study area and surrounding area greatly informed the expectations in terms of possible cultural resources in the study area. Although no cultural resources were found within the Project site, one archaeological resources and four isolates were found within the survey area. In addition to these resources, the record search showed that nine prehistoric resources were previously recorded on Spooner's Mesa. Based on the number of cultural resources in such a small area, and given the poor ground visibility at the time of survey, the likelihood of encountering cultural resources during ground-disturbing activities cannot be discounted.

Therefore, in keeping with similar methods for projects in the area and based on the results of these investigations, cultural resources monitoring of all ground-disturbing activities is recommended.

Mitigation Measures MM-01: Archaeological Monitoring, MM-02: Native American Monitoring, and MM-03: Protection of Human Remains will reduce impacts to less-than-significant levels when implemented.

MM-01: Archaeological Monitoring. In order to minimize disturbance of archaeological deposits, DPR shall retain a qualified archaeologist to monitor all proposed ground-disturbing activities related to the implementation of the proposed Project. Specifically, the following measures will be implemented to reduce impacts:

- All proposed ground disturbance, including grading and excavation for the Project, will be monitored by a qualified archaeologist(s) who meets the Secretary of the Interior's Professional Qualifications Standards, as promulgated in Code of Federal Regulations (CFR), Title 36, Section 61 or in the City's Land Development Code.
- Prior to the start of construction, a monitoring plan will be prepared that describes the nature of the archaeological monitoring work, procedures to follow in the event of an unanticipated discovery, and reporting requirements.
- The archaeologist will be invited to the preconstruction meeting to inform all personnel of the probability of archaeological materials being encountered during construction.
- The County's qualified archaeologist, in consultation with the Native American monitor, will have the discretion under certain field conditions, such as modern disturbance, including previous excavation/grading/trenching activities that exceed the depth of, or has removed potential archaeological deposits; the presence of fossil formations; or when native soils are encountered, to increase or decrease the level of monitoring.
- If intact subsurface deposits are identified during construction, the archaeologist will be empowered to divert construction activities away from the find and will be given sufficient time and compensation to investigate the find and determine its significance. No soil will be exported off site until a determination can be made regarding the significance of the resource, specifically if Native American resources are encountered.

- Recovered items will be treated in accordance with current professional standards by being properly provenienced, cleaned, analyzed, researched, reported, and curated in a collection facility meeting the Secretary of the Interior's Standards, as promulgated in 36 CFR 79, such as the San Diego Archaeological Center. The costs for curation will be included in the budget for recovery of the archaeological remains.
- A final Cultural Resources Monitoring report will be produced, which will discuss the monitoring program and its results and will provide interpretations of any recovered cultural materials.

MM-02: Native American Monitoring. DPR shall retain a Kumeyaay tribal member to monitor all Project-related ground disturbance.

MM-03: Protection of Human Remains. Any ground-disturbing activities on the Project site must be considered as having the potential to encounter Native American human remains. Human remains require special handling and must be treated with appropriate dignity. Specific actions must take place pursuant to State CEQA Guidelines Section15064.5e, Public Resources Code (PRC) Section 5097.98, and Section 87.429 of the County of San Diego Grading, Clearing and Watercourses Ordinance.

Should human remains be identified during ground-disturbing activities related to the Project, whether during construction, maintenance, or any other activity, state- and county-mandated procedures shall be followed for the treatment and disposition of those remains, as follows.

In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, DRP will ensure that the following procedures are followed:

1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:
    a. A County (DPR) official is contacted.
    b. The County Coroner is contacted to determine that no investigation of the cause of death is required.
    c. If the Coroner determines the remains are Native American, then:
        i. The coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours.
        ii. The NAHC shall identify the person or persons it believes to be most likely descended from the deceased Native American.
        iii. The Most Likely Descendent (MLD) may make recommendations to the landowner (DPR), or the person responsible for the excavation work, for the treatment of human remains and any associated grave goods as provided in PRC Section 5097.98.
2. Under the following conditions, the landowner or its authorized representative shall rebury the Native American human remains and associated grave goods on the property in a location not subject to further disturbance:
    a. The NAHC is unable to identify a MLD or the MLD fails to make a recommendation within 24 hours after being notified by the NAHC.
    b. The MLD fails to make a recommendation.

c. The landowner or his authorized representative rejects the recommendation of the MLD, and mediation by the NAHC fails to provide measures acceptable to the landowner.

3. Any time human remains are encountered or suspected and soil conditions are appropriate for the technique, ground penetrating radar (GPR) will be used as part of the survey methodology. In addition, the use of canine forensics will be considered when searching for human remains. The decision to use GPR or canine forensics will be made on a case-by-case basis through consultation among the County Archaeologist, the Project archaeologist, and the Native American monitor.

4. Because human remains require special consideration and handling, they must be defined in a broad sense. For the purposes of this document, human remains are defined as:

   a. Fragmented or disarticulated human bone with no associated artifacts or grave goods.

   b. Cremations, including the soil surrounding the deposit.

   d. Interments, including the soils surrounding the deposit.

   c. Associated grave goods.

In consultation among the County archaeologist, Project archaeologist, and Native American monitor, additional measures (e.g., wet-screening of soils adjacent to the deposit or on-site) may be required to determine the extent of the burial.

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Chapter 6
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Chapter 7
List of Preparers and Persons and Organizations Contacted

Preparers:

Karolina Chmiel, MA	ICF, Archaeologist and GIS
Timothy Yates, PhD	ICF, Historian/Architectural Historian
Nara Cox, BA	ICF, Field Director
Jordan Menvielle, BA	ICF, Archaeologist

Persons and Organizations Contacted:

San Diego County Department of Parks and Recreation

San Diego History Center

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Chapter 8

List of Mitigation Measures and Design Considerations

Mitigation Measures

MM-01: Archaeological Monitoring. DPR shall retain a qualified archaeologist to monitor all proposed ground-disturbing activities related to the implementation of the proposed Project in order to minimize disturbance of archaeological deposits.

MM-02: Native American Monitoring. DPR shall retain a Kumeyaay tribal member to monitor all Project-related ground disturbance.

MM-03: Protection of Human Remains. Any ground-disturbing activities on the Project site must be considered as having the potential to encounter Native American human remains. Human remains require special handling and must be treated with appropriate dignity. Specific actions must take place pursuant to State CEQA Guidelines Section15064.5e, Public Resources Code (PRC) Section 5097.98, and Section 87.429 of the County of San Diego Grading, Clearing and Watercourses Ordinance.

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Appendix A

Records Search Confirmation

South Coastal Information Center
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-5320
Office: (619) 594-5682
www.scic.org
scic@mail.sdsu.edu

CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM
CLIENT IN-HOUSE RECORDS SEARCH

Company: ICF

Company Representative: Nara Cox

Date: 11/3/2017

Project Identification: 617.17

Search Radius: 1 mile

Historical Resources: SELF

Trinomial and Primary site maps have been reviewed. All sites within the project boundaries and the specified radius of the project area have been plotted. Copies of the site record forms have been included for all recorded sites.

Previous Survey Report Boundaries: SELF

Project boundary maps have been reviewed. National Archaeological Database (NADB) citations for reports within the project boundaries and within the specified radius of the project area have been included.

Historic Addresses: SELF

A map and database of historic properties (formerly Geofinder) has been included.

Historic Maps: SELF

The historic maps on file at the South Coastal Information Center have been reviewed, and copies have been included.

Copies: 410

Hours: 4

This is not an invoice. Please pay from the monthly billing statement

Appendix B

Native American Coordination

Sacred Lands File & Native American Contacts List Request

NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95501
(916) 373-3710
(916) 373-5471 – Fax
nahc@nahc.ca.gov

Information Below is Required for a Sacred Lands File Search

Project: TRVRP Campground Spooner's Mesa Septic Supplemental IS/MND

County: San Diego

USGS Quadrangle

Name: Imperial Beach

Township: 19 South Range: 2 West Section(s): 4, 5

Company/Firm/Agency:

ICF

Contact Person: Karolina Chmiel

Street Address: 525 B St. #1700

City: San Diego Zip: 92101

Phone: (858) 444-3936 Extension:

Fax: (858) 578-0573

Email: Karolina.Chmiel@ICF.com

Project Description:

San Diego County is proposing the installation of a 3,000 gallon sewage septic tank and pump chamber on Spooner's Mesa. The proposed project would include the installation of the septic tank and pump as well as the installation of approximately 3,300 feet of effluent transport piping and electrical conduit. The piping and conduit would be installed approximately 2 to 3 feet below ground surface from Monument Road up to Spooner's Mesa within the shoulder of an existing County-owned access road. The leach field will be approximately 32,000 square feet and the drip tube system would be buried 1 foot below ground surface.

☑ Project Location Map is attached

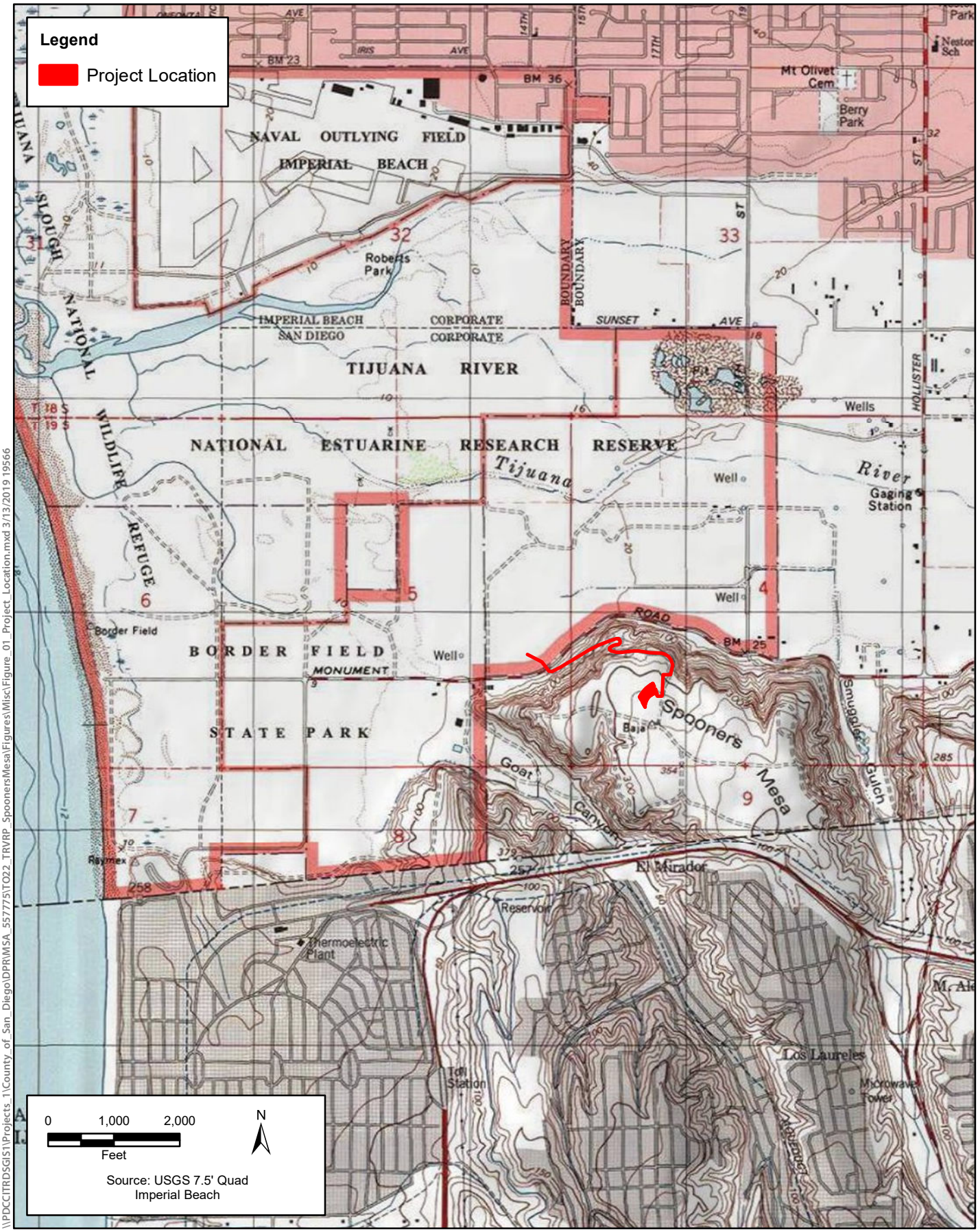

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Figure 1
Project Location
TRVRP Spooners Mesa

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
Phone: (916) 373-3710
Email: nahc@nahc.ca.gov
Website: http://www.nahc.ca.gov
Twitter: @CA_NAHC

March 26, 2019

Karolina Chmiel
ICF

VIA Email to: Karolina.chmiel@icf.com

RE: TRVRP Campground Spooner's Mesa Septic Supplemental IS/MND Project, San Diego County

Dear Ms. Chmiel:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were positive. Please contact the Kwaaymii Laguna Band of Mission Indians on the attached list for more information. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our lists contain current information. If you have any questions or need additional information, please contact me at my email address: steven.quinn@nahc.ca.gov.

Sincerely,

Steven Quinn
Associate Governmental Program Analyst

Attachment

Native American Heritage Commission
Native American Contact List
San Diego County
3/26/2019

Barona Group of the Capitan Grande
Edwin Romero, Chairperson
1095 Barona Road — Diegueno
Lakeside, CA, 92040
Phone: (619) 443 - 6612
Fax: (619) 443-0681
cloyd@barona-nsn.gov

Campo Band of Diegueno Mission Indians
Ralph Goff, Chairperson
36190 Church Road, Suite 1 — Diegueno
Campo, CA, 91906
Phone: (619) 478 - 9046
Fax: (619) 478-5818
rgoff@campo-nsn.gov

Ewiiaapaayp Tribe
Robert Pinto, Chairperson
4054 Willows Road — Diegueno
Alpine, CA, 91901
Phone: (619) 445 - 6315
Fax: (619) 445-9126
wmicklin@leaningrock.net

Ewiiaapaayp Tribe
Michael Garcia, Vice Chairperson
4054 Willows Road — Diegueno
Alpine, CA, 91901
Phone: (619) 445 - 6315
Fax: (619) 445-9126
michaelg@leaningrock.net

Iipay Nation of Santa Ysabel
Virgil Perez, Chairperson
P.O. Box 130 — Diegueno
Santa Ysabel, CA, 92070
Phone: (760) 765 - 0845
Fax: (760) 765-0320

Iipay Nation of Santa Ysabel
Clint Linton, Director of Cultural Resources
P.O. Box 507 — Diegueno
Santa Ysabel, CA, 92070
Phone: (760) 803 - 5694
cjlinton73@aol.com

Inaja-Cosmit Band of Indians
Rebecca Osuna, Chairperson
2005 S. Escondido Blvd. — Diegueno
Escondido, CA, 92025
Phone: (760) 737 - 7628
Fax: (760) 747-8568

Jamul Indian Village
Erica Pinto, Chairperson
P.O. Box 612 — Diegueno
Jamul, CA, 91935
Phone: (619) 669 - 4785
Fax: (619) 669-4817
epinto@jiv-nsn.gov

Kwaaymii Laguna Band of Mission Indians
Carmen Lucas,
P.O. Box 775 — Kwaaymii
Pine Valley, CA, 91962 — Diegueno
Phone: (619) 709 - 4207

La Posta Band of Diegueno Mission Indians
Gwendolyn Parada, Chairperson
P. O. Box 1120 — Diegueno
Boulevard, CA, 91905
Phone: (619) 478 - 2113
Fax: (619) 478-2125
LP13boots@aol.com

La Posta Band of Diegueno Mission Indians
Javaughn Miller, Tribal Administrator
P. O. Box 1120 — Diegueno
Boulevard, CA, 91905
Phone: (619) 478 - 2113
Fax: (619) 478-2125
jmiller@LPtribe.net

Manzanita Band of Kumeyaay Nation
Angela Elliott Santos, Chairperson
P.O. Box 1302 — Diegueno
Boulevard, CA, 91905
Phone: (619) 766 - 4930
Fax: (619) 766-4957

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed TRVRP Campground Spooner's Mesa Septic Supplemental IS/MND Project, San Diego County.

Native American Heritage Commission
Native American Contact List
San Diego County
3/26/2019

Mesa Grande Band of Diegueno Mission Indians
Michael Linton, Chairperson
P.O Box 270 Diegueno
Santa Ysabel, CA, 92070
Phone: (760) 782 - 3818
Fax: (760) 782-9092
mesagrandeband@msn.com

Mesa Grande Band of Diegueno Mission Indians
Mario Morales, Cultural Resources Representative
PMB 366 35008 Pala Temecula Rd. Diegueno
Pala, CA, 92059
Phone: (760) 622 - 1336

San Pasqual Band of Diegueno Mission Indians
John Flores, Environmental Coordinator
P. O. Box 365 Diegueno
Valley Center, CA, 92082
Phone: (760) 749 - 3200
Fax: (760) 749-3876
johnf@sanpasqualtribe.org

San Pasqual Band of Diegueno Mission Indians
Allen Lawson, Chairperson
P.O. Box 365 Diegueno
Valley Center, CA, 92082
Phone: (760) 749 - 3200
Fax: (760) 749-3876
allenl@sanpasqualtribe.org

Sycuan Band of the Kumeyaay Nation
Cody J. Martinez, Chairperson
1 Kwaaypaay Court Kumeyaay
El Cajon, CA, 92019
Phone: (619) 445 - 2613
Fax: (619) 445-1927
ssilva@sycuan-nsn.gov

Sycuan Band of the Kumeyaay Nation
Lisa Haws, Cultural Resources Manager
1 Kwaaypaay Court Kumeyaay
El Cajon, CA, 92019
Phone: (619) 312 - 1935
lhaws@sycuan-nsn.gov

Viejas Band of Kumeyaay Indians
Robert Welch, Chairperson
1 Viejas Grade Road Diegueno
Alpine, CA, 91901
Phone: (619) 445 - 3810
Fax: (619) 445-5337
jhagen@viejas-nsn.gov

Viejas Band of Kumeyaay Indians
Julie Hagen,
1 Viejas Grade Road Diegueno
Alpine, CA, 91901
Phone: (619) 445 - 3810
Fax: (619) 445-5337
jhagen@viejas-nsn.gov

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed TRVRP Campground Spooner's Mesa Septic Supplemental IS/MND Project, San Diego County.

April 10, 2019

Manzanita Band of Kumeyaay Nation
Angela Elliott Santos, Chairperson
P.O. Box 1302
Boulevard, CA, 91905

Subject: TRVRP Campground Spooner's Mesa Septic Project

Dear Ms. Elliott Santos:

The Tijuana River Valley Regional Park (TRVRP) Campground Spooner's Mesa Septic Project proposes the installation of a 3,000 gallon sewage septic tank and pump chamber on Spooner's Mesa, San Diego, California. The proposed project would include the installation of the septic tank and pump as well as the installation of approximately 3,300 feet of piping and electrical conduit. The piping and conduit would be installed approximately 2 to 3 feet below ground surface from Monument Road up to Spooner's Mesa within the shoulder of an existing County-owned access road. The leach field will be approximately 32,000 square feet and the drip tube system would be buried 1 foot below ground surface. The Project is within Sections 4 and 5 of Township 19 South, Range 2 West, and appears on the *Imperial Beach*, California USGS 7.5-minute series topographic map (as shown on attached Figure 1).

ICF has been retained by the San Diego County Department of Parks and Recreation to conduct cultural resources studies in support of an Initial Study/Mitigated Negative Declaration (IS/MND) Report. To accomplish this objective, ICF cultural resources personnel performed a records search, archival research, and a Sacred Lands File search of the project area. Archival research refers to both written and oral history including record searches at the South Coastal Information Center (SCIC), the Native American Heritage Commission (NAHC), as well as Native American consultation. Prehistoric isolates have been identified within the project area as a result the records search and pedestrian survey.

The NAHC completed a search of the Sacred Lands File, which indicated the presence of Native American sacred lands within the project area. The NAHC identify you as a person who may have concerns or knowledge of cultural resources in the project area. Any information you might be able to share about the project area would greatly enhance the study and would be most appreciated.

If you have any recommendations regarding the Project, please address them to me so that I can incorporate them into our draft report. As required by State law, all site data and other culturally sensitive information will not be released to the general public and will be kept strictly confidential. This outreach is for due diligence and not under AB52 or Section 106. I can be reached at 858-444-3936, or by email at Karolina.Chmiel@icf.com.

Sincerely,

Karolina Chmiel, MA
ICF Archaeologist

April 10, 2019

San Pasqual Band of Diegueno Mission Indians
John Flores, Environmental Coordinator
P.O. Box 365
Valley Center, CA 92082

Subject: TRVRP Campground Spooner's Mesa Septic Project

Dear Mr. Flores:

The Tijuana River Valley Regional Park (TRVRP) Campground Spooner's Mesa Septic Project proposes the installation of a 3,000 gallon sewage septic tank and pump chamber on Spooner's Mesa, San Diego, California. The proposed project would include the installation of the septic tank and pump as well as the installation of approximately 3,300 feet of piping and electrical conduit. The piping and conduit would be installed approximately 2 to 3 feet below ground surface from Monument Road up to Spooner's Mesa within the shoulder of an existing County-owned access road. The leach field will be approximately 32,000 square feet and the drip tube system would be buried 1 foot below ground surface. The Project is within Sections 4 and 5 of Township 19 South, Range 2 West, and appears on the *Imperial Beach*, California USGS 7.5-minute series topographic map (as shown on attached Figure 1).

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The NAHC completed a search of the Sacred Lands File, which indicated the presence of Native American sacred lands within the project area. The NAHC identify you as a person who may have concerns or knowledge of cultural resources in the project area. Any information you might be able to share about the project area would greatly enhance the study and would be most appreciated.

If you have any recommendations regarding the Project, please address them to me so that I can incorporate them into our draft report. As required by State law, all site data and other culturally sensitive information will not be released to the general public and will be kept strictly confidential. This outreach is for due diligence and not under AB52 or Section 106. I can be reached at 858-444-3936, or by email at Karolina.Chmiel@icf.com.

Sincerely,

Karolina Chmiel, MA
ICF Archaeologist

April 10, 2019

Ewiiaapaayp Tribal Office
Michael Garcia, Vice Chairperson
4054 Willows Road
Alpine, CA 91901

Subject: TRVRP Campground Spooner's Mesa Septic Project

Dear Mr. Garcia:

The Tijuana River Valley Regional Park (TRVRP) Campground Spooner's Mesa Septic Project proposes the installation of a 3,000 gallon sewage septic tank and pump chamber on Spooner's Mesa, San Diego, California. The proposed project would include the installation of the septic tank and pump as well as the installation of approximately 3,300 feet of piping and electrical conduit. The piping and conduit would be installed approximately 2 to 3 feet below ground surface from Monument Road up to Spooner's Mesa within the shoulder of an existing County-owned access road. The leach field will be approximately 32,000 square feet and the drip tube system would be buried 1 foot below ground surface. The Project is within Sections 4 and 5 of Township 19 South, Range 2 West, and appears on the *Imperial Beach*, California USGS 7.5-minute series topographic map (as shown on attached Figure 1).

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Sincerely,

Karolina Chmiel, MA
ICF Archaeologist

April 10, 2019

Campo Band of Diegueno Mission Indians
Ralph Goff, Chairperson
36190 Church Road, Suite 1
Campo, CA 91906

Subject: TRVRP Campground Spooner's Mesa Septic Project

Dear Mr. Goff:

The Tijuana River Valley Regional Park (TRVRP) Campground Spooner's Mesa Septic Project proposes the installation of a 3,000 gallon sewage septic tank and pump chamber on Spooner's Mesa, San Diego, California. The proposed project would include the installation of the septic tank and pump as well as the installation of approximately 3,300 feet of piping and electrical conduit. The piping and conduit would be installed approximately 2 to 3 feet below ground surface from Monument Road up to Spooner's Mesa within the shoulder of an existing County-owned access road. The leach field will be approximately 32,000 square feet and the drip tube system would be buried 1 foot below ground surface. The Project is within Sections 4 and 5 of Township 19 South, Range 2 West, and appears on the *Imperial Beach*, California USGS 7.5-minute series topographic map (as shown on attached Figure 1).

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Sincerely,

Karolina Chmiel, MA
ICF Archaeologist

April 10, 2019

San Pasqual Band of Diegueno Mission Indians
Allen Lawson, Chairperson
P.O. Box 365
Valley Center, CA 92082

Subject: TRVRP Campground Spooner's Mesa Septic Project

Dear Mr. Lawson:

The Tijuana River Valley Regional Park (TRVRP) Campground Spooner's Mesa Septic Project proposes the installation of a 3,000 gallon sewage septic tank and pump chamber on Spooner's Mesa, San Diego, California. The proposed project would include the installation of the septic tank and pump as well as the installation of approximately 3,300 feet of piping and electrical conduit. The piping and conduit would be installed approximately 2 to 3 feet below ground surface from Monument Road up to Spooner's Mesa within the shoulder of an existing County-owned access road. The leach field will be approximately 32,000 square feet and the drip tube system would be buried 1 foot below ground surface. The Project is within Sections 4 and 5 of Township 19 South, Range 2 West, and appears on the *Imperial Beach*, California USGS 7.5-minute series topographic map (as shown on attached Figure 1).

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Sincerely,

Karolina Chmiel, MA
ICF Archaeologist

April 10, 2019

Iipay Nation of Santa Ysabel
Clint Linton, Director of Cultural Resources
P.O. Box 507
Santa Ysabel, CA 92070

Subject: TRVRP Campground Spooner's Mesa Septic Project

Dear Mr. Linton:

The Tijuana River Valley Regional Park (TRVRP) Campground Spooner's Mesa Septic Project proposes the installation of a 3,000 gallon sewage septic tank and pump chamber on Spooner's Mesa, San Diego, California. The proposed project would include the installation of the septic tank and pump as well as the installation of approximately 3,300 feet of piping and electrical conduit. The piping and conduit would be installed approximately 2 to 3 feet below ground surface from Monument Road up to Spooner's Mesa within the shoulder of an existing County-owned access road. The leach field will be approximately 32,000 square feet and the drip tube system would be buried 1 foot below ground surface. The Project is within Sections 4 and 5 of Township 19 South, Range 2 West, and appears on the *Imperial Beach*, California USGS 7.5-minute series topographic map (as shown on attached Figure 1).

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Sincerely,

Karolina Chmiel, MA
ICF Archaeologist

From:	Clint Linton
To:	Cox, Nara
Cc:	Chmiel, Karolina
Subject:	Re: TRVRP Campground Spooner"s Mesa Septic Project- Due Diligence Outreach
Date:	Friday, April 12, 2019 9:45:06 AM
Attachments:	image002.png

Hi Nara. Yes thats correct and thanks for emailing it!

For this project please have a NAM on site for all ground disturbing activities related to this project.

Thanks again! Clint

On Tue, Apr 9, 2019 at 5:45 PM Cox, Nara <Nara.Cox@icf.com> wrote:

> Hi Clint-
>
> I recall that you requested emails instead of paper letters for outreach. Please see attached.
>
> Thanks,
>
> **NARA COX** | Archaeologist – Southern California | +1.714.337.0769 mobile | nara.cox@icf.com| icf.com
>
> **ICF** | 525 B Street, Suite 1700, San Diego, CA 92101 USA
>
> Connect with us on social media.

--
Clint Linton, President
Cell: (760) 803-5694
Clint@redtailenvironmental.com
P.O. Box 507 Santa Ysabel, CA 92070

DBE MBE SLBE

April 10, 2019

Mesa Grande Band of Diegueno Mission Indians
Michael Linton, Chairperson
P.O. Box 270
Santa Ysabel, CA, 92070

Subject: TRVRP Campground Spooner's Mesa Septic Project

Dear Mr. Linton:

The Tijuana River Valley Regional Park (TRVRP) Campground Spooner's Mesa Septic Project proposes the installation of a 3,000 gallon sewage septic tank and pump chamber on Spooner's Mesa, San Diego, California. The proposed project would include the installation of the septic tank and pump as well as the installation of approximately 3,300 feet of piping and electrical conduit. The piping and conduit would be installed approximately 2 to 3 feet below ground surface from Monument Road up to Spooner's Mesa within the shoulder of an existing County-owned access road. The leach field will be approximately 32,000 square feet and the drip tube system would be buried 1 foot below ground surface. The Project is within Sections 4 and 5 of Township 19 South, Range 2 West, and appears on the *Imperial Beach*, California USGS 7.5-minute series topographic map (as shown on attached Figure 1).

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Sincerely,

Karolina Chmiel, MA
ICF Archaeologist

April 10, 2019

Kwaaymii Laguna Band of Mission Indians
Carmen Lucas
P.O. Box 775
Pine Valley, CA 91962

Subject: TRVRP Campground Spooner's Mesa Septic Project

Dear Ms. Lucas:

The Tijuana River Valley Regional Park (TRVRP) Campground Spooner's Mesa Septic Project proposes the installation of a 3,000 gallon sewage septic tank and pump chamber on Spooner's Mesa, San Diego, California. The proposed project would include the installation of the septic tank and pump as well as the installation of approximately 3,300 feet of piping and electrical conduit. The piping and conduit would be installed approximately 2 to 3 feet below ground surface from Monument Road up to Spooner's Mesa within the shoulder of an existing County-owned access road. The leach field will be approximately 32,000 square feet and the drip tube system would be buried 1 foot below ground surface. The Project is within Sections 4 and 5 of Township 19 South, Range 2 West, and appears on the *Imperial Beach*, California USGS 7.5-minute series topographic map (as shown on attached Figure 1).

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Sincerely,

Karolina Chmiel, MA
ICF Archaeologist

April 10, 2019

Sycuan Band of the Kumeyaay Nation
Cody J. Martinez, Chairperson
1 Kwaaypaay Court
El Cajon, CA 92019

Subject: TRVRP Campground Spooner's Mesa Septic Project

Dear Mr. Martinez:

The Tijuana River Valley Regional Park (TRVRP) Campground Spooner's Mesa Septic Project proposes the installation of a 3,000 gallon sewage septic tank and pump chamber on Spooner's Mesa, San Diego, California. The proposed project would include the installation of the septic tank and pump as well as the installation of approximately 3,300 feet of piping and electrical conduit. The piping and conduit would be installed approximately 2 to 3 feet below ground surface from Monument Road up to Spooner's Mesa within the shoulder of an existing County-owned access road. The leach field will be approximately 32,000 square feet and the drip tube system would be buried 1 foot below ground surface. The Project is within Sections 4 and 5 of Township 19 South, Range 2 West, and appears on the *Imperial Beach*, California USGS 7.5-minute series topographic map (as shown on attached Figure 1).

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Sincerely,

Karolina Chmiel, MA
ICF Archaeologist

April 10, 2019

La Posta Band of Diegueno Mission Indians
Javaughn Miller, Tribal Administrator
P.O. Box 1120
Boulevard, CA, 91905

Subject: TRVRP Campground Spooner's Mesa Septic Project

Dear Mr. Miller:

The Tijuana River Valley Regional Park (TRVRP) Campground Spooner's Mesa Septic Project proposes the installation of a 3,000 gallon sewage septic tank and pump chamber on Spooner's Mesa, San Diego, California. The proposed project would include the installation of the septic tank and pump as well as the installation of approximately 3,300 feet of piping and electrical conduit. The piping and conduit would be installed approximately 2 to 3 feet below ground surface from Monument Road up to Spooner's Mesa within the shoulder of an existing County-owned access road. The leach field will be approximately 32,000 square feet and the drip tube system would be buried 1 foot below ground surface. The Project is within Sections 4 and 5 of Township 19 South, Range 2 West, and appears on the *Imperial Beach*, California USGS 7.5-minute series topographic map (as shown on attached Figure 1).

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Sincerely,

Karolina Chmiel, MA
ICF Archaeologist

April 10, 2019

Mesa Grande Band of Diegueno Mission Indians
Mario Morales, Cultural Resources Representative
PMB 366 35008 Pala Temecula Rd
Pala, CA, 92059

Subject: TRVRP Campground Spooner's Mesa Septic Project

Dear Mr. Morales:

The Tijuana River Valley Regional Park (TRVRP) Campground Spooner's Mesa Septic Project proposes the installation of a 3,000 gallon sewage septic tank and pump chamber on Spooner's Mesa, San Diego, California. The proposed project would include the installation of the septic tank and pump as well as the installation of approximately 3,300 feet of piping and electrical conduit. The piping and conduit would be installed approximately 2 to 3 feet below ground surface from Monument Road up to Spooner's Mesa within the shoulder of an existing County-owned access road. The leach field will be approximately 32,000 square feet and the drip tube system would be buried 1 foot below ground surface. The Project is within Sections 4 and 5 of Township 19 South, Range 2 West, and appears on the *Imperial Beach*, California USGS 7.5-minute series topographic map (as shown on attached Figure 1).

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Sincerely,

Karolina Chmiel, MA
ICF Archaeologist

April 10, 2019

Sycuan Band of the Kumeyaay Nation
Kristie Orosco, Cultural Resources Manager
1 Kwaaypaay Court
El Cajon, CA 92019

Subject: TRVRP Campground Spooner's Mesa Septic Project

Dear Ms. Orosco:

The Tijuana River Valley Regional Park (TRVRP) Campground Spooner's Mesa Septic Project proposes the installation of a 3,000 gallon sewage septic tank and pump chamber on Spooner's Mesa, San Diego, California. The proposed project would include the installation of the septic tank and pump as well as the installation of approximately 3,300 feet of piping and electrical conduit. The piping and conduit would be installed approximately 2 to 3 feet below ground surface from Monument Road up to Spooner's Mesa within the shoulder of an existing County-owned access road. The leach field will be approximately 32,000 square feet and the drip tube system would be buried 1 foot below ground surface. The Project is within Sections 4 and 5 of Township 19 South, Range 2 West, and appears on the *Imperial Beach*, California USGS 7.5-minute series topographic map (as shown on attached Figure 1).

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Sincerely,

Karolina Chmiel, MA
ICF Archaeologist

April 10, 2019

Inaja-Cosmit Band of Indians
Rebecca Osuna, Chairperson
2005 S. Escondido Blvd.
Escondido, CA 92025

Subject: TRVRP Campground Spooner's Mesa Septic Project

Dear Ms. Osuna:

The Tijuana River Valley Regional Park (TRVRP) Campground Spooner's Mesa Septic Project proposes the installation of a 3,000 gallon sewage septic tank and pump chamber on Spooner's Mesa, San Diego, California. The proposed project would include the installation of the septic tank and pump as well as the installation of approximately 3,300 feet of piping and electrical conduit. The piping and conduit would be installed approximately 2 to 3 feet below ground surface from Monument Road up to Spooner's Mesa within the shoulder of an existing County-owned access road. The leach field will be approximately 32,000 square feet and the drip tube system would be buried 1 foot below ground surface. The Project is within Sections 4 and 5 of Township 19 South, Range 2 West, and appears on the *Imperial Beach*, California USGS 7.5-minute series topographic map (as shown on attached Figure 1).

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Sincerely,

Karolina Chmiel, MA
ICF Archaeologist

April 10, 2019

La Posta Band of Diegueno Mission Indians
Gwendolyn Parada, Chairperson
P.O. Box 1120
Boulevard, CA, 91905

Subject: TRVRP Campground Spooner's Mesa Septic Project

Dear Ms. Parada:

The Tijuana River Valley Regional Park (TRVRP) Campground Spooner's Mesa Septic Project proposes the installation of a 3,000 gallon sewage septic tank and pump chamber on Spooner's Mesa, San Diego, California. The proposed project would include the installation of the septic tank and pump as well as the installation of approximately 3,300 feet of piping and electrical conduit. The piping and conduit would be installed approximately 2 to 3 feet below ground surface from Monument Road up to Spooner's Mesa within the shoulder of an existing County-owned access road. The leach field will be approximately 32,000 square feet and the drip tube system would be buried 1 foot below ground surface. The Project is within Sections 4 and 5 of Township 19 South, Range 2 West, and appears on the *Imperial Beach*, California USGS 7.5-minute series topographic map (as shown on attached Figure 1).

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Sincerely,

Karolina Chmiel, MA
ICF Archaeologist

April 10, 2019

Iipay Nation of Santa Ysabel
Virgil Perez, Chairperson
P.O. Box 130
Santa Ysabel, CA 92070

Subject: TRVRP Campground Spooner's Mesa Septic Project

Dear Mr. Perez:

The Tijuana River Valley Regional Park (TRVRP) Campground Spooner's Mesa Septic Project proposes the installation of a 3,000 gallon sewage septic tank and pump chamber on Spooner's Mesa, San Diego, California. The proposed project would include the installation of the septic tank and pump as well as the installation of approximately 3,300 feet of piping and electrical conduit. The piping and conduit would be installed approximately 2 to 3 feet below ground surface from Monument Road up to Spooner's Mesa within the shoulder of an existing County-owned access road. The leach field will be approximately 32,000 square feet and the drip tube system would be buried 1 foot below ground surface. The Project is within Sections 4 and 5 of Township 19 South, Range 2 West, and appears on the *Imperial Beach*, California USGS 7.5-minute series topographic map (as shown on attached Figure 1).

ICF has been retained by the San Diego County Department of Parks and Recreation to conduct cultural resources studies in support of an Initial Study/Mitigated Negative Declaration (IS/MND) Report. To accomplish this objective, ICF cultural resources personnel performed a records search, archival research, and a Sacred Lands File search of the project area. Archival research refers to both written and oral history including record searches at the South Coastal Information Center (SCIC), the Native American Heritage Commission (NAHC), as well as Native American consultation. Prehistoric isolates have been identified within the project area as a result the records search and pedestrian survey.

The NAHC completed a search of the Sacred Lands File, which indicated the presence of Native American sacred lands within the project area. The NAHC identify you as a person who may have concerns or knowledge of cultural resources in the project area. Any information you might be able to share about the project area would greatly enhance the study and would be most appreciated.

If you have any recommendations regarding the Project, please address them to me so that I can incorporate them into our draft report. As required by State law, all site data and other culturally sensitive information will not be released to the general public and will be kept strictly confidential. This outreach is for due diligence and not under AB52 or Section 106. I can be reached at 858-444-3936, or by email at Karolina.Chmiel@icf.com.

Sincerely,

Karolina Chmiel, MA
ICF Archaeologist

April 10, 2019

Ewiiaapaayp Tribal Office
Robert Pinto, Chairperson
4054 Willows Road
Alpine, CA 91901

Subject: TRVRP Campground Spooner's Mesa Septic Project

Dear Mr. Pinto:

The Tijuana River Valley Regional Park (TRVRP) Campground Spooner's Mesa Septic Project proposes the installation of a 3,000 gallon sewage septic tank and pump chamber on Spooner's Mesa, San Diego, California. The proposed project would include the installation of the septic tank and pump as well as the installation of approximately 3,300 feet of piping and electrical conduit. The piping and conduit would be installed approximately 2 to 3 feet below ground surface from Monument Road up to Spooner's Mesa within the shoulder of an existing County-owned access road. The leach field will be approximately 32,000 square feet and the drip tube system would be buried 1 foot below ground surface. The Project is within Sections 4 and 5 of Township 19 South, Range 2 West, and appears on the *Imperial Beach*, California USGS 7.5-minute series topographic map (as shown on attached Figure 1).

ICF has been retained by the San Diego County Department of Parks and Recreation to conduct cultural resources studies in support of an Initial Study/Mitigated Negative Declaration (IS/MND) Report. To accomplish this objective, ICF cultural resources personnel performed a records search, archival research, and a Sacred Lands File search of the project area. Archival research refers to both written and oral history including record searches at the South Coastal Information Center (SCIC), the Native American Heritage Commission (NAHC), as well as Native American consultation. Prehistoric isolates have been identified within the project area as a result the records search and pedestrian survey.

The NAHC completed a search of the Sacred Lands File, which indicated the presence of Native American sacred lands within the project area. The NAHC identify you as a person who may have concerns or knowledge of cultural resources in the project area. Any information you might be able to share about the project area would greatly enhance the study and would be most appreciated.

If you have any recommendations regarding the Project, please address them to me so that I can incorporate them into our draft report. As required by State law, all site data and other culturally sensitive information will not be released to the general public and will be kept strictly confidential. This outreach is for due diligence and not under AB52 or Section 106. I can be reached at 858-444-3936, or by email at Karolina.Chmiel@icf.com.

Sincerely,

Karolina Chmiel, MA
ICF Archaeologist

April 10, 2019

Jamul Indian Village
Erica Pinto, Chairperson
P.O. Box 612
Jamul, CA 91935

Subject: TRVRP Campground Spooner's Mesa Septic Project

Dear Ms. Pinto:

The Tijuana River Valley Regional Park (TRVRP) Campground Spooner's Mesa Septic Project proposes the installation of a 3,000 gallon sewage septic tank and pump chamber on Spooner's Mesa, San Diego, California. The proposed project would include the installation of the septic tank and pump as well as the installation of approximately 3,300 feet of piping and electrical conduit. The piping and conduit would be installed approximately 2 to 3 feet below ground surface from Monument Road up to Spooner's Mesa within the shoulder of an existing County-owned access road. The leach field will be approximately 32,000 square feet and the drip tube system would be buried 1 foot below ground surface. The Project is within Sections 4 and 5 of Township 19 South, Range 2 West, and appears on the *Imperial Beach*, California USGS 7.5-minute series topographic map (as shown on attached Figure 1).

ICF has been retained by the San Diego County Department of Parks and Recreation to conduct cultural resources studies in support of an Initial Study/Mitigated Negative Declaration (IS/MND) Report. To accomplish this objective, ICF cultural resources personnel performed a records search, archival research, and a Sacred Lands File search of the project area. Archival research refers to both written and oral history including record searches at the South Coastal Information Center (SCIC), the Native American Heritage Commission (NAHC), as well as Native American consultation. Prehistoric isolates have been identified within the project area as a result the records search and pedestrian survey.

The NAHC completed a search of the Sacred Lands File, which indicated the presence of Native American sacred lands within the project area. The NAHC identify you as a person who may have concerns or knowledge of cultural resources in the project area. Any information you might be able to share about the project area would greatly enhance the study and would be most appreciated.

If you have any recommendations regarding the Project, please address them to me so that I can incorporate them into our draft report. As required by State law, all site data and other culturally sensitive information will not be released to the general public and will be kept strictly confidential. This outreach is for due diligence and not under AB52 or Section 106. I can be reached at 858-444-3936, or by email at Karolina.Chmiel@icf.com.

Sincerely,

Karolina Chmiel, MA
ICF Archaeologist

April 10, 2019

Barona Group of the Capitan Grande
Edwin Romero, Chairperson
1095 Barona Road
Lakeside, CA 92040

Subject: TRVRP Campground Spooner's Mesa Septic Project

Dear Mr. Romero:

The Tijuana River Valley Regional Park (TRVRP) Campground Spooner's Mesa Septic Project proposes the installation of a 3,000 gallon sewage septic tank and pump chamber on Spooner's Mesa, San Diego, California. The proposed project would include the installation of the septic tank and pump as well as the installation of approximately 3,300 feet of piping and electrical conduit. The piping and conduit would be installed approximately 2 to 3 feet below ground surface from Monument Road up to Spooner's Mesa within the shoulder of an existing County-owned access road. The leach field will be approximately 32,000 square feet and the drip tube system would be buried 1 foot below ground surface. The Project is within Sections 4 and 5 of Township 19 South, Range 2 West, and appears on the *Imperial Beach*, California USGS 7.5-minute series topographic map (as shown on attached Figure 1).

ICF has been retained by the San Diego County Department of Parks and Recreation to conduct cultural resources studies in support of an Initial Study/Mitigated Negative Declaration (IS/MND) Report. To accomplish this objective, ICF cultural resources personnel performed a records search, archival research, and a Sacred Lands File search of the project area. Archival research refers to both written and oral history including record searches at the South Coastal Information Center (SCIC), the Native American Heritage Commission (NAHC), as well as Native American consultation. Prehistoric isolates have been identified within the project area as a result the records search and pedestrian survey.

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If you have any recommendations regarding the Project, please address them to me so that I can incorporate them into our draft report. As required by State law, all site data and other culturally sensitive information will not be released to the general public and will be kept strictly confidential. This outreach is for due diligence and not under AB52 or Section 106. I can be reached at 858-444-3936, or by email at Karolina.Chmiel@icf.com.

Sincerely,

Karolina Chmiel, MA
ICF Archaeologist

April 10, 2019

Viejas Band of Kumeyaay Indians
Ray Teran
1 Viejas Grade Road
Alpine, CA 91901

Subject: TRVRP Campground Spooner's Mesa Septic Project

Dear Mr. Teran:

The Tijuana River Valley Regional Park (TRVRP) Campground Spooner's Mesa Septic Project proposes the installation of a 3,000 gallon sewage septic tank and pump chamber on Spooner's Mesa, San Diego, California. The proposed project would include the installation of the septic tank and pump as well as the installation of approximately 3,300 feet of piping and electrical conduit. The piping and conduit would be installed approximately 2 to 3 feet below ground surface from Monument Road up to Spooner's Mesa within the shoulder of an existing County-owned access road. The leach field will be approximately 32,000 square feet and the drip tube system would be buried 1 foot below ground surface. The Project is within Sections 4 and 5 of Township 19 South, Range 2 West, and appears on the *Imperial Beach*, California USGS 7.5-minute series topographic map (as shown on attached Figure 1).

ICF has been retained by the San Diego County Department of Parks and Recreation to conduct cultural resources studies in support of an Initial Study/Mitigated Negative Declaration (IS/MND) Report. To accomplish this objective, ICF cultural resources personnel performed a records search, archival research, and a Sacred Lands File search of the project area. Archival research refers to both written and oral history including record searches at the South Coastal Information Center (SCIC), the Native American Heritage Commission (NAHC), as well as Native American consultation. Prehistoric isolates have been identified within the project area as a result the records search and pedestrian survey.

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Sincerely,

Karolina Chmiel, MA
ICF Archaeologist

April 10, 2019

Viejas Band of Kumeyaay Indians
Robert Welch, Chairperson
1 Viejas Grade Road
Alpine, CA 91901

Subject: TRVRP Campground Spooner's Mesa Septic Project

Dear Mr. Welch:

The Tijuana River Valley Regional Park (TRVRP) Campground Spooner's Mesa Septic Project proposes the installation of a 3,000 gallon sewage septic tank and pump chamber on Spooner's Mesa, San Diego, California. The proposed project would include the installation of the septic tank and pump as well as the installation of approximately 3,300 feet of piping and electrical conduit. The piping and conduit would be installed approximately 2 to 3 feet below ground surface from Monument Road up to Spooner's Mesa within the shoulder of an existing County-owned access road. The leach field will be approximately 32,000 square feet and the drip tube system would be buried 1 foot below ground surface. The Project is within Sections 4 and 5 of Township 19 South, Range 2 West, and appears on the *Imperial Beach*, California USGS 7.5-minute series topographic map (as shown on attached Figure 1).

ICF has been retained by the San Diego County Department of Parks and Recreation to conduct cultural resources studies in support of an Initial Study/Mitigated Negative Declaration (IS/MND) Report. To accomplish this objective, ICF cultural resources personnel performed a records search, archival research, and a Sacred Lands File search of the project area. Archival research refers to both written and oral history including record searches at the South Coastal Information Center (SCIC), the Native American Heritage Commission (NAHC), as well as Native American consultation. Prehistoric isolates have been identified within the project area as a result the records search and pedestrian survey.

The NAHC completed a search of the Sacred Lands File, which indicated the presence of Native American sacred lands within the project area. The NAHC identify you as a person who may have concerns or knowledge of cultural resources in the project area. Any information you might be able to share about the project area would greatly enhance the study and would be most appreciated.

If you have any recommendations regarding the Project, please address them to me so that I can incorporate them into our draft report. As required by State law, all site data and other culturally sensitive information will not be released to the general public and will be kept strictly confidential. This outreach is for due diligence and not under AB52 or Section 106. I can be reached at 858-444-3936, or by email at Karolina.Chmiel@icf.com.

Sincerely,

Karolina Chmiel, MA
ICF Archaeologist

Appendix C

Resource Location Map

CONFIDENTIAL

Appendix D

DPR 523 Site Record Forms

CONFIDENTIAL