

**FINAL DRAFT INITIAL STUDY/MITIGATED
NEGATIVE DECLARATION
OTAY LAKES CAMPGROUND PROJECT

SAN DIEGO COUNTY, CALIFORNIA**

Prepared for:

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CHAPTER 1.0 – INTRODUCTION AND OVERVIEW

1.1 INTRODUCTION

The County of San Diego (County), as the lead agency under the California Environmental Quality Act (CEQA), has prepared this initial study (IS) to evaluate the potential environmental impacts associated with the Otay Lakes Campground Project (Proposed Project). The San Diego-Imperial Council, Boy Scouts of America (BSA) and the County have been coordinating redeveloping and expanding an existing campground facility on a portion of Otay Lakes County Park. The County proposes to lease a portion of Otay Lakes County Park to the BSA. The Proposed Project includes the rehabilitation and expansion of camping facilities, a flag plaza, archery range, fire ring and amphitheater, zip-line, demolition of existing restroom and construction of a new and larger restroom facility with showers overlapping the existing restroom footprint, development of an activity/program area ('Camporee Field'), construction of a fenced storage facility, development of six Challenging Outdoor Personal Experience (COPE) stations, and minor road improvements on County property adjacent to the already developed portion of Otay Lakes County Park. Each of these elements associated with the Proposed Project is explained in further detail below.

Execution of the proposed lease for the Proposed Project site and implementation of the Proposed Project would require approval by the County Board of Supervisors. Before the County can decide whether to approve the lease and implementation of the Proposed Project, the County must complete an environmental review of the Proposed Project in accordance with CEQA.

1.2 CEQA REQUIREMENTS

Approval of the Proposed Project is a discretionary action and is therefore subject to the requirements of CEQA. Per CEQA (Public Resources Code [PRC], Division 13, Sections 21000–21177) and the State CEQA Guidelines (California Code of Regulations [CCR], Title 14, Sections 15000–15387), an IS/Environmental Checklist Form was prepared to provide the basis for deciding whether to prepare an environmental impact report (EIR), a negative declaration (ND), or a mitigated negative declaration (MND) for the Proposed Project.

An IS/Environmental Checklist Form is intended to satisfy the requirements of CEQA (PRC Division 13, Sections 21000–21177) utilizing the State CEQA Guidelines (14 CCR 15000–15387) and the County of San Diego CEQA Guidelines (2009). CEQA encourages lead agencies and applicants to modify their projects to avoid significant adverse impacts. Per CEQA (14 CCR 15070), an MND may be prepared for a project subject to CEQA when an IS has identified potentially significant impacts on the environment, but revisions to the project have been made so that no significant impacts on the environment would result from project implementation. Based on the findings of the IS, the County has determined that preparation of an IS/MND is the appropriate method to conduct an environmental review of the Proposed Project in compliance with CEQA. Chapter 3 of this IS/MND contains the IS Checklist Form.

1.3 INITIAL STUDY/MITIGATED NEGATIVE DECLARATION ORGANIZATION

The content and format of this document are designed to meet the requirements of CEQA. The IS/MND contains the following sections.

Chapter 1: Introduction and Overview, identifies the purpose and scope of the IS/MND and the terminology used in the report.

Chapter 2: Project Information, identifies the location, background, and planning objectives of the Proposed Project and describes the Proposed Project in detail.

Chapter 3: Initial Study Checklist, presents the checklist responses for each resource topic. This chapter includes a brief setting section for each resource topic and identifies the potential impacts of implementing the Proposed Project at the proposed site.

Chapter 4: Environmental Impacts, provides analysis and identifies level of impact for all resource topics in the Initial Study Checklist.

Chapter 5: References, identifies all printed references and individuals cited in this IS/MND.

1.4 IMPACT TERMINOLOGY

The following terms are used to describe the level of significance of impacts.

A finding of *no impact* is used if the analysis concludes that a project would not affect the particular topic area in any way.

An impact is considered *less than significant* if the analysis concludes that a project would cause no substantial adverse change to the environment and requires no mitigation.

An impact is considered *less than significant with mitigation incorporated* if the analysis concludes that a project would cause no substantial adverse change to the environment provided that environmental commitments or other enforceable measures are included as part of the Proposed Project and agreed to by the applicant.

An impact is considered *potentially significant* if the analysis concludes that a project could have a substantial adverse effect on the environment.

1.5 SCOPE OF THE IS/MND

1.5.1 Environmental Resource Topics

This IS/MND evaluates the Proposed Project's impacts on the following resource topics.

Aesthetics	Mineral Resources
Agricultural and Forestry Resources	Noise
Air Quality	Population and Housing
Biological Resources	Public Services
Cultural Resources	Recreation
Energy	Transportation
Geology and Soils	Tribal Cultural Resources
Greenhouse Gas Emissions	Utilities and Service Systems

Hazards and Hazardous Materials

Wildfire

Hydrology and Water Quality

Mandatory Findings of Significance

Land Use and Planning

1.6 MITIGATION

Mitigation Measures have been developed by the County and incorporated into the Proposed Project design to reduce the potentially significant impacts to a less-than-significant level. The measures are discussed in Sections 4.1, 4.4, 4.5, 4.7, 4.9, 4.17, and 4.18. Further details of the measures are provided in a separate document, the Mitigation Monitoring and Reporting Program for the Otay Lakes Campground Project, that was prepared for the Proposed Project.

CHAPTER 2.0 – PROJECT INFORMATION

2.1 PROJECT OVERVIEW

The San Diego-Imperial Council, Boy Scouts of America (BSA) and the County have been in coordination regarding a proposed campground (Proposed Project) at the County's existing Otay Lakes County Park (Figure 1). The Proposed Project site would be leased to and managed by the BSA under the ownership of the County. Once implemented, the improvements would become a shared-use facility that the County or others could use when BSA is not using the facility. For nearly 100 years, BSA has successfully operated camps within San Diego County providing developmental programs through outdoor experiences for youth and their families. The Proposed Project would enhance recreational amenities and services provided to the community.

While BSA has been active in San Diego County – District 1 for over a century, local community leaders have encouraged an increased physical presence further south. The Proposed Project would encourage further engagement of local families and boy scouts to the natural environment in the southern portion of San Diego County.

The Proposed Project includes the development of new camping facilities, a flag plaza, archery range, fire ring and amphitheater, zip-line, demolition of existing restroom and construction of a new and larger restroom facility with showers overlapping the existing restroom footprint, development of the Camporee Field, construction of a fenced storage facility, development of six COPE stations, and minor road improvements on County property adjacent to Otay Lakes County Park (Figure 2). Although construction and operation of the Proposed Project would be undertaken by BSA, the Proposed Project site, along with the features associated with the Proposed Project would be available for reservation by youth organizations or other not for profit organizations.

2.1.1 Current Usage of Proposed Project Site

The Proposed Project site would be located on a portion of Otay Lakes County Park (Park), which is part of the County's park system. The Park is also located within the boundaries of the Otay Valley Regional Park, which is a multi-jurisdictional regional park that is jointly owned and managed by the County, the City of Chula Vista, and the City of San Diego. The Park will remain under the ownership of the County after Project implementation but will be managed by the BSA in accordance with the terms of an executed lease agreement.

The Proposed Project does not include the existing park facilities located at the Park entrance (located north of the proposed area where the Proposed Project will be located). These facilities include nearly 90 parking spaces, three covered pavilions for group picnics, nearly a dozen uncovered barbeque areas, restroom facilities, and miscellaneous buildings.

The Proposed Project will be located to the south of the existing Park facilities on an area with existing camping facilities (currently not used), a restroom building (that is currently not operable), a walkway attached to a hexagonal covered (roof) pavilion with a diameter of approximately 30 to 35 feet, a number of dirt roads that traverse the property, and access to surrounding trails for hiking, biking, and horseback riding. These facilities are currently used by the public and this area would serve as the location of new Proposed Project features. With the exception of Project features, all of the currently undeveloped areas

located within the Proposed Project site (over half of the total area) will be left entirely undeveloped; though, previous use of the Project site has led to significant disturbance.

2.1.2 Future BSA Usage of Proposed Project Site

Future BSA usage of the Proposed Project site would include programming for day camps, overnight camps, and special events; these programs are described in further detail below. All usage would occur in accordance with the lease agreement between the BSA and the County.

Day Camps

If approved by the County, the lease would authorize BSA to program day camps to occur over a five-day week, four times a year. Day camps would accommodate approximately 50 to 100 campers, including chaperones and employees. Considering day camps are only programmed to occur four times per year, they do not represent typical weekday operations of the Proposed Project site. Day camps would typically occur Monday through Friday 8:30AM to 3:30PM, with after care provided from 3:30PM to 5:30PM, for the designated weeks during which they would occur.

Programmed Overnight Camps

BSA anticipates programmed overnight camps to occur most weekends outside of Special Events and Day Camps. Programmed overnight camps would be for the use of BSA or youth groups that would reserve the Proposed Project site from BSA for the weekend. It is anticipated that the programmed overnight camps would accommodate between 20 to 50 people camping on-site (including chaperones and employees). Programmed overnight camps would occur between Friday and Sunday.

Special Events

The lease (if approved) would authorize BSA to hold Special Events four to six times per year on the weekends and would accommodate approximately 400 attendees (including chaperones and employees). Special Events would utilize all the Project features displayed in Figure 2. Of the 400 attendees on special event weekends, it is anticipated that 200 would stay and camp. Additionally, special events would begin Saturday morning and end Sunday afternoon.

2.2 PROJECT LOCATION

Otay Lakes County Park is located at 2270 Wueste Road in Chula Vista, California, San Diego County. The Proposed Project would occur within a 69-acre parcel of County property (APN: 644-100-19-00), within of Otay Lakes County Park (Proposed Project site). The County of San Diego General Plan identifies the land use of the Proposed Project site as Open Space and zoning is Open Space (S80) and Limited Agriculture (A70) (County of San Diego 2011). The S80 zoning designation is intended for recreation areas or areas with severe environmental constraints; A70 is intended for crop or animal agriculture. Surrounding zoning includes S80 to the north and east, S90 to the southeast and south, and Planned Community to the southwest and west. It should be noted that the Proposed Project site is generally surrounded by undeveloped land, aside from the Otay Water Treatment Plant to the west/northwest. Most of the undeveloped land is designated as Multiple Habitat Planning Area Cornerstone Lands, Otay Lakes, within the City of San Diego's Multiple Species Conservation Program Subarea Plan (City of San Diego 1997).

2.3 PROJECT DESCRIPTION

The Proposed Project includes the development of new camping facilities, a flag plaza, archery range, fire ring and amphitheater, zip-line, demolition of existing restroom and construction of a new and larger restroom facility with showers overlapping the existing restroom footprint, development of the Camporee Field, construction of a fenced storage facility, development of six COPE stations, and minor road improvements, as necessary, on County property adjacent to Otay Lakes County Park. The following sections discuss each component of the Proposed Project. Figure 2 shows the Proposed Project site plan.

2.3.1 Camping Facilities

The camping facilities component of the Proposed Project would include the establishment of seven new multipurpose campsites and rehabilitation of six existing campsites that are conducive to family-style or group camping. Each campsite would require surface preparation (i.e. site clearing and ground leveling) to adequately accommodate tents and would be located near a water source. Existing campsites, currently in disrepair, would be restored for camping purposes; work associated with the restoration of existing campsites would also require site clearing and ground leveling. It is anticipated that each campsite would be multipurpose, serving as an instructional and activity area and as a campsite. Each campsite would have a small hard covered area for food and personal equipment storage with two picnic tables and would be designed to accommodate 6 to 8 people. It should be noted that the camping facilities will be available for reservation by youth organizations or other not for profit organizations. Reservation approval would be at the sole discretion of BSA. Additionally, BSA would provide appropriate staffing for the days that outside organizations reserve the Proposed Project site.

2.3.2 Flag Plaza

The flag plaza would include construction of a concrete slab that would accommodate three flag poles. The flag plaza would be erected as a place of ceremony, commemoration, and communication, and would be located adjacent to the new campsites associated with the Proposed Project. The Flag Plaza would be approximately 30 feet (ft) by 10 ft and the flag poles would be approximately 25 ft in height. The areas adjacent to the Flag Plaza, including the area associated with the new campsites provide a place for youth to stand during ceremonies. Additionally, the area designated for the Flag Plaza is currently bare ground and has been previously disturbed.

2.3.3 Restroom Facilities

The existing restroom facility, which is currently not in operation, would be demolished and replaced with a new comfort station/restroom facility. The new restroom facility would include twelve single user bathrooms and two showers to support large group camping, family restrooms, and showers. The footprint of the restroom facility would be approximately 60 ft by 30 ft. The replacement comfort station would be connected to the park sewer infrastructure and the showers would be coin-operated. The new restroom facility would be designed for energy efficiency, including solar panels and battery storage. All restroom facilities will comply with the Americans with Disabilities Act (ADA) and current state regulations.

2.3.4 Camporee Field

The primary activity/program area, or Camporee Field, would be developed to host large groups of up to 400 people; the Camporee Field area would require minor brush clearing to accommodate groups within the designated area (see Figure 2). The Camporee Field would be four acres in size and would be used as a large activity field for traditional games (i.e. relay races, pioneering projects, knot tying, orienteering, water bottle rockets), teambuilding activities, trainings, and ceremonies. Additionally, the Camporee Field area will be used as an overflow camping area. Although Camporee Field will not have delineated campground, overflow camping would be possible within the area designated as Camporee Field. These sites would only be available for camping during the special event weekends.

Additionally, to serve the Camporee Field in the lower portion of the Proposed Project site, the Proposed Project would utilize portable toilets. The portable toilets would be delivered to the Proposed Project site prior to the special event weekends and picked up following the special event weekends. However, the County of San Diego is currently working on permitting and design of a sewer service connection to the Proposed Project site. The County of San Diego has reached an agreement with the City of Chula Vista to tie into the City of Chula Vista's municipal sewer system within proximity to the Proposed Project site. Planning and design of the future facilities required to expand sewer service to Otay Lakes County Park are currently underway. It is anticipated that implementation of the future sewer facilities will occur after construction is completed for the Proposed Project.

2.3.5 COPE Course

The COPE Course would include six stations (four stations at 10 ft by 20 ft, one plot at 20 ft by 30 ft, and one at 15 ft by 15 ft) and would be located adjacent to an existing trail. General activities at each station include team initiative games that would require a group of participants to plan and work together to solve a problem or accomplish a goal. Another COPE station would require the group to actively look out for each other through spotting, which increases group trust. Facilitators will frequently engage the group in reflections to encourage group discussion and learning. Most involve the team moving some or all members through or across an element made of wood and rope; each activity would be designed to be disabled when not in use. The stations would be designed in a way that guides users from one station to the next with the final station leading to the zip-line platform. When not in use, the COPE Course stations would be disassembled. Site preparation for the COPE Course stations include brush clearing and ground leveling.

2.3.6 Zip-line

The zip-line would include one platform and support columns at the top of the zip-line and one platform and support columns at the end. The upper platform would be approximately 15 ft by 30 ft and the lower platform would be 35 ft by 40 ft. The platform and support column would be made from wood or trex. The distance from the upper platform to the lower platform is approximately 900 ft. The height of the support columns would be less than 30 ft and the height of the zip-line would be approximately 25 ft. Installation of the poles would require a 3 ft by 3 ft work area to drill the holes approximately 5 ft deep. Additionally, two anchor screws approximately 6 to 10 ft from the support columns would be required for tension. The zip-line proposed is defined under California Labor Code § 7921 as a commercial zip-line; therefore, zip-line is subject to the California Division of Occupational Safety and Health regulatory

authority. Prior to issuance of a permit, the zip-line must have been evaluated by a professional engineer, and components must have been tested to recognized standards. Additionally, the zip-line would be operated by a trained professional. If a pulling rig is required to ensure proper tension of the zip-line, the puller would be located within the adjacent access road at either end of the line.

2.3.7 Fenced Storage

Storage facilities would be constructed with two large cargo containers adjacent to the new campsites; the storage containers would be inside a fenced area. Construction of the storage areas would require minor brush clearing and fence installation. The storage containers are 20 ft by 20 ft with a peak height of 12.5 ft. The storage containers would store equipment for instruction and enjoyment of the local surroundings. Additionally, the fenced and secured storage facilities would provide a secure facility to secure equipment associated with Project programming, including but not limited to mountain and road bikes, archery equipment, fishing, canoeing, zip-line equipment, and COPE course equipment. It should be noted that no hazardous materials, aside from routine maintenance and cleaning supplies, would be stored in the storage facilities.

2.3.8 Proposed Project Site Circulation

The Proposed Project would include minor road improvements, as necessary, to the existing dirt road servicing the Proposed Project site. No changes to the existing paved roads and parking lots, including changes to site circulation, would occur as part of the Proposed Project. Improvements to the dirt road would involve minor ground leveling and pothole maintenance (i.e. decomposed granite installation) where needed. All vehicles travelling on access roads within the Proposed Project site, including porta-potty haulers, would be trucks or other utility vehicles capable of travelling on uneven dirt roads. The roads would be improved as needed to ensure safe travel within the Proposed Project site. All vehicles travelling within the Proposed Project site would be limited to 10 miles per hour and vehicles would be restricted to the existing dirt roads within the Proposed Project site. The existing roads are currently used by City and County vehicles for maintenance activities associated with the park and Lower Otay Reservoir.

2.3.9 Fire Ring and Amphitheater

The Proposed Project would include the construction of an amphitheater which includes an approximately 150 square foot stage and seating for approximately 100 people. Additionally, a fire ring three feet in diameter will be installed. The stage and seating would be constructed of wood. Minor brush clearing and ground leveling may be required; however, the site would not require grading or significant earthwork to accommodate the amphitheater. Events at the amphitheater would likely include programmed activities (i.e. informational presentations or talent shows). Campfires contained within the fire ring would not be allowed during Red Flag days.

2.3.10 Archery Range

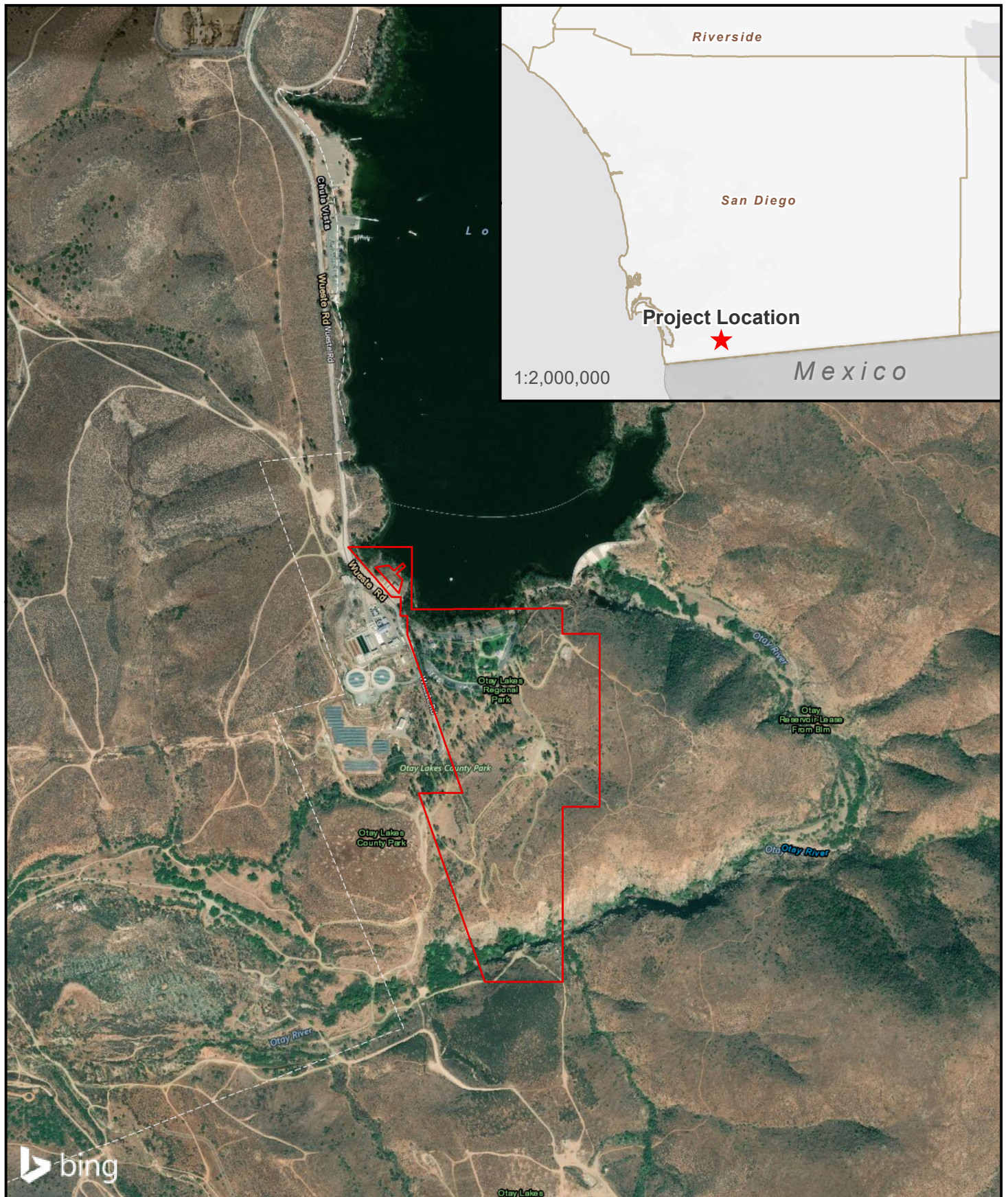
The Proposed Project would include the establishment of an archery range along the western edge of the Proposed Project site in a generally northwest-southeast orientation. The range would include temporary bumpers that will be set up along the eastern and western sides of the range to contain any stray arrows and associated impacts associated with retrieval of lost arrows. The archery range is anticipated to be approximately 50 ft by 100 ft and south of an existing access road.

2.3.11 Construction Activities

Construction of the Proposed Project is anticipated to occur in a single phase, with the exception of the restroom facility, over a period of 6 months and is anticipated to take place as soon as permits and approvals are authorized, as early as Spring 2020. Construction of the restroom facility is anticipated to occur at a later date, after planning and design of the future sewer extension to Otay Lakes County Parks are complete. Construction equipment would include a concrete truck, truck mounted crane, backhoe, forklifts, augurs, a motograder for ground leveling, and hand tool for minor brush clearing. Grading and building performed during construction would be done in accordance with the grading and building permits issued by the County.

2.4 APPROVALS AND PERMITS REQUIRED

The County is the lead agency under CEQA and is responsible for deciding whether to approve the lease for the Proposed Project site, authorizing the Proposed Project, and certification of the environmental documentation for the Proposed Project. The BSA is responsible for securing any required permits for the Proposed Project. There are no responsible or trustee agencies.



Legend

 Project Location

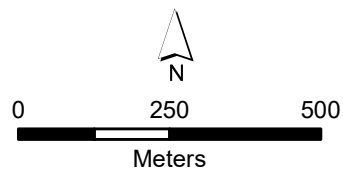
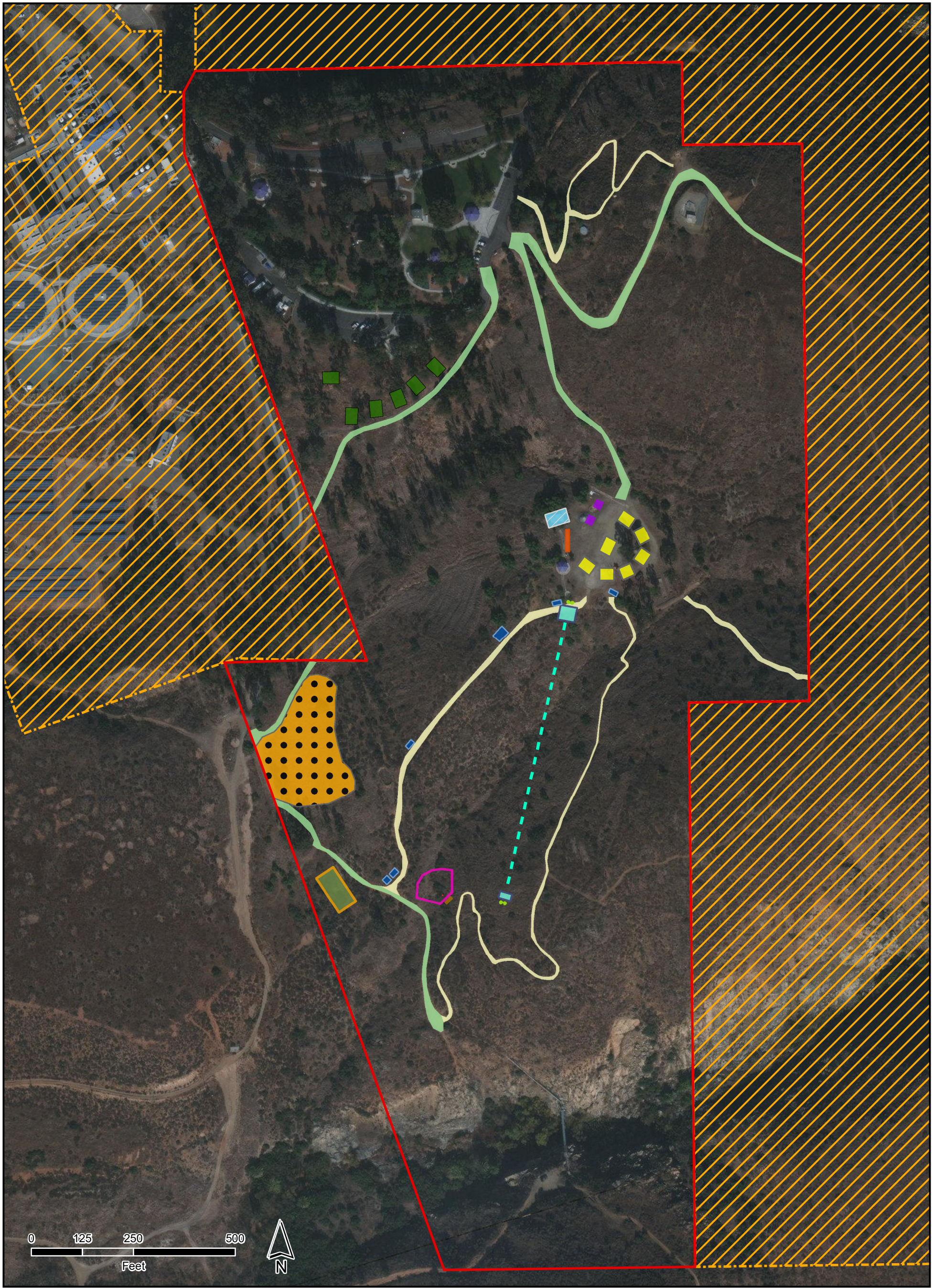


Figure 1
Project Location Map



Legend

- | | | |
|----------------------------------|--------------------|----------------|
| Study Area | New Campsite | Stage |
| Multiple Habitat Planning Area | Existing Trail | Fire Ring |
| Zipline | Existing Road | COPE Station |
| Zip Line Anchor | Storage | Camporee Field |
| Potential Rehabilitated Campsite | Archery Range | Restroom |
| Seating | Zip Line Platforms | Flag Plaza |

Figure 2
Site Plan



Name: 21134 PROJ Site Plan.Mxd
Print Date: 2/12/2020, Author: pcarlos

CHAPTER 3.0 – INITIAL STUDY CHECKLIST

1. Project title:

Otay Lakes Campground Project

2. Lead agency name and address:

County of San Diego
Department of Parks and Recreation
5500 Overland Ave, Suite 410
San Diego, CA 92123

3. Contact person and phone number:

Kiran Kaur, Project Manager
(858) 966-1378
Kiran.Kaur@sdcounty.ca.gov

4. Project location:

2270 Wueste Road in Chula Vista, California, San Diego County

5. Project sponsor's name and address:

Boy Scouts of America
San Diego – Imperial Council
1207 Upas Street
San Diego, California 92103

6. General plan designation:

Open Space

7. Zoning:

Open Space (S80) and Limited Agriculture (A70).

8. Description of project. (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary):

The County, in cooperation with the San Diego-Imperial Council, Boy Scouts of America (BSA), proposes to redevelop the existing (non-operational) campground located on a portion of Otay Lakes County Park (Proposed Project)(Figure 1). The County proposes to lease the Project site to the BSA. If authorized by the County, the Proposed Project will be improvements to a shared-use facility. The County, and those authorized by the County, may use the Proposed Project site when BSA is not using the facility.

For nearly 100 years, BSA has successfully operated camps within San Diego County providing developmental programs through outdoor experiences for youth and their families. The Proposed Project would enhance recreational amenities and services provided to the community.

While BSA has been active in San Diego County – District 1 for over a century, local community leaders have encouraged an increased physical presence further south. The Proposed Project would encourage further engagement of local families and boy scouts to the natural environment in the southern portion of San Diego County.

The Proposed Project includes the development of new camping facilities, a flag plaza, archery range, fire ring and amphitheater, zip-line, demolition of existing restroom and construction of a new and larger restroom facility with showers overlapping the existing restroom footprint, development of the Camporee Field, construction of a fenced storage facility, development of six COPE stations, and minor road improvements, as necessary, on County property adjacent to Otay Lakes County Park. The following sections discuss each component of the Proposed Project.

Construction of the Proposed Project is anticipated to occur in a single phase, with the exception of the restroom facility, over a period of 6 months and is anticipated to take place as soon as permits are authorized, as early as Spring 2020. Construction of the restroom facility is anticipated to occur at a later date, after planning and design of the future sewer extension to Otay Lakes County Parks are complete.

9. Surrounding land uses and setting (Briefly describe the project's surroundings):

The Proposed Project would be located on a portion of Otay Lakes County Parks and will be integrated into the existing Otay Lakes County Park land owned and operated by the County. Surrounding land uses include open space to the east, and open space preserve and public & quasi-public to the west (City of Chula Vista 2005c). Lower Otay Lake is directly north of the Proposed Project site and the Otay Water District's Otay Water Treatment Plant is to the northwest. Zoning surrounding the Proposed Project site includes Open Space (S80) to the north and east, holding area (S90) to the southeast and south, and Planned Community (PC) to the southwest and west.

10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):

The following approvals are expected to be required:

- Lease from County of San Diego
- County of San Diego Grading Permit
- County of San Diego Building Permit

No other Public Agency approvals are anticipated.

11. Have Native American Tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1? If so, has consultation begun?

Yes; AB 52 Notification Letters were sent to tribes affiliated with the Proposed Project site on April 12, 2019. The tribes include: Barona Band of Mission Indians, Jamul Indian Village, Iipay Nation of Santa Ysabel, Kwaaymii Laguna Band, Sycuan Band of the Kumeyaay Nation, Viejas Band of Kumeyaay Indians, Campo Band of Mission Indians, and the Manzanita Band of Kumeyaay Nation. The County received three responses from Jamul Indian Village, Iipay Nation of Santa Ysabel, and Viejas Band of Kumeyaay Indians. The County met with the Jamul Indian Village and Iipay Nation of Santa Ysabel on June 7th and the Viejas Band of Kumeyaay Indians on July 16th. All consultations have been concluded.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this Proposed Project, involving at least one impact that is a “Potentially Significant Impact,” as indicated by the checklist on the following pages.

- | | | |
|--|---|--|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture Resources | <input checked="" type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input type="checkbox"/> Energy |
| <input checked="" type="checkbox"/> Geology /Soils | <input type="checkbox"/> GHG Emissions | <input checked="" type="checkbox"/> Hazards and Hazardous Materials |
| <input type="checkbox"/> Hydrology / Water Quality | <input type="checkbox"/> Land Use / Planning | <input type="checkbox"/> Mineral Resources |
| <input type="checkbox"/> Noise | <input type="checkbox"/> Population / Housing | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Recreation | <input checked="" type="checkbox"/> Tribal Cultural Resources | <input checked="" type="checkbox"/> Transportation |
| <input type="checkbox"/> Utilities / Service Systems | <input type="checkbox"/> Wildfire | <input checked="" type="checkbox"/> Mandatory Findings of Significance |

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

- ☐ I find that the Proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☒ I find that although the Proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the Proposed Project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the Proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the Proposed Project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the Proposed Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the Proposed Project, nothing further is required.

Signature

Date

CHAPTER 4.0 – ENVIRONMENTAL IMPACTS

4.1 AESTHETICS

a) Would the project have a substantial adverse effect on a scenic vista?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a) Less Than Significant Impact.

The Proposed Project site is in a relatively remote area, but would be constructed within the viewshed of surrounding trails accessed from Otay Lakes County Park. Neither the Otay Valley Regional Park Concept Plan nor the County of San Diego General Plan specifically designate any areas within the Proposed Project Site as scenic vistas (County of San Diego 2011a; 2016a). Additionally, the Proposed Project site is not within an area identified as containing a short- or long-range view. Nonetheless, the Otay Valley Regional Park Concept Plan and the County of San Diego General Plan emphasize the need to protect visual resources that provide value through quality, uniqueness, prominence, relationship to community and identity, and economic contributions; therefore, the Proposed Project would be designed to minimize visual impacts (County of San Diego 2011a). Moreover, the Proposed Project site has been used as a campground since the early 1980's, thus the Proposed Project would not substantially alter the well-established, existing viewshed.

The features that could potentially have a visual impact are the Zip Line and the COPE Course stations. As noted in Section 2.3.5, the Proposed Project would include six COPE Course stations within the Proposed Project site, which would be used during day camps and special events and would be disassembled when not in use. The zip-line would include one platform and support columns at the top of the zip-line and one platform and support columns at the end. The upper platform would be approximately 15ft x 30ft and the lower platform would be 35ft x 40ft. The remaining Proposed Project features would be located in previously disturbed areas (i.e. the camping area and the Camporee Field). Although the Proposed Project would establish features that could impact the existing viewshed, the impact would be minimal as the COPE Course stations would be disassembled when not in use, and the zip-line would be constructed using wood or trex; either of these materials would likely blend in to the existing environment in a way that does not significantly alter the viewshed from the Proposed Project site.

Construction of the proposed project would include the use of construction equipment, which would introduce temporary visual obstructions into the primarily natural, vegetated landscape of the project site and surrounding area. However, the degraded visual condition would only be temporary and would return to pre-construction conditions once construction is complete.

Therefore, impacts related to an adverse effect on a scenic vista are less than significant.

b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

b) Less Than Significant Impact. The Proposed Project site is approximately 2 miles east of State Route (SR) 125, 2 miles south of Otay Lakes Road, and 7.5 miles west of SR 94. The County of San Diego General Plan designates both Otay Lakes Road and portions of SR 94 near the Proposed Project site as scenic highways. The small portion of SR 94 that is designated state scenic highway is between Spring Valley and Interstate 8. This portion of the highway is approximately 11 miles north of the Proposed Project site, and therefore the Proposed Project site is not visible from the scenic highway. Otay Lakes Road is designated as a scenic road by the County from the City of Chula Vista limits to SR 94. The portion of Otay Lakes Road designated as scenic is approximately 2 miles north of the Proposed Project site, across Lower Otay Lake. The Proposed Project would be constructed south of Otay Lakes County Park, which is forested along the shore of Lower Otay Lake, and thus would not be visible from the scenic highway to the north (County of San Diego 2011a). Because the Proposed Project site is not located within the viewshed of a scenic highway there would be a less than significant impact on a scenic resource within a state scenic highway.

c) Would the project substantially degrade the existing visual character or quality of the site and its surroundings?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

c) Less Than Significant Impact. The surrounding visual character is primarily characterized by low-lying vegetation and gradually sloped mesas (County of San Diego 2016a). As described above in Impact a), implementation of the Proposed Project would introduce new features to the Proposed Project site. The features with the greatest potential to impact the visual character and quality are the COPE Course stations and the zip-line; however, the impact would be minimal as the COPE Course stations would be disassembled when not in use, and the zip-line would be constructed using wood or trex; either of these materials would likely blend in to the existing environment. Additionally, the Proposed Project site has been used as a campground since the early 1980's and therefore, the Proposed Project would not substantially alter the existing viewshed. Additionally, visual impacts from construction of the Proposed Project would be temporary, as construction of the Proposed Project is anticipated to last up to six months. After construction is complete, the visual character of the site will remain the same as pre-Project conditions. Therefore, impacts related to degrading the existing visual character or quality of the site and its surroundings would be less than significant.

d) Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

d) Less Than Significant Impact. In accordance with the County of San Diego Noise Ordinance, construction activities associated with the Proposed Project would occur only during daytime hours (7 a.m. to 7 p.m.). Additionally, the Proposed Project does not involve the establishment of any new lighting on-site, except for safety lighting for the restroom. Restroom light fixtures would conform to the lamp type and shielding requirements described in Section 59.105 (Requirements for Lamp Source and Shielding) of the San Diego County Light Pollution Code. In conformance with the County's Multiple Species Conservation Program (MSCP), all lighting at the Proposed Project site would be confined to areas necessary to ensure public safety and would be shielded and directed away from the surrounding natural areas where possible (MSCP 1998). Therefore, construction of the Proposed Project would not introduce any new sources of substantial nighttime lighting or glare, and potential impacts associated with construction would be minor and temporary. Further, campfires are not considered a source of light pollution under the County Light Pollution Code and typical BSA camp policy requires campers to be in bed by 10 p.m.; thus, it can be expected that any campfires in the fire ring would be put out before 10 p.m. (BSA 2011). Therefore, potential impacts on daytime and/or nighttime views in the area associated with light or glare would be less than significant.

4.2 AGRICULTURAL & FORESTRY RESOURCES

a) Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) No Impact. The County of San Diego General Plan identifies the land use of the Proposed Project site as Open Space and zoning is Open Space (S80) and Limited Agriculture (A70) (County of San Diego 2011b). The S80 zoning designation is intended for recreation areas or areas with severe environmental constraints; A70 is intended for crop or animal agriculture. Despite the A70 zoning, there are no active farmlands or agricultural resources are currently within the Proposed Project site. According to the California Department of Conservation, the Proposed Project site is classified as Grazing Land and does not contain Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (CDC 2016). Therefore, implementation of the Proposed Project would not result in the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use. Because Prime Farmland, Unique Farmland, or Farmland of Statewide Importance would not need to be converted, no impact would occur.

b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

b) No Impact. The Proposed Project site is zoned A70 for limited agricultural use; however, implementation of the Proposed Project would not change the land use or zoning within the Proposed Project site. Thus, the Proposed Project would not preclude the use of Proposed Project site for agriculture in the future and would not create a conflict with existing zoning for agricultural use (County of San Diego 2011b). Furthermore, there are no existing Williamson Act contracts within the Proposed Project site (CDC 2013). The Proposed Project would not conflict with existing zoning for agricultural use, or a Williamson Act contract, therefore no impact would occur.

c) Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220 (g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104 (g))?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

c) No Impact. The Proposed Project site is not zoned as forestland, timberland, or timberland zoned Timberland Production (CDC 2016). No impact to agricultural and forestry resources would occur.

d) Would the project result in the loss of forest land or conversion of forest land to non-forest use?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

d) No Impact. As noted above in Impact b), the Proposed Project site is not located on forest land; therefore, the Proposed Project would not result in the loss of forest land or conversion of forest land to non-forest use. No impact would occur.

e) Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion forest land to non-forest use?	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporated <input type="checkbox"/>	Less than Significant Impact <input type="checkbox"/>	No Impact <input checked="" type="checkbox"/>
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e) No Impact. As noted above in Impact c), no forest land exists on the Proposed Project site. No impact would occur.

4.3 AIR QUALITY

This section describes the existing air quality setting and potential effects from implementation of the Proposed Project and its surrounding area. Construction air quality modeling was performed through use of the California Emissions Estimator Model (CalEEMod) Version 2016.3.2. The model output is provided in Appendix A.

The Proposed Project site is located within the San Diego Air Basin (SDAB) that is contiguous with the political boundary of San Diego County. Air quality regulation within the SDAB is administered by the San Diego Air Pollution Control District (SDAPCD). The SDAPCD implements the programs and regulations required by the federal and state Clean Air Acts.

Atmospheric Setting

Air quality is a function of both the rate and location of pollutant emissions under the influence of meteorological conditions and topographical features. Atmospheric conditions such as wind speed, wind direction, and air temperature gradients interact with physical features of the landscape to determine their movement and dispersal, and consequently, their effect on air quality.

The climate of western San Diego County is characterized by warm dry summers and mild, wet winters. The climate of the Air Basin, as well as all of Southern California, is largely controlled by the strength and position of the Pacific High, which is a semi-permanent high-pressure center located over the Pacific Ocean. The Pacific High influences the direction of prevailing winds (westerly to north-westerly) and maintains clear skies for much of the year.

The same atmospheric conditions that create a desirable living climate combine to limit the ability of the atmosphere to disperse the air pollution generated by the large population attracted to the pleasant climate. In the summer, subsidence inversions occur as descending air associated with the Pacific high-pressure cell comes into contact with cool marine air. The boundary between the two layers of air creates a temperature inversion that traps pollutants. In the winter, radiation inversion occurs when air near the ground cools through radiation and the air aloft remains warm. This creates a shallow inversion layer between these two air masses that can also trap pollutants.

Average temperatures for Bonita, which is the nearest monitored location to the Proposed Project site with complete data, range from an average low of 40 degrees Fahrenheit (°F) in January to an average high of 81°F in August. Rainfall averages approximately 12 inches a year with almost all annual rainfall

coming from the fringes of mid-latitude storms from late November to early April, with summers being almost completely dry.

Regulatory Setting

The Proposed Project site lies within the SDAB, which is managed by the SDAPCD. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) have been established for the following criteria pollutants: carbon monoxide (CO), ozone, sulfur dioxide (SO₂), nitrogen dioxide (NO₂), inhalable particulate matter (PM₁₀), fine particulate matter (PM_{2.5}), and lead. The CAAQS also set standards for sulfates, hydrogen sulfide, and visibility.

Areas are classified under the Federal Clean Air Act as either “attainment” or “nonattainment” areas for each criteria pollutant, based on whether the NAAQS have been achieved or not. Attainment relative to the state standards is determined by the California Air Resources Board (CARB). The EPA has designated Air Basin as nonattainment for the 8-hour average ozone standard. In 2015, the EPA strengthened its 8-hour “primary” and “secondary” ozone standards to 0.070 parts per million (ppm). The previous standard, set in 2008, was 0.075 ppm. The SDAPCD, the agency principally responsible for comprehensive air pollution control in the SDAB, adopted the San Diego Regional Air Quality Strategy (RAQS) that identifies feasible emission control measure and provides expeditious progress toward attaining the State’s ozone standards. The RAQS control measures focus on emissions sources under the SDAPCD’s authority, specifically stationary emissions sources and some area-wide sources that include residential water heaters, furnaces, architectural coatings, and consumer products. The most current update to the RAQS was adopted December 2016 that provides measures to reduce 8-hour ozone levels to below the federal standard by 2035.

The Air Basin has been designated by CARB as a nonattainment area for ozone, PM₁₀, and PM_{2.5}. Currently, the Air Basin is in attainment with the state ambient air quality standards for CO, NO₂, SO₂, and sulfates and is unclassified for visibility-reducing particles and hydrogen sulfide. The adopted RAQS provide measures to meet the state standards for ozone, PM₁₀, and PM_{2.5}. Table 1 presents the designations and classifications applicable to the Proposed Project area.

Table 1: Designations/Classification for the Proposed Project Site

Pollutant	Averaging Time Standard	National Standards	California Standards ²
1979 1-Hour Ozone (O ₃) ³	1-Hour (0.12 ppm)	No Federal Standard	Nonattainment
1997 8-Hour Ozone (O ₃) ⁴	8-Hour (0.08 ppm)	Nonattainment	Nonattainment
2008 8-Hour Ozone (O ₃)	8-Hour (0.075 ppm)	Nonattainment	Nonattainment
2015 8-Hour Ozone (O ₃)	8-Hour (0.070 ppm)	Nonattainment	Nonattainment
Carbon Monoxide (CO)	1-Hour (35 ppm) 8-Hour (9 ppm)	Attainment	Attainment

Nitrogen Dioxide (NO ₂) ⁵	1-Hour (100 ppb)	No Federal Standard	Attainment
	Annual (0.053 ppm)	Attainment	No State Standard
Sulfur Dioxide (SO ₂) ⁶	1-Hour (75 ppb)	No Federal Standard	Attainment
	24-Hour (0.14 ppm) Annual (0.03 ppm)	Attainment	
Particulate Matter (PM ₁₀)	24-Hour (150 µg/m ³)	Attainment	Nonattainment
Particulate Matter (PM _{2.5})	24-Hour (35 µg/m ³)	Attainment	Attainment
	Annual (12.0 µg/m ³)	Attainment	Nonattainment
Lead (Pb)	3-Months Rolling (0.15 µg/m ³)	Attainment	Attainment

Source: California Air Resources Board and EPA

Monitored Air Quality

The air quality at any site is dependent on the regional air quality and local pollutant sources. Regional air quality is determined by the release of pollutants throughout the Air Basin. The SDAPCD operates an extensive monitoring network throughout the County that continuously monitor ambient levels of criteria pollutants in compliance with federal monitoring regulations. The nearest monitoring site to the Proposed Project site is the Otay Mesa-Donovan Monitoring Station that is located at the Richard J Donovan Correctional Facility. The monitoring data is presented in Table 2 and shows the most recent three years of monitoring data from CARB. CO measurements have not been provided, since CO is currently in attainment in the Air Basin and monitoring of CO within the Air Basin ended on March 31, 2013. It should also be noted that due to the air monitoring station's distance from the Project site, recorded air pollution levels at the air monitoring stations reflect with varying degrees of accuracy, local air quality conditions at the Proposed Project site.

Table 2: Ambient Air Quality Monitoring Summary

Pollutant (Standard)	Year		
	2016	2017	2018
Ozone			
Maximum 1-Hour Concentration (ppm)	0.092	0.097	0.092
Days > CAAQS (0.09 ppm)	0	1	0
Maximum 8-Hour Concentration (ppm)	0.075	0.082	0.078
Days > NAAQS (0.070 ppm)	4	6	1
Days > CAAQS (0.070 ppm)	4	6	1
Nitrogen Dioxide			

Pollutant (Standard)	Year		
	2016	2017	2018
Maximum 1-Hour Concentration (ppb)	67.0	74.0	54.0
Days > NAAQS (100 ppb)	0	0	0
Respirable Particulate Matter (PM10)			
Maximum 24-Hour California Measurement (ug/m ³)	79	69	55
Days > NAAQS (150 ug/m ³)	0	0	0
Days > CAAQS (50 ug/m ³)	9	4	3
Annual Arithmetic Mean (AAM) (ug/m ³)	31.3	26.9	26.2
Annual > NAAQS (50 ug/m ³)	No	No	No
Annual > CAAQS (20 ug/m ³)	Yes	Yes	Yes
Fine Particulate Matter (PM2.5)			
Maximum 24-Hour National Measurement (ug/m ³)	42.1	42.7	50.8
Days > NAAQS (35 ug/m ³)	2	4	2
Annual Arithmetic Mean (AAM) (ug/m ³)	12.8	ND	ND
Annual > NAAQS and CAAQS (12 ug/m ³)	Yes	ND	ND

Notes: Exceedances are listed in **bold**. CAAQS = California Ambient Air Quality Standard; NAAQS = National Ambient Air Quality Standard; ppm = parts per million; ppb = parts per billion; ND = no data available.

a) Would the project conflict with or obstruct implementation of the applicable air quality plan?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- a) **Less Than Significant Impact.** CEQA requires a discussion of any conflicts with or obstructions of implementation of applicable air quality plans. The air quality plans that apply to the Proposed Project includes SDAPCD's Regional Air Quality Strategy (RAQS) and the California State Implementation Plan (SIP).

The California Clean Air Act requires areas that are designated nonattainment of state ambient air quality standards of any of the criteria pollutants to prepare and implement plans to attain the standards by the earliest practicable dates. As detailed above, the Air Basin is designated by the EPA for the national standards as a non-attainment area for ozone (O₃) and by CARB as nonattainment for ozone, PM₁₀, and PM_{2.5}. The RAQS was developed to identify feasible emission control measures and provide expeditious progress toward attaining the state standard for ozone and particulate matter. The two pollutants analyzed in the RAQS are VOCs and NO_x, which are precursors to the formation of ozone. Projected increases in motor vehicle usage, population, and growth create challenges in controlling and reducing air emissions. The RAQS, in conjunction with the Transportation Control Measures, were most recently revised in 2016.

The SIP is the document that sets forth the State's strategies for attaining the NAAQS. The SDAPCD is the agency responsible for preparing the portion of the SIP applicable to the SDAB. The RAQS outlines the plans and control measures designed to attain the NAAQS for ozone. The SDAPCD relies on information from CARB and SANDAG, including projected growth, mobile, area and all other source emissions in order to predict future emissions and develop appropriate strategies for the reduction of source air emissions through regulatory controls. The CARB mobile source emission projections and SANDAG growth projections are based on population and vehicle trends and land use plans developed by the incorporated cities and County of San Diego. As such, projects that propose development that is consistent with the growth anticipated by SANDAG would also be consistent with the RAQS and the SIP.

Construction associated with the Proposed Project would be required to comply with SDAPCD Rules and Regulations, including Rules 50, 51, and 55, which forbid visible emissions, forbid nuisance activities, and require fugitive dust control measures, respectively.

The Proposed Project site contains an existing campground (nonoperational) and is designated as Open Space (Conservation) in the County of San Diego General Plan and is zoned Open Space and Limited Agriculture. The Proposed Project is consistent with the current land use designations and would not require a General Plan Amendment or zone change. Although the campground improvements are anticipated to increase the number of people utilizing the facility as well as the number of events at the facility, the Proposed Project would not result in any increases to the employment or population of San Diego County, which are the primary growth parameters utilized in the RAQS. Although the Traffic Study found that the Proposed Project would generate up to 176 additional weekday trips when Day Camps or Special Events would occur, these events would occur less than 10 times per year and would result in a negligible impact, when considered on an annual basis. Weekend trips are forecasted at most to be 528 ADT on a Saturday and 198 ADT on a Sunday; though weekend trips at maximum capacity would only occur four (4) to six (6) times annually (LLG 2019a). Furthermore, carpooling, vanpooling and the use of buses will be encouraged for all events, which promotes the policies in the RAQS.

Further, the Proposed Project would not permanently change the existing or planned transportation network or traffic patterns anywhere in the Air Basin. As such, the Proposed Project would be consistent with the local general plan and SANDAG's growth projections.

Based on the above, the Proposed Project would not conflict with or obstruct implementation of the applicable air quality plan because construction and operations emissions would not exceed the air quality thresholds discussed in other places of the IS/MND. Accordingly, this impact is less than significant.

b) Would the project violate any air quality standard or result in a cumulatively considerable net increase in an existing or projected air quality violation?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

b) Less Than Significant Impact. As shown above in Table 1, the Proposed Project area is designated as a federal and/or state nonattainment area for ozone, PM10 and PM2.5. To estimate if the

Proposed Project may adversely affect the air quality in the region, the SDAPCD has established significance thresholds for NO_x and VOC for stationary sources as detailed in SDAPCD Rules 20.2 and 20.3. SDAPCD informally recommends also quantifying construction emissions and comparing them to these thresholds as well. Because these Rules do not include VOCs or PM_{2.5}, the screening level for VOCs and PM_{2.5} used in this analysis are from the South Coast Air Quality Management District (SCAQMD), which are used as standards in the County Guidelines for Determining Significance for Air Quality and are generally stricter emissions thresholds than SDAPCD. If construction-phase emissions exceed these thresholds for a stationary source air quality impact analysis, then construction has the potential to violate air quality standards or to contribute substantially to an existing violation. The significance thresholds for both construction and operational activities are shown below in Table 3.

Table 3: Criteria Air Pollutants Thresholds of Significance

Pollutant	Threshold (pounds/day)
Volatile Organic Compounds (VOC) ²	75
Oxides of Nitrogen (NO _x) ¹	250
Carbon Monoxide (CO) ¹	550
Oxides of Sulfur (SO _x) ¹	250
Respirable Particulate Matter (PM ₁₀) ¹	100
Fine Particulate Matter (PM _{2.5}) ²	55

Notes:

¹ Based on thresholds from SDAPCD Rules 20.2 and 20.3.

² Based on thresholds from SCAQMD.

Construction Emissions

Construction of the Proposed Project would create air emissions primarily from equipment exhaust and fugitive dust. The air emissions from the Proposed Project were analyzed through use of the CalEEMod model (see Appendix A). Construction of the Proposed Project is anticipated to occur in a single phase over a period of 6 months, from January 2020 to June 2020. Although the restroom may be constructed at a later date, the analysis assumes construction of the restroom simultaneously with other Proposed Project features to capture a worst case scenario for emissions. Construction activities are anticipated to include: (1) Demolition of the existing bathroom structure; (2) Site preparation that would include site clearing and ground leveling activities; and (3) Combined building construction and architectural coatings of the camping facilities, flag plaza, restroom building, Camporee Field, COPE course, zip-line, fenced storage, and fire ring and amphitheater.

Table 4 shows the estimated worst-case summer or winter daily emissions that would be predicted from each phase of the Proposed Project, which is based on the construction equipment provided by the applicant of what is anticipated to be used during construction activities.

Table 4: Construction-Related Criteria Pollutant Emissions

Activity	Pollutant Emissions in pounds/day					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Demolition of Existing Restroom	0.68	6.37	6.36	0.01	0.53	0.37
Site Preparation	0.91	9.12	9.58	0.01	8.79	5.00
Combined Building Construction & Architectural Coatings	3.74	24.76	22.43	0.05	2.29	1.46
SDAPCD Thresholds	75	250	550	250	100	55
Exceed Thresholds?	No	No	No	No	No	No

Source: CalEEMod Version 2016.3.2.

As shown in Table 4, short-term construction emissions would not exceed the SDAPCD criteria pollutant emissions thresholds. In addition, construction emissions would be short-term, limited only to the period when construction activity is taking place. As such, construction-related criteria pollutant emissions would be less than significant for the Proposed Project.

Operational Emissions

The Proposed Project would generate air emissions from vehicular emissions, area sources, and energy usage. The air emissions associated with the Proposed Project have been calculated through use of the CalEEMod model and are based on the opening year 2020, which is the anticipated opening year of the Proposed Project. According to the Traffic Impact Analysis (LLG 2019a) the Proposed Project is anticipated to generate a maximum of 176 weekday daily trips, 528 Saturday daily trips, and 198 Sunday daily trips, which were entered into the CalEEMod model. It should be noted that the maximum weekday trips analyzed would only occur for approximately four weeks of the year and the maximum weekend trips analyzed would occur up to six times per year. Table 5 shows the estimated worst-case daily emissions that would be predicted from operation of the Proposed Project.

Table 5: Operations-Related Criteria Pollutant Emissions

Activity	Pollutant Emissions in pounds/day					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Area Sources ¹	0.09	0.00	0.00	0.00	0.00	0.00
Energy Usage ²	0.00	0.00	0.00	0.00	0.00	0.00
Mobile Sources ³	0.90	3.60	9.44	0.03	2.42	0.67
Total Project Emissions	0.99	3.60	9.44	0.03	2.42	0.67
SDAPCD Thresholds	75	250	550	250	100	55
Exceed Threshold?	No	No	No	No	No	No

Notes:

¹ Area sources consist of emissions from consumer products, architectural coatings, and landscape equipment.

² Energy usage consists of emissions from natural gas usage (no natural gas appliances are anticipated to be installed as part of the Proposed Project).

³ Mobile sources consist of emissions from vehicles and road dust.

Source: CalEEMod Version 2016.3.2.

As shown in Table 5, operations-related emissions would not exceed the SDAPCD criteria pollutant emissions thresholds. As such, operations-related criteria pollutant emissions would be less than significant for the Proposed Project.

Accordingly, the Proposed Project would not result in a cumulative considerable net increase of any criteria pollutant and, therefore, the impact is less than significant.

c) Would the project expose sensitive receptors to substantial pollutant concentrations?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- c) Less Than Significant Impact.** The nearest sensitive receptors are off-site workers at the Otay Water Treatment Plant that are located as near as 300 feet to the improvements included within the Proposed Project. There are also County trails that intersect the Proposed Project site that may have hikers on them as near as 50 feet from the improvements proposed as part of the Proposed Project. The nearest homes are located approximately 1.5 miles northwest of the Proposed Project site. As discussed above in (b), the criteria pollutant emissions have been calculated for both construction and operational activities, which were found to be within the SDAPCD's allowable thresholds. Due to the limited amount of criteria pollutants created from construction and operation of the Proposed Project and the distances to the nearest sensitive receptors to the Proposed Project, the Proposed Project would not expose sensitive receptors to substantial concentrations of criteria pollutants.

In addition, to the criteria pollutant emissions impacts analyzed above, construction and ongoing operational maintenance activities have the potential to expose nearby sensitive receptors to toxic air contaminants (TACs), which would be created from the operation of diesel-powered equipment in the form of diesel particulate matter (DPM). According to SDAPCD and CAPCOA methodology, health effects from carcinogenic air toxins are usually described in terms of "individual cancer risk". "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of toxic air contaminants over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. Diesel-powered equipment utilized during construction of the Proposed Project would be very limited and may include a backhoe or similar equipment utilized during demolition of the existing bathroom, a tractor or grader utilized during site preparation of the new camp sites and amphitheater, and limited use of cranes, forklifts, generators, and welders during construction of the proposed structures. Diesel-powered equipment utilized during operation of the Proposed Project would likely be limited to annual grading of the dirt roads by a tractor or grader, that would likely be limited to one or two days per year. Given the relatively limited number of heavy-duty construction equipment and operational maintenance equipment, the Proposed Project would not result in a long-term (i.e., 70 years) substantial source of toxic air contaminant emissions and corresponding individual cancer risk.

In addition, California Code of Regulations Title 13, Article 4.8, Chapter 9, Section 2449 regulates emissions from off-road diesel equipment in California. This regulation limits idling of equipment

to no more than five minutes, requires equipment operators to label each piece of equipment and provide annual reports to CARB of their fleet's usage and emissions. This regulation also requires systematic upgrading of the emission Tier level of each fleet, and currently no commercial operator is allowed to purchase Tier 0 or Tier 1 equipment and by January 2023 no commercial operator is allowed to purchase Tier 2 equipment. In addition to the purchase restrictions, equipment operators need to meet fleet average emissions targets that become more stringent each year between years 2014 and 2023. Therefore, no significant toxic air contaminant impacts would occur during construction or operation of the Proposed Project. As such, development of the Proposed Project would result in a less than significant exposure of sensitive receptors to substantial pollutant concentrations.

Therefore, implementation of the Proposed Project would not expose sensitive receptors to substantial pollutant concentrations, and impacts would be less than significant.

d) Would the project result in substantial emissions (such as odors or dust) adversely affecting a substantial number of people?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- d) Less Than Significant Impact with Mitigation Incorporated.** Any diesel equipment used during construction of the Proposed Project would consist of mobile equipment that would be changing locations, allowing any dust or odors generated from the equipment to disperse rapidly. The use of off-road equipment during construction and operations would be required to adhere to SDAPCD Rules 50, 51, and 55, which forbid visible emissions, forbid, nuisance activities, and require fugitive dust control measures, respectively. To ensure mitigation of any potential impacts associated with fugitive dust during construction and operation, the Proposed Project would implement MM-AQ-1 and MM-AQ-2. Construction and operation of the Proposed Project is not anticipated to introduce any other sources of objectionable odors or dust. Therefore, with mitigation incorporated, construction and operation of the Proposed Project would not create substantial emissions of objectionable odors or dust affecting a substantial number of people and impacts would be less than significant.

- MM-AQ-1:** To reduce and avoid indirect air quality impacts due to dust generated from Proposed 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.
 - Watering of roadways will be conducted as needed to alleviate dust generation visible offsite, but will not be applied in quantities that will allow for water ponding.
 - Limits of construction areas will be fenced or flagged and maintained throughout the construction activities.

MM-AQ-2: During Special Events at the Proposed Project site, watering of roadways will be conducted as needed to alleviate dust generation visible offsite, but will not be applied in quantities that allow for water ponding.

4.4 BIOLOGICAL RESOURCES

A Biological Technical Report was Prepared for the Proposed Project (Chambers Group 2019a). The report is included as Appendix B. The survey methodologies are presented below.

Biological Renaissance Survey

Chambers Group biologists Clark Austin and Laurie Gorman conducted a general reconnaissance survey to map vegetation communities and to identify habitats that could support sensitive plant and wildlife species. All vegetation communities observed within the Proposed Project site were recorded as well as all sensitive plant and animal species observed. The survey was conducted over two site visits. The second site visit included a focused habitat assessment for Quino checkerspot butterfly (QCB), in accordance with the USFWS QCB Survey Guidelines (USFWS 2014) to map all areas requiring QCB surveys.

Flora and Fauna

The most recent records of the California Natural Diversity Database (CNDDB) managed by the CDFW (CDFW 2019) and the California Native Plant Society's Electronic Inventory (CNPSEI) of Rare and Endangered Vascular Plants of California (CNPS 2019) were reviewed within five miles of the Proposed Project site. These databases contain records of reported occurrences of federally- or state-listed as endangered or threatened species, proposed endangered or threatened species, California Species of Concern (SSC), or otherwise sensitive species or habitats that may occur within or in the immediate vicinity of the Proposed Project site.

All wildlife and wildlife signs observed and detected, including tracks, scat, carcasses, burrows, excavations, and vocalizations, were recorded. Additional survey time was spent in those habitats most likely to be utilized by wildlife (native vegetation, wildlife trails, etc.) or in habitats with the potential to support federally, state-listed, or otherwise sensitive species. Notes were made on the general habitat types, species observed, and the conditions of the Proposed Project site. Focused surveys were conducted for QCB in February, March, and April; and rare plant surveys in April and a second survey in June.

The location of prior CNDDB and USFWS records of occurrence were used as additional data, but since the CNDDB is a positive-sighting database; this data was used only in support of the analysis from the previously identified factors. The potential for occurrence (PFO) was determined through a combination of these databases and habitat quality identified during field survey efforts. Species-based assessments were referenced through a variety of tools and publications including, but not limited to: Tremore et al. (2017), Unit and Klovstad (2004), and Calflora (2019).

Focused Sensitive Plant Surveys

Due to the spread of anticipated blooming periods and the presence of favorable environmental conditions (prolonged and prolific rain year) for sensitive plant species to occur within the Proposed Project site, two rounds of sensitive plant surveys were conducted in spring 2019 within the Proposed Project site to capture the blooming periods for each of the 68 targeted species with a low, moderate or high PFO. Three categories of special-status plant species were targeted. Category 1 species targeted all

federally threatened or endangered plant species, Category 2 targeted all state threatened or endangered plant species, and Category 3 targeted plants not listed as federally and/or state threatened or endangered with a CRPR of 1 or 2. Special-status plant species targeted during the surveys are listed and evaluated in Section 4.1.3 of the Biological Technical Report (Appendix B).

Focused plant surveys were performed in accordance with survey protocols set forth by CDFW, CNPS, and USFWS Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants (CDFW 2009; CNPS 2001; USFWS 2000). Species identified as being sensitive and having the potential to occur within the Survey Area were reviewed by Chambers Group botanists prior to the beginning of surveys each day. Botanists walked transects within the Proposed Project site spaced approximately 30 feet apart and visually surveyed for any signs of the targeted plant species. A complete inventory of all plant species observed within the Proposed Project site was prepared. Sensitive plant species observed during the survey were documented by counting individuals or estimating numbers for larger populations, characterizing the approximate population size, and recording a Global Positioning System (GPS) location.

Areas that were designated as private property separated by fences and signs were not accessed on foot; surveys were conducted by binocular from outside the property boundary unless specific permission to enter was granted by the landowner.

Focused Quino Checkerspot Butterfly Surveys

Due to the presence of environmental conditions (accumulated rainfall, weather, and temperature conditions) suitable for QCB to occur within the Proposed Project site, QCB surveys were conducted according to the USFWS QCB Survey Guidelines (QCB Survey Guidelines; USFWS 2014). Surveys throughout all potentially suitable habitat (i.e., where no QCB excluded areas were mapped during the habitat assessment) were initiated at the beginning of the QCB flight season, following a 15-day survey notification submitted to USFWS on February 8, 2019. In order to maximize species detectability, surveys were continued up to twice per week, weather permitting, while maintaining a temporal spacing of at least four days apart.

The QCB surveys were conducted for the required minimum survey timeframe of five continuous weeks. Within the five-week period, QCB had been identified within the Proposed Project site. The QCB Survey Guidelines state that if a QCB is detected during any survey within the first 5 weeks, surveys do not need to be conducted after the fifth week. Therefore, the surveys were concluded after the fifth week. When a QCB was detected in the QCB Survey Area, the USFWS was notified within 24 hours by the permitted QCB biologist.

Surveys were conducted by walking survey routes that were roughly parallel to each other, spaced approximately 30 ft. apart, and within 15 ft. of the Proposed Project site boundary and/or the perimeter of excluded areas. Chambers Group biologists conducted the surveys at a rate of approximately 5 to 10 acres per person/hour and under suitable weather conditions defined as (1) no significant precipitation (e.g., fog, drizzle, or rain); (2) sustained or gusting winds averaging less than 15 miles per hour over a 30 second period at a height of 4 to 6 ft. above ground level; and (3) temperatures of at least 60 degrees Fahrenheit (°F) in the shade at ground level on a clear, sunny day (i.e., less than 50 percent cloud cover), and temperatures of at least 70°F on cloudy days (i.e., greater than 50 percent cloud cover).

Butterfly species observed and numbers of each species were recorded during each weekly survey. Butterflies observed during the surveys were identified by sight and with the aid of binoculars. Biologists also recorded and updated information on host plant populations, including revised numbers, densities, and new locations, as well as a list of potential nectar sources. Additional observations of larval host plant populations were mapped with the aid of hand-held GPS units and/or hand-drawn onto high-resolution aerial field maps, and potential nectar plant species were documented. Butterfly identification and nomenclature was based on field guides by Shiraiwa (2009) and Glassberg (2001).

a) Would the project 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 Wildlife or U.S. Fish and Wildlife Services?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- a) **Less Than Significant With Mitigation Incorporated.** The Proposed Project site is within the County MSCP Subarea Plan's South County Segment (SCS) of the County's MSCP Subarea Plan. The lands covered under the MSCP have received long-term Take Authorizations (and an acknowledgment that the MSCP satisfies conditions established in the Section 4(d) Special Rule for the coastal California gnatcatcher) that allow the taking of certain "Covered Species" incidental to land development and other lawful land uses which are authorized by the County (see Figure 1-2 in the MSCP Subarea Plan). The SCS contains areas which the County, California Department of Fish and Wildlife, and the United States Fish and Wildlife Service have agreed to set aside as preserve lands in perpetuity. The SCS designates areas by the Wildlife Agencies and the County for development, including Otay Lakes County Park, where the Proposed Project would be located. Per the terms of the County's Implementing Agreement for the MSCP, the MSCP authorizes use of the Project site as active recreation.

Additionally, eight vegetation communities were observed within the Proposed Project site: California Sagebrush Scrub (33.8 acres), California Sagebrush-California Brittlebush Scrub (2.09 acres), Purple Needlegrass Grassland (0.56 acres), Brome Grass-Wild Oat Grassland (17.16 acres), Eucalyptus Woodland (20.02 acres), Maritime Succulent Bluff (2.15 acres), Cattail Marsh (0.09 acres), Red Willow Riparian Woodland (2.15 acres), and Disturbed (3.37 acres). In addition, Landscape/Ornamental, Developed, Bare Ground, and Pavement areas were present within the Proposed Project site.

Sensitive Plant Species

A current database searches (USFWS 2019, CDFW 2019, CNPS 2019) resulted in a list of 68 federal-and/or state-listed threatened and endangered or rare sensitive plant species documented to occur within the vicinity of the Proposed Project site. A complete list of plant species observed is located within Appendix C of the Biological Technical Report. After the literature review, the assessment of the various habitat types in the area of the site, and two rounds of focused rare

plant surveys it was determined that 60 species are not expected to occur or are presumed absent and eight species are considered present within the Proposed Project site.

The analysis of the database searches as well as reconnaissance-level and focused plant surveys resulted in eight species that are considered present within the Proposed Project site:

- San Diego viguiera (*Bahiopsis laciniata*) CRPR 4.3
- San Diego goldenstar (*Bloomeria clevelandii*) CRPR 1B.1, MSCP
- San Diego barrel cactus (*Ferocactus viridescens*) CRPR 2B.1, MSCP
- decumbent goldenbush (*Isocoma menziesii* var. *decumbens*) CRPR 1B.2
- San Diego marsh-elder (*Iva hayesiana*) CRPR 2B.2
- Leopold's rush (*Juncus acutus* subsp. *leopoldii*) CRPR 4.2
- ashy spike moss (*Selaginella cinerascens*) CRPR 4.1
- San Diego County needle grass (*Stipa diegoensis*) CRPR 4.2

Sensitive Wildlife Species

A current database search (CDFW 2019 and USFWS 2019) resulted in a list of 42 federally, state, and/or locally listed endangered or threatened, SSC, or otherwise sensitive wildlife species that may potentially occur within the Proposed Project site. A complete list of wildlife species is located in Appendix D of the Biological Technical Report. After a literature review and the assessment of the various habitat types within the Proposed Project site, these species were categorized as not expected to occur; having low, moderate, or high PFO; or as present within the Proposed Project site, as described below. Factors used to determine PFO included the type of habitat, quality of habitat, and the location of prior records of occurrence. Note that five avian species are listed under more than one category, depending on their behavior and habitat use; in such incidences an asterisk (*) proceeds the common name of the species.

The following seven wildlife species have a low PFO within the Proposed Project site due known occurrences within five miles from the Proposed Project site and/or habitat present is of low quality:

- coast patch-nosed snake (*Salvadora hexalepis virgultea*) – SSC
- burrowing owl (*Athene cunicularia*; nesting and wintering) – SSC, MSCP
- northern harrier* (*Circus hudsonius*; nesting) – SSC, MSCP
- loggerhead shrike (*Lanius ludovicianus*; nesting and foraging) – BCC, SSC
- Bell's sage sparrow (*Artemisiospiza belli belli*; nesting and foraging) – BCC, WL
- mountain lion (*Felis concolor*) – MSCP
- American badger (*Taxidea taxus*) – SSC, MSCP

The following ten species have a moderate PFO within the Proposed Project site due to known occurrences within three miles of the Proposed Project site and the presence of low to moderate quality suitable habitat within the Proposed Project site:

- Baja California coachwhip (*Masticophis fuliginosus*) - SSC
- Townsend's big-eared bat (*Corynorhinus townsendii*) - SSC
- northern harrier* (foraging) – SSC, MSCP

- Cooper's hawk* (*Accipiter cooperii*; nesting) – WL, MSCP
- southwestern willow flycatcher* (foraging, migration, and dispersal) – FE, SE, MSCP
- least bittern* (foraging) – SSC
- least Bell's vireo* (*Vireo bellii pusillus*; nesting) – FE, SE, MSCP
- yellow warbler (foraging) – BCC, SSC
- San Diego desert woodrat (*Neotoma lepida intermedia*) – SSC
- pocketed free-tailed bat (*Nyctinomys's femorosaccus*) – SSC

The following 11 species have a high PFO within the Proposed Project site due to known occurrences within one mile of the Proposed Project site and the presence of moderate to high quality suitable habitat within the Proposed Project site:

- western spadefoot (*Spea hammondi*) - SSC
- coastal whiptail (*Aspidoscelis tigris stejnegeri*) - SSC
- coast horned lizard (*Phrynosoma blainvillii*) - SSC, MSCP
- white-tailed kite (*Elanus leucurus*; nesting and foraging) - FP
- yellow-breasted chat (*Icteria virens*; foraging and nesting) - SSC
- coastal California gnatcatcher (*Polioptila californica californica*; nesting and foraging) - FE, SSC, MSCP
- grasshopper sparrow (*Ammodramus savannarum*) - SSC
- western mastiff bat (*Eumops perotis californicus*) - SSC
- western red bat (*Lasiurus blossevillei*) - SSC
- San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) - SSC
- mule deer (*Odocoileus hemionus*) - MSCP

The following seven species were observed within the Proposed Project site during reconnaissance level surveys and are considered present:

- QCB – FE
- orange-throated whiptail (*Aspidoscelis hyperythra beldingi*) – SSC, MSCP
- two-striped gartersnake (*Thamnophis hammondi*) - SSC
- red diamond rattlesnake (*Crotalus ruber*) - SSC
- Cooper's hawk* (foraging) – WL, MSCP
- southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*; foraging) – WL, MSCP
- least Bell's vireo* (foraging and migration/dispersal) – FE, SE, MSCP

Critical Habitat

One sensitive wildlife species, QCB, has USFWS-designated critical habitat within the Proposed Project site. Otay tarplant critical habitat is located west and adjacent to the Proposed Project site but does not cross into the Proposed Project site.

USFWS (2002)-designated critical habitat for QCB occurs throughout the majority of the Proposed Project site, covering approximately 68.96 acres of the approximately 69-acre parcel. Paved and developed areas account for approximately 3.69 acres of land within the designated critical habitat area, with the remaining area consisting of habitat communities as described in Section

4.1.2. Numerous patches of host plant and multiple nectar sources were observed during the reconnaissance and host-plant mapping surveys.

A total of approximately 55.5 acres of suitable habitat for QCB were identified within the Proposed Project Proposed Project site and surveyed as the QCB Survey Area. A total of two distinct QCB were observed during the 2019 focused surveys for the Proposed Project. Both of these observations were within the USFWS “Recommended Quino Survey Area”.

Based on consultation with the USFWS on April 18, 2019 and August 15, 2019, Proposed Project features have been designed to avoid host plant locations, and the use of proposed camp facilities shall include public outreach and education, and additional protection measures such as access road use restrictions shall be implemented during the QCB flight season (Eric Porter, email communication, August 15, 2019).

Summary of Direct and Indirect Impacts

Physical impacts associated with this site are anticipated to consist of a mix of permanent and temporary impacts to a variety of habitats detailed below in Table 6.

Table 6: Summary of Permanent and Temporary Impacts Associated with Project Related Activities

Habitat/Vegetation Community	Permanent Impacts (acres)	Temporary Impacts (acres)
Bare Ground	0.18	0.05
Brome Grass-Wild Oat Grassland	1.14	0.02
California Sagebrush Scrub	0.20	0.10
Developed	0.01	0.01
Disturbed	0.15	0.27
Landscape/Ornamental	0.05	0.06
Total	1.73	0.51

Direct Impacts

Direct impacts associated with the Proposed Project include: permanent removal or significant alteration of existing native habitat, increased land use and disturbance by humans, and potential temporary fragmentation of movement corridors for various species. Other permanent impacts associated with this Project are generally small in size and are not expected to affect the surrounding habitat or habitat functionality greatly.

Temporary direct Project impacts would result from construction crews moving about a Project Area, or by the laydown of tools or equipment while the specific Proposed Project feature is being built or maintained. Impacts to surrounding vegetation are anticipated to be light and consist primarily of crushing and trimming rather than grubbing and vegetation root structure and functionality is expected to be recovered through natural means.

As noted in Table 6, permanent impacts from Proposed Project features would be expected to have a permanent impact on 1.73 total acres and a temporary impact would be expected for approximately 0.51 total acres. Both permanent and temporary direct impacts for each Proposed Project feature are detailed below with the total impacts to each habitat detailed in acreage and in square feet (sq. ft.).

Work areas have been specifically designed to maintain a minimum of a 100-foot buffer from QCB host plant patches and recorded observations from the QCB focused survey. Therefore, no impacts to the QCB are expected from Proposed Project facilities. In addition, best management practices (BMPs) will alleviate many of the direct impacts to habitat, sensitive plant species, and potential and observed sensitive wildlife species associated with construction of Proposed Project related facilities.

Camping Facilities

The restoration of existing camping facilities will result in only temporary impacts to: Disturbed habitat (0.167 acre; 7,285 sq. ft.) and Bare Ground (0.004 acre; 194 sq. ft.). These sites are located within the mapped Eucalyptus Woodland and impacts will only occur to the habitat located at ground level. Therefore, no additional impacts are anticipated to the Eucalyptus Woodland.

Sensitive plant resources, San Diego viguiera, are located within close proximity (within 20 ft.) of the location of two of the existing camping sites. This is a CRPR List 4 species and while afforded special protection by encouraging avoidance from unnecessary impacts, there are no regulations regulating take of this species. No direct impacts the species are expected at these camp sites.

The establishment of seven new camping locations will result in only permanent impacts to Bare Ground (0.087 acre; 3,789 sq. ft.) and Disturbed habitat (0.092 acre; 4,018 sq. ft.). Three of the proposed new campsites are located within the mapped Eucalyptus Woodland and impacts will only occur to the habitat located at ground level. Therefore, no additional impacts are anticipated to the Eucalyptus Woodland.

Flag Plaza

Establishment of the flag plaza will result in permanent impacts to Disturbed habitat (0.012 acre; 521 sq. ft.) and Landscape/Ornamental vegetation (0.000 acre; 8.5 sq. ft.). In addition, a 15-foot temporary impact buffer has been established around the permanent impact area and will result in temporary impacts to: Disturbed habitat (0.064 acre; 2,784 sq. ft.), Brome Grass-Wild Oat Grassland (0.006 acre; 246 sq. ft.), Landscape/Ornamental vegetation (0.007 acre; 312 sq. ft.), bare ground (0.013 acre; 572 sq. ft.), and developed land (0.009 acre; 382 sq. ft.).

Restroom Facilities

The demolition of the existing restroom facilities and the construction of a new larger restroom will result in permanent impacts to Disturbed habitat (0.010 acre; 440 sq. ft.), Brome Grass-Wild Oat Grassland (0.000 acre; 5 sq. ft.), Landscape/Ornamental vegetation (0.012 acre; 504 sq. ft.), Developed land (0.012 acre; 518 sq. ft.), and Bare Ground (0.008 acre; 353 sq. ft.). In addition, a 15-foot temporary impact buffer has been established around the permanent impact area and will result in temporary impacts to: Coastal Sage Scrub (0.002 acre; 87 sq. ft.), Brome Grass-Wild

Oat Grassland (0.004 acre; 154 sq. ft.), Disturbed habitat (0.003 acre; 122 sq. ft.), and Landscape/Ornamental vegetation (0.027 acre; 1,166 sq. ft.).

Camporee Field

Establishing Camporee Field will only result in permanent impacts to: Coastal Sage Scrub (0.002 acre; 93 sq. ft.), Brome Grass-Wild Oat Grassland (1.045 acre; 45,522 sq. ft.), Landscape/Ornamental vegetation (0.015 acre; 643 sq. ft.), and Bare Ground (0.075 acre; 3,273 sq. ft.).

Camporee Field will be a drill field that will be cleared of its current primarily Brome Grass-Wild Oat Grassland and replace it with a field more indicative of landscape/ornamental settings. While the conversion of the non-native grassland will result in a decrease of habitat complexity, the area will still provide foraging opportunities for birds and mammals.

COPE Course

Establishing the six COPE course stations will result in permanent impacts to Brome Grass-Wild Oat Grassland habitat (0.006 acre; 278 sq. ft.), California Sagebrush Scrub (0.029 acre; 1,276 sq. ft.), Disturbed habitat (0.008; 344 sq. ft.), Landscape/Ornamental vegetation (0.001 acre; 60 sq. ft.), and bare ground (0.001; 26 sq. ft.). In addition, a 15-foot temporary impact buffer has been established around the permanent impact area and will result in temporary impacts to: Brome Grass-Wild Oat Grassland habitat (0.005 acre; 219 sq. ft.), California Sagebrush Scrub (0.028 acre; 1,201 sq. ft.), Disturbed habitat (0.031; 1,369 sq. ft.), Landscape/Ornamental vegetation (0.024 acre; 1,028 sq. ft.), and bare ground (0.030; 1,298 sq. ft.) The COPE stations are designed to be able to be collapsed and partially disassembled when not in use, resulting in less long-term impacts to the surrounding habitat.

Sensitive plant resources, San Diego viguiera, are located within the proposed location of three of the COPE stations. Proposed Project features have been designed to minimize the total impacts required to sensitive species, however, trimming and occasional grubbing of this species may be required to facilitate construction. Individuals of this species range in the 1,000s to 10,000s within the Proposed Project site and long-term impacts to the species from Project related activities are not anticipated.

Zip-line

Establishing the two zip-line base stations and associated anchors will result in permanent impacts to Brome Grass-Wild Oat Grassland habitat (0.004 acre; 176 sq. ft.), California Sagebrush Scrub (0.007 acre; 324 sq. ft.), Disturbed habitat (0.008 acre; 347 sq. ft.), Landscape/Ornamental vegetation (0.024 acre; 1,052 sq. ft.), and bare ground (0.002 acre; 105 sq. ft.). In addition, a 15-foot temporary impact buffer has been established around the permanent impact area and will result in temporary impacts to: Brome Grass-Wild Oat Grassland habitat (0.009 acre; 384 sq. ft.), California Sagebrush Scrub (0.045 acre; 1,979 sq. ft.), and bare ground (0.001; 40 sq. ft.)

Fenced Storage

Establishing the fenced storage areas will only result in permanent impacts to the following habitats: Disturbed habitat (0.010 acre; 422 sq. ft.), Landscape/Ornamental vegetation (0.001 acre; 29 sq. ft.), and Bare Ground (0.010 acre; 451 sq. ft.).

Proposed Project Site Circulation

Direct permanent and temporary Proposed Project related impacts to the existing road and trail network are not addressed in this study. All impacts associated with these features will occur to the existing bare ground of the feature and is considered routine maintenance.

A solitary red-diamond rattlesnake was observed within an existing access road along the northern portions of the Proposed Project site. This species is highly mobile and will likely flee from areas of activity (construction or general use) if given the opportunity. No lasting impacts to this sensitive species are anticipated from Proposed Project related activities.

Fire Ring and Amphitheater

Establishing the fire ring and amphitheater will result in permanent impacts to California Sagebrush Scrub (0.076 acre; 3,313 sq. ft.) and Brome Grass-Wild Oat Grassland (0.062 acre; 2,710 sq. ft.). In addition, a 15-foot temporary impact buffer has been established around the proposed stage location for construction purposes and will result in temporary impacts to: Brome Grass-Wild Oat Grassland habitat (0.000 acre; 10 sq. ft.) and California Sagebrush Scrub (0.026 acre; 1,145 sq. ft.).

Archery Range

Establishing the archery range will only result in permanent impacts to the following habitats: California Sagebrush Scrub (0.083 acre; 3,625 sq. ft.), Brome Grass-Wild Oat Grassland (0.026 acre; 1,115 sq. ft.), and Disturbed habitat (0.006 acre; 267 sq. ft.).

Sensitive plant resources, San Diego viguiera, are located within close proximity (within 20 ft.) of the location of the archery range and are not anticipated to be impacted by Proposed Project-related activities.

Indirect Impacts

Temporary indirect Project effects are anticipated to occur within the Proposed Project site; and are expected to include diurnal and nocturnal noise and dust production from utilization of the campground and associated facilities. Such anticipated impacts will be reduced to less than significant levels through the implementation of mitigation measures detailed below. The majority of indirect Project-related impacts will occur a few times a year (3 to 4 occasions), when large numbers of people will be present within the general area. Impacts associated with human use of the Proposed Project facilities will occur on a temporary basis, therefore, majority of the indirect Project impacts will be short term. Construction is anticipated to occur during daylight hours and therefore, light pollution is not expected to be an issue with the Proposed Project. Further, construction related noise would be minor and temporary as the noise impacts would be at a maximum of 67 dBA. Existing noise levels in the project area are characterized by traffic, park usage, and nearby noise sources such as the airport and the Firearms Training Center. Temporary

noise sources such as those that would occur during construction will not significantly impact wildlife species.

Additionally, implementation of the Proposed Project may result in indirect effects to existing wild animals altering land use patterns while the campsite and associated facilities are being used. These effects are anticipated to be short term (2 to 3 days maximum) and are not anticipated to negatively affect long-term animal land use patterns.

Overall, the Proposed Project has been designed to minimize impacts to native habitat as well as minimize habitat fragmentation. Proposed Project features were located adjacent to existing access roads and areas of non-native vegetation (e.g. Disturbed Habitat, Landscape/Ornamental, and Bare Ground). The COPE stations have been designed to be collapsible to minimize potential impacts when not in use. The anticipated sporadic use of the Proposed Project facilities also contributes to the minimal overall impact expected from the Project. Impacts expected to Coastal Sage Scrub habitat will occur to areas with minimal shrub density and impacts will affect annual species to a greater extent than perennial species.

Conclusions

This Proposed Project is located within a designated “Take Authorized” parcel that is associated with Otay Lakes County Park. This area was previously mitigated for at the inception of San Diego County’s MSCP. The Take Authorized qualifier pertains only to species covered within the San Diego County MSCP, which does not include QCB. Since QCB is present within the Proposed Project site, the Proposed Project has been designed to avoid impacts to this species. Project features will be placed more than 100 ft. from all QCB sightings and host plant patches, and Project-specific mitigation measures were developed and are presented below. Through the implementation of the measures included in **MM-BIO-1**, a less than significant impact is anticipated as a result of Proposed Project-related activities.

Because the Project is located within a “Take Authorized” parcel and in accordance with the MSCP Subarea Plan, “In areas which are shown as brown or “take authorized areas,” no additional biological mitigation is required for development to occur.” The Proposed Project and all associated impacts fall within a designated “Take-Authorized” area within the MSCP and qualifies for a mitigation exemption pursuant to Sec. 86.503 Exemptions – (a) (4) “Any Take Authorization Area approved by the Board of Supervisors and the Wildlife Agencies as part of the County Subarea Plan, as shown on Attachment B of Document No. 0769999 on file with the Clerk of the Board or any approved Habitat Loss Permit issued pursuant to 16 U.S.C. Sec. 1533 (d).” Therefore, no mitigation is required for permanent impacts anticipated from Proposed Project features pursuant to the County’s Biological Mitigation Ordinance (BMO). However, mitigation measures have been included below to reduce impacts from temporary and permanent disturbance from implementation of the Project.

Additionally, implementation of the mitigation measures listed below (MM-BIO-1 through MM-BIO-8) would result in a less than significant impacts to any listed species. No sensitive animal resources were identified within the Proposed Project site. San Diego viguiera is located within three areas associated with COPE stations and at the northwestern edge of the proposed Amphitheater location, and impacts are anticipated to include vegetation trimming and limited vegetation removal. Additional San Diego viguiera populations are located in close proximity to

existing access roads and trails; however, with implementation of the mitigation measures below and the utilization of established work areas, no additional impacts are anticipated.

Multiple populations of ashy spike moss and San Diego barrel cactus are located adjacent to existing access roads and trails; however, these populations are far enough removed from the existing facilities that they are not anticipated to be impacted by Project-related activities.

Permanent impacts are anticipated to be minimal and restricted to previously disturbed areas where feasible, and some Proposed Project features (i.e. COPE stations) are designed to collapse when not in use. The Proposed Project will utilize existing access roads and trails such that no new roads or trails will be created.

Implementation of the mitigation measures identified below would result in a less than significant impact associated with direct or indirect habitat modifications, on any species identified as a candidate, sensitive or special status species.

MM-BIO-1: The following measures will be implemented to avoid all impacts to the Quino checkerspot butterfly.

- Avoid all direct impacts to locations of host plants, including a 100 ft buffer, as mapped during the QCB focused surveys and refined during the 2019 rare plant surveys conducted by Chambers Group;
- Prior to construction, but no more than two weeks prior to ground disturbing activities, pre-construction surveys to identify QCB host plant locations will be conducted;
- All construction or other ground-disturbing maintenance activities within a 100-ft. buffer of mapped QCB host plants will be prohibited during the QCB flight season (defined as the third week of February through the second Saturday of May).
- BSA will conduct environmental awareness training for all personnel entering the Proposed Project site during construction and operation of the Proposed Project.
- During flight season, limit activities within the campground to Project features or currently established and maintained trails; no activities will be permitted within area inhabited by host plants and their buffers.
- Due to the inherent sensitivity of QCB host plants and the proximity of suitable habitat to existing trails, larger events where the trails may be utilized increasing the propensity for people to venture off the established trails. Educational campaigns will be conducted to minimize potential impacts to host plant patches during host plant booming season (generally March to April).
- Install permanent physical barrier(s) (i.e., fence) and signage, as appropriate, between locations of host plants and Project components to facilitate avoidance of host plant areas. Placement of fencing should be located immediately adjacent to developed areas rather than within habitat such that movement of QCB and other wildlife is not impeded; these areas include the entrance to and along the existing trails and roads in the northeastern portion of the campground, at the entrance to and along the existing trails and roads in the southern portion of the campground that connect the campsites to the

Amphitheatre, and along the eastern edge of the campsites. Signage should clearly state that entry into the host plant area is prohibited.

- A speed limit of 10 miles per hour will be instituted for all access roads during the QCB flight season (defined as the third week of February through the second Saturday of May).

- MM-BIO-2:** To avoid the destruction of active nests and to protect the reproductive success of birds protected by Migratory Bird Treaty Act, nesting bird surveys shall be performed not more than 3 days (72 hours) prior to the scheduled construction in the Proposed Project site and surrounding area. In the event that active nests are discovered, a suitable buffer should be established around such active nests and no construction within the buffer allowed until a qualified biologist has determined that the nest is no longer active (e.g. the nestlings have fledged and are no longer reliant on the nest). No ground disturbing activities shall occur within this buffer until the qualified biologist has confirmed that breeding/nesting is complete, and the young have fledged the nest. Survey results shall be presented in a letter report and submitted to the County. Nesting bird surveys are not required for construction activities occurring between September 16 and January 31.
- MM-BIO-3:** A qualified biological monitor shall conduct an environmental awareness training prior to the start of any construction related activities. Special focus should be made on sensitive animals and plants that are present or have a potential for occurrence and sensitive habitat located adjacent to the Proposed Project site.
- MM-BIO-4:** Heavy equipment shall work from existing access roads, footpaths, and bare ground areas as much as possible to avoid unnecessary soil compaction or impacts.
- MM-BIO-5:** Environmentally sensitive areas, including sensitive plant resources, within 20 ft. of construction areas shall be flagged for avoidance.
- MM-BIO-6:** A qualified biologist will monitor all construction activities to ensure that standard and special-status species-specific avoidance and minimization recommendations are adhered to. The biological monitor will conduct a general preconstruction survey no more than 14 days prior to the start of construction to verify that no special-status species are in the Proposed Project area or its buffers. The monitor shall also conduct a daily survey in and around work areas before activities start.
- MM-BIO-7:** BMPs shall be implemented to prevent new erosional features from developing in any newly contoured areas (including access roads and footpaths).
- MM-BIO-8:** Newly exposed bare ground shall be covered with native hydroseed appropriate to the immediately surrounding habitat.

b) Would the project have a substantial adverse effect on any riparian habitat or sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporated <input type="checkbox"/>	Less than Significant Impact <input checked="" type="checkbox"/>	No Impact <input type="checkbox"/>
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b) Less Than Significant Impact. The Otay Lakes County Park consists of a total of 69 acres. The Proposed Project site would be located within the southern portion of the 69 acre Park site, in the currently abandoned campground and surrounding open space. A total of 2.15 acres of Red Willow Riparian Forest adjacent to the Otay River exists within the 69-acre parcel that is the Proposed Project site but is located outside the area proposed to be used by the BSA. Where the Otay River crosses through the Proposed Project site, a steep, approximately 30-foot tall cliff face separates the Otay River floodplain from Proposed Project features, which are located approximately 250 feet north of the Otay River floodplain. All Project features have been strategically designed to avoid areas containing Red Willow Riparian Forest, thus there will be no construction or operational activities within this area. The Red Willow Riparian Forest is the only riparian habitat or sensitive natural community located within the Proposed Project site; therefore, the separation between the riparian vegetation and the low impact of Proposed Project features would result in a less than significant impact to riparian habitat or sensitive natural communities.

c) Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporated <input type="checkbox"/>	Less than Significant Impact <input checked="" type="checkbox"/>	No Impact <input type="checkbox"/>
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c) Less Than Significant Impact. The Proposed Project site is located in the 1807030410 (Otay River) watersheds (Hydrologic Unit Codes [HUC-10]; USDA 2019) in San Diego County, California. This watershed is the source the Otay River, a traditionally navigable waterway (TNW). An assessment of potential jurisdictional waters regulated by the USACE, RWQCB, and CDFW was conducted for the Proposed Project site. The assessment was conducted by a desktop survey through the USGS National Hydrography Dataset for hydrological connectivity. In addition, USFWS National Wetlands Inventory (NWI) Maps were referenced to determine potential wetland or other water features occurring within the Proposed Project site. The Proposed Project site is dominated by topographical features that facilitate ephemeral drainages that eventually connect to the Otay River to the south. A larger swale feature is located approximately 120 ft east of the main camping area that contained standing water during the month of March (Chambers Group 2019). Project related activities are not anticipated to impact any of the observed ephemeral drainage features

or swales, or the Otay River. Proposed Project features were designed to avoid impacting any drainage or jurisdictional features and associated habitat. There is a small amount of new impervious surface that would be implemented as a result of the Proposed Project, which is associated with the flag plaza (1,120 square feet), camping areas (2,300 square feet), restroom facilities (1,800 square feet), and fenced storage area (800 square feet). This area of additional impervious surface is approximately 0.2% of the total Proposed Project area. Because the Proposed Project includes design features to avoid impacts to drainage or jurisdictional features and associated habitat and the amount of impervious surfaces that would be added as a result of the Proposed Project is negligible, potential impacts are considered less than significant.

d) Would the project 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 impeded the use of native wildlife nursery sites?	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporated <input checked="" type="checkbox"/>	Less than Significant Impact <input type="checkbox"/>	No Impact <input type="checkbox"/>
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- d) Less Than Significant Impact With Mitigation Incorporated.** The Proposed Project site functions as part of the Otay River wildlife corridor. The approximately 25-mile Otay River begins at San Miguel Mountain, flows through the Upper and Lower Otay Reservoirs westward to the Pacific Ocean, where it empties into Egger Highlands at the San Diego Bay National Wildlife Refuge. The Otay River serves as a wildlife corridor for insect, amphibian, reptile, amphibian, mammal, and avian species.

The Proposed Project site is located immediately south of the Lower Otay Reservoir and is within the Otay River floodplain. A mountain ridge separates the Otay River from the Proposed Project site as the river flows southeast from the Lower Otay Reservoir for approximately 0.5 mile before curving southwest and crossing through the southern portion of the Proposed Project site. Therefore, the southern portion of the Proposed Project site functions to facilitate wildlife movement along the Otay River wildlife corridor.

The Proposed Project site is situated on a hill outside of the Otay River floodplain and is not within the path of the wildlife corridor; however, the Proposed Project site contributes to the functionality of the corridor by providing open space for foraging and dispersal of wildlife. Where the Otay River crosses through the Proposed Project site, a steep, approximately 30-foot tall cliff face separates the Otay River floodplain from Proposed Project features, which are located approximately 250 feet north of the Otay River floodplain. This steep cliff decreases the quality of connectivity between the Otay River and the Proposed Project site.

No direct impacts to wildlife corridors would occur as a result of the Proposed Project. None of the Proposed Project features are anticipated to be large enough to create physical barriers to wildlife movement, with the remodeled restroom facility comprising the largest new developed area at 0.03 acres. The tallest Proposed Project features are the 30-foot masts for the zipline, each of which will comprise of a single pole and will have negligible impact on surrounding wildlife. Lighting associated with the Proposed Project would be limited to the safety lighting on the new restroom building, which would be minimal and would comply with Requirements for Lamp

Source and Shielding in the San Diego County Light Pollution Code. The quality of habitat for foraging and dispersal of wildlife may be diminished on a temporary basis from noise during construction; however, the surrounding area consists primarily of undeveloped open space containing high-quality habitat and MM-BIO-2 would reduce potential impacts to migratory bird species in the Project area to a less than significant impact. Additionally, the Proposed Project is located within the County of San Diego MSCP South County Subarea, in a region designated as "Take Authorized"; in areas designated as "Take Authorized," no additional biological mitigation for Covered Species is required for development to occur. Therefore, indirect impacts to wildlife movement corridors as a result of the Proposed Project are anticipated to be less than significant with mitigation incorporated.

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- e) No Impact.** As discussed previously, the County MSCP addresses biological impacts for species included in the plan on a regional basis and the Proposed Project site is within the County MSCP Subarea Plan's South County Segment. The Proposed Project would be consistent with all relevant goals and policies of the County's MSCP, particularly the objectives focused on no-net-loss of wetlands and developing in the least sensitive habitat areas. The Proposed Project would not develop land in the area adjacent to wetlands in the southern portion of Otay Lakes County Park and Project features would be designed to occur in the least sensitive habitat areas within the parcel whenever feasible. The SCS is also designated as "Take Authorized," meaning no additional biological mitigation for Covered Species is required for development to occur. The South County Subarea Plan is intended to provide for the take of Covered Species and their habitats associated with development. Take of Covered Species associated with the on-going management of San Diego County Park Lands and construction of facilities consistent with existing (1996) park development plans is authorized consistent with the MSCP Subarea Plan (County of San Diego 1998).

While the Proposed Project is not permitted through the City, and is therefore not subject to the City of San Diego MHPA Land Use Adjacency Guidelines that are identified in the MSCP Subarea Plan (City of San Diego 1997), the Proposed Project has been designed to conform with the Land Use Adjacency Guidelines, as follows:

- Drainage will not drain directly into the MHPA.
- Lighting of all developed areas will be directed away from the MHPA.
- Operating procedures must include noise restrictions and will consider the breeding season of sensitive species.
- Signage will be implemented to prevent errant impacts on sensitive vegetation communities.
- No invasive non-native plant species will be used within the Project.
- Development has been sited to avoid brush management into sensitive habitat.

- The soils on the Proposed Project site are primarily San Miguel-Exchequer rocky silt loam and Huerhuero loam (USDA 2019). No hydric or sensitive soils are present on site. No soils associated with vernal pools are present within the study area.

Mitigation for any Project-related impacts would comply with standards set by the County's Biological Mitigation Ordinance. Therefore, implementation of the Proposed Project would not result in an impact associated with a local policy protecting biological resources.

f) Would the project conflict with provisions or an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporated <input type="checkbox"/>	Less than Significant Impact <input type="checkbox"/>	No Impact <input checked="" type="checkbox"/>
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- f) **No Impact.** As noted above in Impact e), the Proposed Project is located within the County of San Diego MSCP South County Subarea, in a region designated as "Take Authorized," within Otay Lakes County Park. Also described above, the Proposed Project would be consistent with all relevant goals and policies of the County's MSCP. Therefore, implementation of the Proposed Project would not result in an impact associated with an adopted Habitat Conservation Plan or Natural Community Conservation Plan.

4.5 CULTURAL RESOURCES

A Phase I Cultural Resources Report was prepared for the Proposed Project (Chambers Group 2019b). The report is included as Appendix C.

a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to Public Resources Code Section 21084.1 and CEQA Guidelines Section 15064.5, respectively?	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporated <input checked="" type="checkbox"/>	Less than Significant Impact <input type="checkbox"/>	No Impact <input type="checkbox"/>
b) Would the project cause a substantial adverse change in the significance of an archaeological resource as defined in Public Resources Code Section 21083.2 and 21084.1, and CEQA Guidelines Section 15064.5, respectively?	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporated <input checked="" type="checkbox"/>	Less than Significant Impact <input type="checkbox"/>	No Impact <input type="checkbox"/>

- a) and b) **Less Than Significant With Mitigation Incorporated.** Compliance with CEQA statutes and guidelines requires both public and private projects with financing or approval from a public agency to assess the project's impact on cultural resources (PRC Section 21082, 21083.2 and 21084 and CCR 10564.5). The first step in the process is to identify cultural resources that may be

impacted by the Proposed Project and then determine whether the resources are “historically significant” resources.

CEQA defines historically significant resources as “resources listed or eligible for listing in the California Register of Historical Resources (CRHR)” (PRC Section 5024.1). A cultural resource may be considered historically significant if the resource is 45 years old or older; possesses integrity of location, design, setting, materials, workmanship, feeling, and association; and meets any of the following criteria for listing on the CRHR:

- 1) Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
- 2) Is associated with the lives of persons important in our past;
- 3) 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,
- 4) Has yielded, or may be likely to yield, information important in prehistory or history (PRC Section 5024.1).

Cultural resources are buildings, sites, humanly modified landscapes, traditional cultural properties, structures, or objects that may have historical, architectural, cultural, or scientific importance. CEQA states that if a project will have a significant impact on important cultural resources, deemed “historically significant,” then project alternatives and mitigation measures must be considered. Additionally, any proposed project that may affect historically significant cultural resources must be submitted to the State Historic Preservation Officer (SHPO) for review and comment prior to project approval by the responsible agency and prior to construction.

A pedestrian survey of the Proposed Project site was conducted by Chambers Group archaeologists Kyle Knabb and Ted Roberts on February 4, 2019. Ground visibility ranged between 10 to 50 percent on non-paved areas. Transects were spaced at no greater than 15-meter intervals across the Proposed Project site. Site locations were recorded with a handheld GPS with sub-meter accuracy and documented with high-resolution digital photographs. Artifacts were examined on site and left in place. When diagnostic artifacts were present these were recorded to obtain a date with as much precision as possible. Paved portions, mostly in the northwest part of the Proposed Project site where the San Diego County Parks office is located, were not surveyed. The southern extent of the Proposed Project site was not surveyed due to steep topography (canyon walls) as well as inaccessibility due to access roads being washed out.

Additionally, a literature review and records search were conducted at South Coastal Information Center (SCIC) at San Diego State University, on November 13, 2018. The record search results provided information on all documented cultural resources and previous archaeological investigations within 0.5-miles of the Proposed Project site. Resources consulted during the records search conducted by the SCIC included the National Register of Historic Places (NRHP), California Historical Landmarks, California Points of Historical Interest, and the California State Historic Resources Inventory.

Based upon the records search conducted by the SCIC, 73 cultural resource projects have previously been completed within a 0.5-mile records search radius of the Proposed Project site. Thirteen of these studies partially overlapped with the current Proposed Project site. Additionally, the records search identified 62 previously recorded cultural resources within the 0.5-mile records search radius.

The Proposed Project has been designed to avoid all areas that may impact a known historical and/or archaeological resource; however, the potential exists for the Proposed Project to impact unknown historical and/or archaeological resources within the Proposed Project site. Implementation of the **MM-CUL-1** below would reduce potentially significant impacts to less than significant.

MM-CUL-1: The Applicant will retain a qualified archaeologist and Native American monitor for construction monitoring of all ground disturbing activities located within 50 feet of a known archaeological and/or historic resource. In the event unexpected archaeological and/or historic resources are uncovered during ground-disturbing activities associated with the Proposed Project, work must stop in the immediate area until it is evaluated by a qualified archaeologist and Native American monitor to ensure satisfactory compliance with applicable regulations (State CEQA Guidelines Section 15064.5(f)).

c) Would the project disturb any human remains, including those interred outside of dedicated cemeteries	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

c) **Less Than Significant Impact With Mitigation Incorporated.** The Phase I Cultural Resources Report identified that the Proposed Project site is not a formal cemetery, nor is the site near a formal cemetery. Due to the fact that the Proposed Project site is not known to contain areas with human remains, it is highly unlikely that the Proposed Project would disturb any human remains during construction; however, in the event human remains are discovered during construction, implementation of **MM-CUL-2** would reduce any impact to the human remains. A less than significant impact would occur with mitigation incorporated.

MM-CUL-2: Should human remains be uncovered during construction, as specified by State Health and Safety Code Section 7050.5, no further disturbance would occur until the County Coroner has made the necessary findings as to the origin and disposition pursuant to PRC 5097.98. If such a discovery occurs, excavation or construction would halt in the area of the discovery, the area would be protected, and consultation and treatment would occur as prescribed by law. If the County Coroner recognizes the remains to be Native American, he or she would contact the Native American Heritage Commission, who would appoint the Most Likely Descendant. Additionally, if the bones are determined to be Native American, a plan would be developed regarding the treatment of human remains and associated burial objects, and the plan would be implemented in coordination with the Most Likely Descendant.

4.6 ENERGY

a) Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operation?	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporated <input type="checkbox"/>	Less than Significant Impact <input checked="" type="checkbox"/>	No Impact <input type="checkbox"/>
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a) Less Than Significant Impact. Construction associated with the Proposed Project would result in a temporary increase in energy consumption due to the energy requirements associated with operating construction equipment. Due to the temporary nature and the limited nature of construction activities, it is assumed the Proposed Project would not waste energy or conduct activities that result in inefficient use of energy. Operation of the Proposed Project would require the use of energy to transport campers to the Proposed Project site. Implementation of the Proposed Project would result in a campground facility to serve the San Diego and Imperial Council of Boy Scouts of America and other approved local groups. A minimal amount of energy would be required to operate Proposed Project features and the campsites; as mentioned in Section 4.1, the Proposed Project does not involve the establishment of any lighting on-site, except for safety lighting for the restroom. However, the restroom would have solar panels and battery storage installed and it is expected that the power requirements associated with the restroom would be accommodated by the energy harnessed by the solar panels. It is not considered a wasteful, inefficient, or unnecessary consumption of energy to upgrade and implement the Proposed Project. Therefore, the Proposed Project would result in less than significant impacts associated with wasteful or inefficient energy consumption during construction or operation.

b) Would conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporated <input type="checkbox"/>	Less than Significant Impact <input checked="" type="checkbox"/>	No Impact <input type="checkbox"/>
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b) Less Than Significant Impact. As discussed above in Impact a), the Proposed Project would not result in inefficient or unnecessary use of energy. The energy required for the Proposed Project would be marginal due to site improvements, particularly those incorporating renewable energy resources, and the temporary nature of the construction phase of the Project. Additionally, the incorporation of renewable energy would align the Proposed Project with the County of San Diego's Strategic Energy Plan for 2015-2020 and construction would comply with both the County's Building Energy Efficiency Standards and the California Green Building Standards Code (County of San Diego 2012; 2015; CBSC 2016). Therefore, implementation of the Proposed Project would not conflict with or obstruct any plan associated with energy efficiency and impacts would be less than significant.

4.7 GEOLOGY AND SOILS

a) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of injury, damage or death involving:					
i)	Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporated <input type="checkbox"/>	Less than Significant Impact <input checked="" type="checkbox"/>	No Impact <input type="checkbox"/>
ii)	Strong seismic ground shaking?	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporated <input type="checkbox"/>	Less than Significant Impact <input checked="" type="checkbox"/>	No Impact <input type="checkbox"/>

(a) i) and ii) Less Than Significant Impact. Although all of southern California is prone to ground shaking associated with earthquake activity, the Proposed Project site is not located within an active Alquist-Priolo Earthquake Fault Zone. The Proposed Project site is in near proximity to two potentially active fault lines; one fault is approximately 0.5 mile to the south and the other approximately 6 miles to the east (County of San Diego 2011e). To combat any potential risks, design and construction of the new restroom facility would comply with all seismic-safety development requirements, including the Title 24 standards of the current California Building Code. Additionally, the zip-line construction would be subject to the California Division of Occupational Safety and Health regulatory authority and would be evaluated by a professional engineer. Compliance with these regulations would reduce any impacts associated with Therefore, implementation of the Proposed Project would result in a less than significant impact associated with rupture of a known earthquake fault or strong seismic ground shaking.

iii)	Seismic-related ground failure, including liquefaction?	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporated <input type="checkbox"/>	Less than Significant Impact <input checked="" type="checkbox"/>	No Impact <input type="checkbox"/>
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(a) iii) Less Than Significant Impact. The southern portion of the Proposed Project site is potentially prone to liquefaction, but Proposed Project features would be strategically placed outside of liquefaction zones (County of San Diego 2016b). Furthermore, design and construction of the new facilities would comply with all seismic-safety development requirements, including

the Title 24 standards of the current California Building Code. Therefore, implementation of the Proposed Project would result in less than significant impacts associated with ground failure, including liquefaction.

iv) Landslides?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- a) **iv) Less Than Significant Impact.** The Proposed Project site is relatively flat and does not lie below any slopes steep enough to pose a risk of landslide (County of San Diego 2011e; City of Chula Vista 2005). Therefore, implementation of the Proposed Project would result in less than significant impacts associated with landslides.

b) Would the project result in substantial soil erosion or the loss of topsoil?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- b) **Less Than Significant Impact.** According to the United States Department of Agriculture (USDA) Web Soil Survey, the soils on the Proposed Project site are primarily San Miguel-Exchequer rocky silt loam and Huerhuero loam (USDA 2019). San Miguel-Exchequer rocky silt loams have a moderate to high erosion hazard and Huerhuero loams have a moderate erosion hazard (USFWS 2014b). Many of the construction activities associated with the Proposed Project would require minor brush clearing and ground leveling; however, none of these activities will require significant movement or disturbance of native soils. Installation of the two anchor poles for the zip-line would extend approximately 5 to 8 ft below ground level. The Proposed Project would not result in the installment of a significant amount of impervious surface that would result in the opportunity for rapid stormwater runoff. Excluding the pre-existing impervious Park surfaces, the new sources of impervious surface within the 69-acre parcel would be the flag plaza, camping areas, restroom facilities, and a fenced storage area, which involves approximately 6,000 square feet or 0.2% of the total Proposed Project site area. Additionally, the Proposed Project would require the preparation of a Storm Water Pollution Prevention Plan (SWPPP) as the amount of ground disturbance across the Proposed Project site is in excess of one acre. A SWPPP identifies best management practices (BMPs) to further reduce soil erosion during construction; these BMPs would be consistent with the County's BMP Design Manual for Permanent Site Design, Storm Water Treatment and Hydromodification Management (County of San Diego 2019). The identification and implementation of construction BMPs would include but are not limited to watering soil, soil cover of inactive areas, gravel bags, and fiber rolls to minimize the potential impacts. Therefore, implementation of the Proposed Project would result in less than significant impacts associated with soil erosion or the loss of topsoil.

c) Would the project be located in a geologic unit or soil that is unstable as a result of the project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporated <input type="checkbox"/>	Less than Significant Impact <input checked="" type="checkbox"/>	No Impact <input type="checkbox"/>
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- c) Less Than Significant Impact.** As discussed in Impacts a) i) through a) iii), the Project is not located within an active or potentially active fault zone, or in an area at risk of landslide or liquefaction (County of San Diego 2011e; City of Chula Vista 2005). Implementation of the Proposed Project would result in less than significant impacts associated with landslides, lateral spreading, subsidence, liquefaction, or collapse.

d) Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property??	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporated <input type="checkbox"/>	Less than Significant Impact <input checked="" type="checkbox"/>	No Impact <input type="checkbox"/>
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- d) Less Than Significant Impact.** Expansive soils are certain types of clay soils that expand when saturated and shrink when dried. According to the United States Department of Agriculture (USDA) Web Soil Survey, the soils on the Proposed Project site are primarily San Miguel-Exchequer rocky silt loam and Huerhuero loam (USDA 2019). San Miguel-Exchequer rocky silt loams generally have no clay sediments, but Huerhuero loams generally have a clay subsoil (USFWS 2014b). Nonetheless, the County of San Diego General Plan does not identify any areas within the Proposed Project site as having expansive soils (County of San Diego 2011e). Implementation of the Proposed Project would result in less than significant impacts associated with expansive soils.

e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporated <input type="checkbox"/>	Less than Significant Impact <input type="checkbox"/>	No Impact <input checked="" type="checkbox"/>
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- e) No Impact.** The Proposed Project would involve the renovation of a restroom facility, but the facility would be connected to the existing park sewer infrastructure. Additionally, portable toilets would be installed on-site, as-needed to accommodate needs in the lower portion of the Proposed Project site. Therefore, the Proposed Project would not require the installation of septic tanks or alternative wastewater disposal systems. No impact would occur.

f)	Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- f) **Less Than Significant With Mitigation Incorporated.** A Phase I Paleontological Resources Report was prepared for the Proposed Project (Chambers Group 2019c; see Appendix F). Sensitivity levels for paleontological resources are rated for individual geologic formations, as it is the formation that contains the fossil remains. The sensitivity levels are the same as the resource potential ratings. The resource potential ratings and geologic formation sensitivity levels are described below.

Sensitivity Ratings

High

High resource potential and high sensitivity are assigned to geologic formations known to contain paleontological localities with rare, well preserved, critical fossil materials for stratigraphic or paleoenvironmental interpretation, and fossils providing important information about the paleoclimatic, paleobiological and/or evolutionary history (phylogeny) of animal and plant groups. In general, formations with high resource potential are considered to have the highest potential to produce unique invertebrate fossil assemblages or unique vertebrate fossil remains and are, therefore, highly sensitive.

Moderate

Moderate resource potential and moderate sensitivity are assigned to geologic formations known to contain paleontological localities. These geologic formations are judged to have a strong, but often unproven, potential for producing unique fossil remains (Deméré and Walsh 1993).

Low

Low resource potential and low sensitivity are assigned to geologic formations that, based on their relatively young age and/or high-energy depositional history, are judged unlikely to produce unique fossil remains. Low resource potential formations rarely produce fossil remains of scientific significance and are considered to have low sensitivity. However, when fossils are found in these formations, they are often very significant additions to our geologic understanding of the area.

Marginal

Marginal resource potential and marginal sensitivity are assigned to geologic formations that are composed either of volcanoclastic (derived from volcanic sources) or metasedimentary rocks, but that nevertheless have a limited probability for producing fossils from certain formations at localized outcrops. Volcanoclastic rock can contain organisms that were fossilized by being covered by ash, dust, mud, or other debris from volcanoes. Sedimentary rocks that have been metamorphosed by heat and/or pressure caused by volcanoes or plutons are called

metasedimentary. If the sedimentary rocks had paleontological resources within them, those resources may have survived the metamorphism and still be identifiable within the metasedimentary rock, but since the probability of this occurring is so limited, these formations are considered marginally sensitive.

No Potential

No resource potential is assigned to geologic formations that are composed entirely of volcanic or plutonic igneous rock, such as basalt or granite, and therefore do not have any potential for producing fossil remains. These formations have no paleontological resource potential, i.e. they are not sensitive.

Geologic Rock Units Underlying Proposed Project site

Young Alluvium

A small area in the southwestern corner of the Project site is underlain at the surface by Holocene-age young alluvium, which typically lines modern drainages. Young alluvial deposits are generally considered to be less than 10,000 years old, and range in composition from unconsolidated to moderately consolidated silt, sand, pebbly and cobbly sand, and boulders. No fossils are currently known from these deposits in the vicinity of the Project site. These deposits are assigned a low paleontological sensitivity based on their relatively young geologic age and lack of recorded fossil collection localities. However, within the Project site, these deposits appear to overlie the Friars Formation (high paleontological sensitivity, see below), which could be impacted where the contact between these two geologic units is relatively shallow, though the actual depth is currently unknown.

Friars Formation

The fluvial deposits of the middle Eocene-age (approximately 47 to 46 million years old) Friars Formation underlie the southeastern corner of the Project site, and likely underlie the Lindavista Formation at unknown depths throughout the rest of the Project site. The SDNHM does not have any fossil collection localities from the Friars Formation within a half-mile radius of the Project site. The Friars Formation is assigned a high paleontological sensitivity on the basis of the recovery of diverse and well-preserved assemblages of both marine invertebrates and terrestrial vertebrates from these deposits.

Santiago Peak Volcanics

Crystalline basement rocks of early Cretaceous age (approximately 125 to 145 million years old), mapped as the Santiago Peak Volcanics by Todd (2004) underlie the majority of the Project site. The SDNHM does not have any fossil localities from these rocks within a half-mile radius of the Proposed Project site. The metavolcanic portions of this unit rarely preserve fossils due to the high temperatures associated with their formation; some of the volcanic breccias, however, have produced petrified wood, and are assigned a marginal sensitivity (Deméré and Walsh, 1993). The metasedimentary portions have the potential to yield fossils, including siliceous microfossils (e.g., radiolarians) and marine macroinvertebrates (e.g., clams and belemnites), and are assigned a moderate paleontological sensitivity. The lack of nearby localities from these deposits indicates

that fossil recovery is unlikely, so the geologic unit as a whole is assigned a low paleontological sensitivity.

The high paleontological sensitivity of the Friars Formation in San Diego County (Deméré and Walsh, 1993; Stephenson et al., 2009) suggest the potential for construction of the Proposed Project to result in impacts to paleontological resources. Any proposed excavation activities that extend deep enough to encounter previously undisturbed deposits of this geologic unit have the potential to impact the paleontological resources preserved therein. Since an impact to paleontological resources does not typically occur until the substratum is excavated, monitoring during excavation is the essential measure to reduce significant impacts to paleontological resources to a level below significance. According to County guidelines, the type of monitoring required is based on the amount of excavation and the site's paleontological resource potential and sensitivity. The guidelines state that when the volume of excavation exceeds 2,500 cubic yards, the potential loss of paleontological resources is much higher than for lesser amounts of excavation (County of San Diego 2007). Since the Proposed Project would not require the excavation of more than 2,500 cubic yards, yet the Project is in an area of high paleontological sensitivity, the Proposed Project would implement **MM-PAL-1** to reduce impacts to paleontological resources to less than significant.

MM-PAL-1: The Applicant will retain a Standard Monitor, defined by the County as any one person who is on the Project site during all the original cutting of undisturbed substratum, for the portion of the construction activities that extend into the Friars Formation. The Standard Monitor shall be any one person who is on the Proposed Project site during all the original cutting of undisturbed substratum. The Standard Monitor must be designated by the Applicant and given the responsibility of watching for fossils so that the Proposed Project is in conformance with Section 87.430 of the Grading Ordinance. All ground disturbing activities that extend into the Friars Formation will be monitored and the suspension of grading operation is required upon the discovery of fossils greater than twelve inches in any dimension.

4.8 GREENHOUSE GAS EMISSIONS

This section describes the potential global climate change effects from implementation of the Proposed Project. Greenhouse gas (GHG) emission modeling was performed through use of the CalEEMod Version 2016.3.2 and the CalEEMod model output files are provided in Appendix D.

Regulatory Setting

Significant legislative and regulatory activities directly and indirectly affect climate change and GHGs in California. The primary climate change legislation in California is AB 32, the California Global Warming Solutions Act of 2006. AB 32 focuses on reducing greenhouse gas emissions in California, and AB 32 requires that GHGs emitted in California be reduced to 1990 levels by the year 2020. In addition to AB 32, Executive Order B-30-15 was issued on April 29, 2015 that aims to reduce California's GHG emissions 40 percent below 1990 levels by 2030. In September 2016, AB 197 and SB 32 codified into statute the GHG emission reduction targets provided in Executive Order B-20-15.

CARB is the state agency charged with monitoring and regulating sources of emissions of GHGs in California that contribute to global warming in order to reduce emissions of GHGs. The CARB Governing Board approved the 1990 GHG emissions level of 427 million tons of CO₂ equivalent (MtCO₂e) on December 6, 2007. Therefore, in 2020, annual emissions in California are required to be at or below 427 MtCO₂e. The CARB Board approved the Climate Change Scoping Plan (Scoping Plan) in December 2008, the First Update to the Scoping Plan in May 2014, and California's 2017 Climate Change Scoping Plan in November 2017. The Scoping Plans define a range of programs and activities that will be implemented primarily by state agencies but also include actions by local government agencies. Primary strategies addressed in the Scoping Plans include new industrial and emission control technologies; alternative energy generation technologies; advanced energy conservation in lighting, heating, cooling, and ventilation; reduced-carbon fuels; hybrid and electric vehicles; and other methods of improving vehicle mileage. Local government will have a part in implementing some of these strategies. The Scoping Plans also call for reductions in vehicle-associated GHG emissions through smart growth that will result in reductions in vehicle miles traveled (CARB 2008; 2014; 2017).

a) Would the project generate gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporated <input type="checkbox"/>	Less than Significant Impact <input checked="" type="checkbox"/>	No Impact <input type="checkbox"/>
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a) Less Than Significant Impact. The State of California has developed guidelines to address the significance of climate change impacts based on Appendix G of the CEQA Guidelines, which contains two significance criteria for evaluating greenhouse gas (GHG) emissions of a project. A project would have a significant environmental impact if it would:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The County of San Diego currently recommends projects be compared to a 900-metric-ton carbon dioxide equivalent (MTCO₂e) screening level to identify which projects require additional analysis and mitigation. Project emissions below this 900 MTCO₂e level are considered less than cumulatively considerable, and project emissions above this level require additional analysis. Moreover, projects that result in a net benefit by reducing GHG emissions are determined to have a less than significant impact related to GHG emissions. Recent Court decisions, including *Newhall Ranch*, have recommended that analyses emphasize the consideration of GHG efficiency, and while the County guidance encourages CEQA analyses to focus on the GHG efficiency of a proposed project, the County also acknowledges that some projects are sufficiently small such that it is highly unlikely they would generate a level of GHGs that would be cumulatively considerable.

A direct comparison of construction GHG emissions with long-term thresholds would not be appropriate, since construction emissions are short-term in nature and would cease upon

completion of construction. Other Air Districts, including the SCAQMD, recommend that GHG emissions from construction activities be amortized over 30 years, when construction emissions are compared to operational-related GHG emissions thresholds.

The CalEEMod model used to calculate the criteria pollutant emissions for the air quality analysis was also utilized to calculate the GHG emissions associated with construction and operation of the Proposed Project. The CalEEMod model calculated GHG emissions generated from construction activities for the Proposed Project that are anticipated to occur over a period of 6 months, as soon as permits and approvals are authorized, starting as early as Spring 2020. Construction activities include: (1) Demolition of the existing bathroom structure; (2) Site preparation that would include site clearing and ground leveling activities; and (3) Combined building construction and architectural coatings of the camping facilities, flag plaza, restroom building, Camporee Field, COPE course, zip-line, fenced storage, and fire ring and amphitheater. The operations-related GHG emissions were calculated for an opening year of 2020. According to the Traffic Impact Analysis (LLG 2019a) the Proposed Project is anticipated to generate a maximum of 176 weekday daily trips, 528 Saturday daily trips, and 198 Sunday daily trips, which were entered into the CalEEMod model. It should be noted that the maximum weekday trips analyzed would only occur for approximately four weeks of the year and the maximum weekend trips analyzed would occur up to six times per year. However, in order to provide a worst-case analysis, the GHG emissions were calculated based on the maximum daily trips occurring every week of the year. Table 7 shows the estimated GHG emissions that would be predicted from development of the Proposed Project.

Table 7: Annual GHG Emissions from the Proposed Project

Activity	Greenhouse Gas Emissions in metric tons/year			
	CO ₂	CH ₄	N ₂ O	CO ₂ e
Construction				
Demolition of Existing Restroom	1.08	0.00	0.00	1.08
Site Preparation	14.55	0.00	0.00	14.64
Combined Building Construction & Architectural Coatings	173.91	0.02	0.00	174.60
Total Construction Emissions	189.54	0.03	0.00	190.32
Total Construction Emissions Amortized over 30 Years	6.32	0.00	0.00	6.34
Operations¹				
Area Sources ²	0.00	0.00	0.00	0.00
Energy Usage ³	0.00	0.00	0.00	0.00
Mobile Sources ⁴	208.03	0.01	0.00	208.33
Solid Waste ⁵	0.08	0.00	0.00	0.20
Water and Wastewater ⁶	19.55	0.00	0.00	19.62
Total Project Emissions	233.98	0.01	0.00	234.49
GHG Emissions Thresholds of Significance ⁷				900
Exceed Threshold?				No
Notes:				

¹ Operational emissions calculated by CalEEMod model divided by 3, since the Proposed Project would be operated a maximum of four months (120 days) per year.

² Area sources consist of GHG emissions from consumer products, architectural coatings, and landscaping equipment.

³ Energy usage consists of GHG emissions from electricity and natural gas usage.

⁴ Mobile sources consist of GHG emissions from vehicles.

⁵ Waste includes the CO₂ and CH₄ emissions created from the solid waste placed in landfills.

⁶ Water includes GHG emissions from electricity used for transport of water and processing of wastewater.

⁷ GHG emissions threshold from California Air Pollution Control Officers Association's (CAPCOA's) CEQA & Climate Change paper (CAPCOA 2008)
Source: CalEEMod Version 2016.3.2 (see Appendix D).

As shown in Table 7, the Proposed Project would generate 234.49MTCO₂e per year, which would not exceed the annual threshold of 900 MTCO₂e.

Further, the State adopted the Global Warming Solutions Act in 2006, commonly referred to as AB 32, which codified the greenhouse gas emissions reduction goal of achieving 1990 GHG emission levels by the year 2020. In 2015 the State adopted SB 32 and AB 197, which codified the GHG emission reduction target of at least 40 percent below 1990 levels by 2030. In order to achieve the State's GHG emissions reduction targets, the County prepared a Climate Action Plan (CAP) (County of San Diego 2018). The CAP is a long-term programmatic plan that identifies strategies and measures to meet the County's targets to reduce GHG emissions by 2020 and 2030, consistent with the State's legislative GHG reduction targets, and demonstrates progress towards the State's 2050 GHG reduction goal. The CAP requires that new development projects incorporate more sustainable design features and implement applicable reduction measures consistent with the CAP. To help streamline this review and determine consistency with the CAP, the County has prepared a CAP Consistency Review Checklist. The Checklist has been completed for the Proposed Project (see Appendix E), which details how the Proposed Project would implement all applicable measures identified in the Checklist and therefore be consistent with the CAP.

Additionally, the Project would upgrade an existing campground area where the Project would not change the land use or function of the site. Project construction would use small-scale construction equipment and would occur over a six-month period. Construction emissions would vary from day-to-day and would include clearing, grubbing, grading, and fine grading operations, as well as installation of Project elements. Due to the limited construction equipment and duration, the amount of emissions generated during construction would be relatively minimal and would not have the potential generate a level of GHGs that would be cumulatively considerable. Construction-related GHG emissions would cease upon completion and would not contribute to long-term or on-going GHG emissions. Operation of the Project would generate a minimal amount of operational emissions (as shown in Table 7) as the site currently generates under existing conditions as the Project would only upgrade the type of facility currently on-site. As such, it could be concluded that the Project's GHG contribution is not "cumulatively considerable" and is therefore the Project will have a less than significant impact on generating greenhouse gas emissions.

b) Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporated <input type="checkbox"/>	Less than Significant Impact <input checked="" type="checkbox"/>	No Impact <input type="checkbox"/>
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b) Less Than Significant Impact. As mentioned above, in 2006, the State adopted the Global Warming Solutions Act of 2006, commonly referred to as AB 32, which codified the greenhouse gas emissions reduction goal of achieving 1990 GHG emission levels by the year 2020. In 2015, the State adopted SB 32 and AB 197, which codified the GHG emission reduction target of at least 40 percent below 1990 levels by 2030. In order to achieve the State’s GHG emissions reduction targets, the County prepared a Climate Action Plan (CAP) (County of San Diego 2018). The CAP is a long-term programmatic plan that identifies strategies and measures to meet the County’s targets to reduce GHG emissions by 2020 and 2030, consistent with the State’s legislative GHG reduction targets, and demonstrates progress towards the State’s 2050 GHG reduction goal. The CAP requires that new development projects incorporate more sustainable design features and implement applicable reduction measures consistent with the CAP. To help streamline this review and determine consistency with the CAP, the County has prepared a CAP Consistency Review Checklist. The Checklist has been completed for the Proposed Project (see Appendix E), which details how the Proposed Project would implement all applicable measures identified in the Checklist and therefore be consistent with the CAP. In addition, the Proposed Project would be required to meet the most current Title 24 Part 6 Building Energy Efficiency standards and the Title 24 Part 10 CalGreen standards that would further reduce energy usage and corresponding GHG emissions created from the Proposed Project. Through implementation of the above measures, the Proposed Project would be in compliance with both the County’s and State’s GHG emissions reduction plans.

Moreover, the Proposed Project is consistent with the County General Plan, as it would support development of recreational opportunities while preserving habitat within the MSCP area through avoidance, and the Scoping Plan, as it would not hinder progress towards statewide reduction targets.

Therefore, the Proposed Project would not conflict with any applicable plan, policy, or regulation adopted for reducing the emissions of GHGs. A less than significant impact would occur.

4.9 HAZARDS AND HAZARDOUS MATERIALS

As a requirement of the BSA organization, local councils are required to have written plans detailing how council staff, volunteers, and members should respond during a crisis at a council facility or program. The standard of care to meet that expectation may include a variety of emergency plans. For example, national camp standards require written plans dealing with missing persons as well as how staff and campers should respond to fire and hazardous weather. Some program activities, such as aquatics and climbing, require written plans detailing response to specific incidents. In addition, OSHA requires employers (councils) to develop written plans for emergencies that may reasonably be expected in the workplace, including but not limited to fires, tornadoes, and floods (BSA 2019).

a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporated <input type="checkbox"/>	Less than Significant Impact <input checked="" type="checkbox"/>	No Impact <input type="checkbox"/>
b) Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporated <input type="checkbox"/>	Less than Significant Impact <input checked="" type="checkbox"/>	No Impact <input type="checkbox"/>

a) and b) Less Than Significant Impact. As part of the Proposed Project, portions of the existing land would be developed, existing facilities would be renovated, and elements to encourage engagement of local boy scouts to the Proposed Project site would be installed. Construction and operation of the Proposed Project would necessitate the routine transport of potentially hazardous commercial materials, including but not limited to gasoline, oil, solvents, cleaners, and paint. However, any potentially hazardous materials used or found on site would be handled in accordance with state and federal regulations regarding the transport, use, and storage of hazardous materials.

Visitors to the Proposed Project site would increase following implementation of the Proposed Project, but visitors would be actively managed by the BSA. Use of hazardous materials during operations would be limited to the use of commercially available gasoline, oil, solvents, cleaners, paint and various other commercially available substances. The BSA also have their own policy on the storage, handling, and use of chemical fuels and equipment (BSA 2019). A supervisor versed in this policy would always oversee members during activities involving the storage, handling, and use of chemical fuels and equipment at the Proposed Project site.

All construction and operational activities would be required to adhere to local standards set forth by the County, as well as state and federal health and safety requirements that are intended to minimize risk to the public from hazardous materials, such as California Division of Occupational Safety and Health (Cal/OSHA) requirements, the Hazardous Waste Control Act, the California Accidental Release Prevention (CalARP) Program, and the California Health and Safety Code. As a result, the Proposed Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials or result in a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Therefore, construction and operational impacts for these issues would be less than significant.

c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

c) No Impact. The Proposed Project would involve the use of typical construction and operational materials such as heavy equipment and other gas- or diesel-powered equipment that would generate emissions associated with internal combustion engines (i.e., diesel and gasoline). As described in Impact a) and b), construction would also require the routine transport of potentially hazardous commercial materials, including but not limited to gasoline, oil, solvents, cleaners, and paint. However, the Proposed Project does not have the potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school; the closest school is 1.5 miles to the northwest. Furthermore, hazardous materials would be handled in compliance with local regulations and standards set forth by the District, City, state, and federal government. Therefore, no impact would occur.

d) Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

d) No Impact. A review of federal and state standard and supplemental databases, including the State Water Resources Control Board's Geotracker site and the Department of Toxic Substances Control's Envirostor site, indicated that the Proposed Project site is not located within an identified hazardous material site pursuant to Government Code Section 65962.5 (DTSC 2019; SWRCB 2019). A hazardous material clean-up site was previously located approximately 0.2 mile away from the Proposed Project site. The case summary discloses that in 2004 there was a leaking underground storage tank (LUST) cleanup site involving a gasoline tank. The tank was removed, and the case was closed in 2006 (SWRCB 2019). Therefore, as the Project site is not listed as an open cleanup site or hazardous waste facility, no impact would occur.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

e) No Impact. The Proposed Project site is located approximately 3.5 miles northeast of Brown Field Municipal Airport and 17 miles southeast of San Diego International Airport. The Proposed Project

site is not within the Airport Influence Area for the Brown Field Municipal Airport nor the San Diego International Airport; therefore, no impact would occur.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

f) Less Than Significant Impact With Mitigation Incorporated.

The County's Guidelines for Determining Significance regarding Emergency Response Plans identifies two significance guidelines, a and b, below. A project will generally be considered to have a significant effect if it proposes either guideline, absent specific evidence to the contrary:

a. The project proposes one of the following unique institutions in a dam inundation zone as identified on the inundation map prepared by the dam owner:

- Hospital
- School
- Skilled nursing facility
- Retirement home
- Stadium, arena, amphitheater
- Mental health care facility
- Care facility with patients that have disabilities
- Adult and childcare facility
- Jails/detention facility
- Any other use that would involve concentrations of people that could be exposed to death in the event of a dam failure

b. The project proposes a structure or tower 100 feet or greater in height on a peak or other location where no structures or towers of similar height already exist and as a result, the project could cause hazards to emergency response aircraft resulting in interference with the implementation of an emergency response (County of San Diego 2007).

The Proposed Project site is approximately 0.25 mile southwest of the Savage Dam and the southern portion of the 69-acre parcel that is the Proposed Project site is located within the dam inundation zone; though, the Project features would be strategically placed outside the inundation extent (County of San Diego 2016b). Moreover, the Proposed Project does not include any structures or towers 100 feet or greater in height, and would not fall under any of the other categories listed above. The Proposed Project, therefore, would not have a significant impact to Emergency Response Plans when evaluated under County significance guidelines. Additionally, construction and operational activities of the Proposed Project would not interfere with the San

Diego County Operational Area Emergency Plan or the Multi-Jurisdictional Hazard Mitigation Plan because the activities would not prohibit subsequent plans from being established or prevent the goals and objectives of existing plans from being carried out.

In the case of a special event with up to 400 attendees, MM-HAZ-1 would require BSA local councils to prepare an Emergency Action and Fire Prevention Plan detailing how council staff, volunteers, and members should respond during a crisis at the special event. Additionally, the majority of attendees would be dropped off at the event in a coordinated fashion, preventing the risk of vehicles blocking emergency access routes. No emergency response or evacuation plans would be compromised due to the Proposed Project; thus, impacts would be less than significant.

MM-HAZ-1: In preparation for Day Camp and Special Events at the Proposed Project site, BSA local councils will prepare an Emergency Action Plan (EAP) and a Fire Prevention Plan (FPP) that is compliant with OSHA standards 29 CFR 1910.38 and 29 CFR 1910.39. An OSHA-compliant EAP/FPP must include but is not limited to the following: a written evacuation plan, site plans showing primary and secondary evacuation routes, emergency alarm system (e.g., manual pull station, public address, radio, two-way radio, voice, or camp signal), the posting of emergency numbers, training of employees on the plan and the procedures, inspection of fire extinguishers, location(s) of hazardous materials (e.g., paints, varnish, inks, propane and gasoline storage tanks, etc.), and responsible party for maintaining the EAP/FPP. Additionally, the FPP shall require that the fire ring not be used on Red Flag warning days.

g) Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporated <input checked="" type="checkbox"/>	Less than Significant Impact <input type="checkbox"/>	No Impact <input type="checkbox"/>
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g) Less Than Significant Impact With Mitigation Incorporated. The Proposed Project site is located within an identified Very High Fire Hazard Severity Zone (VHFHSZ) (CAL FIRE 2007). Additionally, visitors to the Proposed Project site would increase following implementation of the Proposed Project and a fire ring would be introduced as a Project feature. To counteract the risk of wildfire, the Proposed Project would align with the goals of the County General Plan's Safety Element, specifically Goals S-3, S-4, and S-6. These goals focus on minimizing fire hazards, managing fuel loads, and ensuring adequate fire and medical services.

In accordance with the policies under Goal S-3, the Proposed Project would ensure that access roads within the Project site could provide safe access for emergency equipment and civilian evacuation, that there would be multiple ingress and egress routes, and that the new restroom building would meet current ignition resistance construction codes. To maintain consistency with the policies under Goal S-4, the BSA would coordinate with the County to create a fuel management program for the Project site. In alignment with the policies under Goal S-6, the Proposed Project site would be adjacent to Lower Otay Lake, which would serve as an adequate water supply to combat wildland fire, and fire services would meet the travel time standards from the closest fire station. The closest fire station is County Fire Station 38; fire services from this

station could respond to a fire on the Project site in approximately 17 minutes, which is below the 20-minute standard for rural lands (County of San Diego 2011e; Google Maps 2019).

Additionally, the Proposed Project would comply with the regulations in the County Consolidated Fire Code, particularly those sections regarding storage of firewood and fire apparatus access roads (County of San Diego 2017a). Firewood at the Proposed Project site would be kept in the fenced storage facility and the fire apparatus access roads south of the Project site would be marked to avoid obstruction. Access roads within the Project site would also be improved as needed to ensure safe travel within the Proposed Project site. All construction and operational activities within the Proposed Project site would also align with the Community Wildfire Protection Plan for Southwest San Diego County (County of San Diego 2010).

The construction activities associated with the Proposed Project would not introduce features that exacerbate the risk of wildfires, beyond the addition of a fire ring. Furthermore, the BSA incorporates fire safety into their curriculum; unit leaders are required to educate their members on the unit fireguard plan, which teaches methods in fire prevention, fire detection, reporting, and fire control (BSA 2019). The BSA award a merit badge to members who demonstrate knowledge of and uphold BSA fire safety standards. Finally, under the policies of the BSA and with implementation of MM-HAZ-1 above, local council would be required to prepare an Emergency Action and Fire Prevention Plan for the day camp and each special event held at the Proposed Project site; the plans shall require evacuation preparation, safety training, and a ban on fire ring use on Red Flag warning days. Therefore, the Proposed Project would not increase the risk of wildfire at the Proposed Project site; this results in less than significant impacts.

4.10 HYDROLOGY AND WATER QUALITY

a) Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporated <input type="checkbox"/>	Less than Significant Impact <input checked="" type="checkbox"/>	No Impact <input type="checkbox"/>
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- a) **Less Than Significant Impact.** The majority of construction activities require only minor brush clearing and ground leveling so a temporary increase in the amount of suspended solids (sediment) in sheet flow or runoff entering the existing storm drain system during a rain event during construction is unlikely; however, the County would be required to comply with SWRCB's National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (General Construction Permit).

Compliance with the General Construction Permit requires the development of a SWPPP by a qualified SWPPP developer, the elimination or reduction of non-stormwater discharge off site into storm drainage systems or other water bodies, and the implementation of BMPs throughout the construction period. Stormwater BMPs would be required to limit erosion, minimize sedimentation, and control stormwater runoff water quality during construction activities. The SWPPP requires a description of the Project site; identification of sources of sediment and other

pollutants that may affect the quality of stormwater discharges; and a list of BMPs to provide sediment and erosion control, waste handling measures, and non-stormwater management. The specific BMPs that would be implemented with the Proposed Project would be identified during development of the SWPPP, which would occur concurrently with final Project design and be completed prior to construction. Typical construction BMPs include but are not limited to watering soil, soil cover of inactive areas, gravel bags, and fiber rolls. Compliance with the SWPPP would ensure that construction activities would not degrade the surface water quality of receiving waters to levels that would exceed the standards considered acceptable by the San Diego Regional Water Quality Control Board or other regulatory agencies. This impact is less than significant.

b) Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporated <input type="checkbox"/>	Less than Significant Impact <input type="checkbox"/>	No Impact <input checked="" type="checkbox"/>
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- b) No Impact.** The Proposed Project would not use groundwater to fulfill water requirements. The main use of water associated with operation of the Proposed Project is via the renovated restroom facility, which would be connected to the existing Otay Lakes County Park water system. Otay Lakes County Park water service is provided by the City of San Diego Public Utilities Department's (PUD's) Water Branch. Additionally, the Proposed Project site is not an area identified as a groundwater recharge area. The Proposed Project would not deplete groundwater supplies or interfere substantially with groundwater recharge. No impact would occur.

c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course or a stream or river or through the addition of impervious surfaces, in a manner that would:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
i) result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) impeded or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

c) i) through iv) Less Than Significant Impact. The majority of construction activities associated with the Proposed Project include minor ground leveling and brush clearing that would occur in compliance with the County grading permit. Additionally, the Proposed Project would not install a significant amount of impervious surfaces. None of the Proposed Project features would result in substantial alteration of the existing drainage pattern of the site. Additionally, no stream or river courses exist within the Proposed Project site; however, the Otay River is located directly south of the Proposed Project site. During construction, BMPs would be implemented in compliance with the SWPPP and the General Construction Permit issued for the Proposed Project, which would ensure that erosion and siltation do not result in any offsite water quality impacts. All disturbed buffer areas would be restored to pre-Project conditions once construction has been completed.

The rate and amount of surface runoff is determined by multiple factors, including topography, the amount and intensity of precipitation, the amount of evaporation that occurs in the watershed, and the amount of precipitation and water that infiltrates to the groundwater. As described in the Water Quality Technical Report (Appendix I), an increase in impervious surfaces would result from the construction of camping areas, a flag plaza, a restroom facility, and a fenced storage area. These features would add up to a total of approximately 6,000 square feet of proposed impervious ground surface, which would comprise only 0.2% of the 69-acre Proposed Project area; therefore, the Proposed Project would not have the potential to result in an increase in erosion potential of downstream receiving water bodies during a rain event. As such, the

Proposed Project would not substantially alter the existing drainage pattern of the site or substantially increase the rate or amount of surface runoff in a manner that would result in substantial erosion, siltation, or flooding on or off site. Therefore, impacts would be less than significant.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- d) Less Than Significant Impact.** The Proposed Project site is located approximately 12 miles east of the coast of the Pacific Ocean but is approximately 0.25 mile from Savage Dam on the Lower Otay Reservoir. Nonetheless, the Proposed Project site is not located in an area at risk of tsunami or inundation. Although the Chula Vista General Plan states that the Otay Lakes represent potential seiche hazard in the area, the plan identifies that seiches are not likely to occur (City of Chula Vista 2005). Additionally, the Proposed Project is not within a flood hazard area. There is minimal risk of flood, tsunami, or seiche releasing pollutants due to inundation, thus impacts are less than significant.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- e) Less Than Significant Impact.** As noted above in Impact b), the Proposed Project would have no impact on groundwater resources; therefore, the Proposed Project would not result in an impact associated with a sustainable groundwater management plan.

As described in Impact a), compliance with the General Construction Permit and the SWPPP would ensure that construction activities would not result in the degradation of surface water quality of receiving waters to levels that would exceed the standards considered acceptable by the San Diego Regional Water Quality Control Board or other regulatory agencies. BMPs implemented through the SWPPP would align with the County's BMP Design Manual and would ensure consistency with the ~~San Diego County Jurisdictional Urban Runoff and Standard Urban Storm Water Mitigation Plans~~ County of San Diego Jurisdictional Runoff Management Program (JRMP). Additionally, the amount of stormwater runoff from the site would not change substantially after implementation of the Proposed Project due to the limited amount of impervious surface. Therefore, with the implementation of both construction and permanent BMPs, the Proposed Project would not obstruct any water quality control plan. Impacts would be less than significant.

4.11 LAND USE PLANNING

a) Would the project physically divide an established community?	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporated <input type="checkbox"/>	Less than Significant Impact <input type="checkbox"/>	No Impact <input checked="" type="checkbox"/>
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- a) **No Impact.** As described in Section 2.2, the County of San Diego General Plan identifies the land use of the Proposed Project site as Open Space and zoning is Open Space (S80) and Limited Agriculture (A70) (County of San Diego 2011b). Implementation of the Proposed Project would not result in a change in land use or zoning. Additionally, the Proposed Project does not include features that would preclude mobility across the Proposed Project site; therefore, construction activities associated with the Proposed Project would not physically divide an established community. No impact would occur.

b) Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporated <input type="checkbox"/>	Less than Significant Impact <input type="checkbox"/>	No Impact <input checked="" type="checkbox"/>
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- b) **No Impact.** The Proposed Project would not result in any changes to the existing land use or zoning at the Proposed Project site, which is currently Open Space. Additionally, the Proposed Project would maintain consistency with the goals and policies of the County General Plan's Land Use Element and Zoning Ordinance. In accordance with Goal LU-2 of the Land Use Element, the Proposed Project would maintain the County's rural character through conservation and enhancement of the rural setting at the Proposed Project site. The Proposed Project would also align with Goal LU-6 of the Land Use Element by creating a built environment in balance with the natural environment (County of San Diego 2011b). The BSA follow an Outdoor Ethics Guide designed to reduce environmental impacts (BSA 2018). Moreover, activities at the Proposed Project site would be substantially similar to activities onsite currently and no components of the Proposed Project that, once operational, would have the potential to conflict with adjacent land uses. No impact would occur.

4.12 MINERAL RESOURCES

a) Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a) **No Impact.** According to the Chula Vista General Plan, the Proposed Project site is not within an area of known mineral resources and no mineral resource extraction or other mining operations currently occur within the Proposed Project site. Adjacent to the Proposed Project site there are two “Regionally Significant” MRZ-2 Aggregate Resource Areas, approximately 0.5 mile south and 3 miles northeast of the Proposed Project site, though the current land use precludes mineral extraction at the Proposed Project site and land use would not change as a result of the Proposed Project (City of Chula Vista 2005). Therefore, the Proposed Project would not result in a new impact associated with mineral resource availability. No impact would occur.

b) Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan other land use plan?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- b) **No Impact.** As noted above in Impact a), the Proposed Project site is not mapped within an area of known mineral resources and no mineral resource extraction or other mining operations currently occur within the Proposed Project site. The current land use precludes mineral extraction at the Proposed Project site and land use would not change as a result of the Proposed Project. No impact would occur.

4.13 NOISE

a) Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- a) **Less Than Significant Impact.** Construction of the Proposed Project would create short-term noise impacts associated with construction equipment. Construction of the Proposed Project is anticipated to occur in a single phase over a period of 6 months, as soon as permits allow, as early as Spring 2020. Although the restroom may be constructed at a later date, the analysis assumes construction of the restroom simultaneously with other Proposed Project features to

capture a worst-case scenario for emissions. Construction activities are anticipated to include: (1) Demolition of the existing bathroom structure; (2) Site preparation that would include site clearing and ground leveling activities; and (3) Combined building construction and architectural coatings of the camping facilities, flag plaza, restroom building, Camporee Field, COPE course, zip-line, fenced storage, and fire ring and amphitheater. The nearest residence is approximately 1.5 miles to the northwest and is not anticipated to be impacted by construction noise, however there are off-site workers at the Otay Water Treatment Plant that are located as near as 300 feet to the Proposed Project's improvements.

Section 36.409 of the County's Municipal Code prohibits construction activities from causing, at or beyond the property line of any property zoned residential, an average sound level greater than 75 decibels during the 12-hour hour period from 7:00 a.m. and 7:00 p.m. All construction activities for the Proposed Project would occur during the allowable hours for construction activities that are detailed in Section 36.408 of the County's Municipal Code.

The Federal Highway Administration (FHWA) compiled noise level data regarding the noise generating characteristics of several different types of construction equipment used during the Central Artery/Tunnel project in Boston. Table 8 below provides a list of the construction equipment measured, along with the associated measured noise emissions and measured percentage of typical equipment use per day. From this acquired data, FHWA developed the Roadway Construction Noise Model (RCNM). The RCNM, which uses the Spec 721.560 L_{max} at 50 feet, has been used to calculate the construction equipment noise emissions (see Appendix J).

Table 8: Construction Equipment Emissions and Usage Factors

Equipment	Acoustical Use Factor ¹ (Percent)	Spec 721.560 L _{max} @ 50 Feet ² (dBA, slow ³)	Actual Measured L _{max} @ 50 feet ⁴ (dBA, slow)
Auger Drill Rig	20	85	N/A
Backhoe	40	80	78
Compressor (air)	40	80	78
Concrete Mixer Truck	40	85	79
Concrete Pump	20	82	81
Concrete Saw	20	90	90
Crane	16	85	81
Dozer	40	85	82
Dump Truck	40	84	76
Excavator	40	85	81
Flatbed Truck	40	84	74
Front End Loader	40	80	79
Generator	50	82	81
Gradall (Forklift)	40	85	83
Mounted Impact Hammer	20	90	90
Paver	50	85	77
Roller	20	85	80
Tractor	40	84	N/A
Welder/Torch	40	73	74

¹ Acoustical use factor is the percentage of time each piece of equipment is operational during a typical workday.

² Spec 721.560 is the equipment noise level utilized by the Roadway Construction Noise Model program.

³ The “slow” response averages sound levels over 1-second increments. A “fast” response averages sound levels over 0.125-second increments.

⁴ Actual Measured is the average noise level measured of each piece of equipment during the Central Artery/Tunnel project in Boston, Massachusetts primarily during the 1990s.

Source: Federal Highway Administration, 2006.

The anticipated areas of construction and construction equipment that will be utilized during each construction activity was obtained from the default construction equipment list provided by the CalEEMod model for the air quality analysis. For each construction activity, the first piece of equipment was placed at the shortest distance to the nearest home and each subsequent piece of equipment was setback an additional 50 feet. Since construction activities would typically be based on an eight-hour work day, the RCNM model results were averaged based on the calculated noise levels occurring for eight of the 12 hours. The results are shown below in Table 9.

Table 9: Proposed Project Construction Noise Levels

Construction Phase	Distance to Nearest Off-Site Worker (feet)	Construction Noise Level (dBA L _{eq})
Demolition of Existing Restroom	900	57

Site Preparation	300	67
Combined Building Construction & Architectural Coatings	300	67
Construction Noise Threshold¹		75
Exceed Threshold?		No

Notes:

¹ Construction Noise Thresholds from Section 36.409 of the County of San Diego Municipal Code.

Source: RCNM Version 1.1 (see Appendix J).

Table 9 shows that the greatest construction noise impacts would occur during the Site Preparation and Combined Building Construction and Architectural Coatings phases with a noise level as high as 67 dBA Leq at the nearest off-site workers at the Otay Water Treatment Plant, located west of the Proposed Project site. Table 9 shows that the Proposed Project construction noise impacts would be within the County's 75 dBA construction noise standard. Therefore, through adherence to the allowable hours for construction activities that are detailed in Section 36.408 of the County's Municipal Code, the Proposed Project would not create a substantial temporary or periodic increase in ambient noise levels from construction noise. Impacts would be less than significant.

The Proposed Project consists of improvements to an existing County Park that is currently utilized as a campground for the Boy Scouts and other groups. Although the Proposed Project would introduce new noise sources, such as the proposed amphitheater and new camp sites, the nearest homes are approximately 1.5 miles away, which are not anticipated to be impacted by any of the proposed noise sources. It should also be noted that although there are off-site workers that are as near as 300 feet west of the proposed improvements, the off-site workers are located the Otay Water Treatment Plant that is an industrial use and the County's noise ordinance does not provide any noise limits for projects impacting industrial uses. Impacts would be less than significant from onsite operational noise impacts.

The Proposed Project may also result in the generation of additional vehicle trips to the Proposed Project site. According to the Traffic Impact Analysis (LLG 2019a) the Proposed Project is anticipated to generate a maximum of 176 weekday daily trips, 528 Saturday daily trips, and 198 Sunday daily trips, which were entered into the CalEEMod model. It should be noted that the maximum weekday trips analyzed would only occur for approximately four weeks of the year and the maximum weekend trips analyzed would occur up to six times per year. Roadway noise impacts are typically analyzed in based on the Project impacts to the annual average daily traffic volumes and due to the limited additional days that the Proposed Project would utilize the Project site (approximately six weeks per year), the Proposed Project would result in a less than significant roadway noise impact.

Therefore, the Proposed Project would not generate substantial temporary or permanent increases in ambient noise levels or in excess of standards established in the General Plan or noise ordinance or other applicable standards that may have a potentially significant impact on the environment. This impact is less than significant.

b) Would the project result in generation of excessive groundborne vibration or groundborne noise levels?	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporated <input type="checkbox"/>	Less than Significant Impact <input checked="" type="checkbox"/>	No Impact <input type="checkbox"/>
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- b) Less Than Significant Impact.** Construction activities would require the operation of off-road equipment and trucks that are known sources of vibration. Since neither the County's General Plan nor the Municipal Code provide any thresholds or policies related to vibration, Caltrans guidance¹ has been utilized, which defines the threshold of perception from transient sources at 0.25 inch-per-second peak particle velocity (PPV). Table 10 shows the typical PPV produced from construction equipment that may be utilized during construction of the Proposed Project. It should be noted that other types of off-road equipment will be utilized, however none of the other types of equipment are known sources of vibration.

Table 10: Typical Construction Equipment Vibration Emissions

Equipment	Peak Particle Velocity in inches per second at 25 feet	Vibration Level (L _v) at 25 feet
Loaded truck (off road)	0.076	86
Jackhammer	0.035	79
Small Bulldozer	0.003	58

Source: Federal Transit Administration 2006.

From the list of equipment shown in Table 10, a loaded truck operating off-road, which may be used during construction of the Proposed Project would create the highest vibration levels of 0.076 inch-per-second PPV at 25 feet. Based on typical propagation rates this would result in a vibration level of 0.005 inch-per-second PPV at the nearest offsite workers to construction activities (300 feet away). The construction-related vibration levels would be within the 0.25 inch-per-second PPV threshold detailed above. Construction-related vibration impacts would be less than significant.

The on-going operation of the Proposed Project would not result in the creation of any known vibration sources. Therefore, a less than significant vibration impact is anticipated from the operation of the Proposed Project.

¹ From *Transportation and Construction Vibration Guidance Manual*, prepared by Caltrans, September 2013.

4.14 POPULATION AND HOUSING

a) Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporated <input type="checkbox"/>	Less than Significant Impact <input type="checkbox"/>	No Impact <input checked="" type="checkbox"/>
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- a) No Impact.** The Proposed Project would occur within the existing footprint of the existing park. The Proposed Project would result in the establishment of features described in Section 2.3; implementation of the Proposed Project would not result in the construction of new homes or businesses or extension of roads or other infrastructure. Construction of the Proposed Project would result in the generation of temporary construction jobs; however, the additional jobs are expected to be filled by residents who currently live in the San Diego region. The jobs would not result in the relocation of any population. Therefore, the Proposed Project would not directly or indirectly induce substantial population growth through the creation of new homes or businesses in the San Diego region. No impact would occur.

b) Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporated <input type="checkbox"/>	Less than Significant Impact <input type="checkbox"/>	No Impact <input checked="" type="checkbox"/>
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- b) No Impact.** As discussed above in Impact a), the Proposed Project would occur within the existing park boundaries. The park does not contain any housing units. No existing housing units or people would be removed or displaced. Therefore, the Proposed Project would not require the construction of replacement housing elsewhere. No impact would occur.

4.15 PUBLIC SERVICES

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any or the public services:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
i. Fire protection? ii. Police protection? iii. Schools? iv. Parks? v. Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a) i) and ii) Less Than Significant Impact. As described in Section 4.14, implementation of the Proposed Project would not induce permanent population growth in any way. Although the Proposed Project would result in additional users accessing the park for temporary use, as previously discussed in Section 4.9, the Proposed Project would maintain compliance with the County General Plan's Safety Element. The Safety Element determines 20 minutes as the maximum allowable emergency travel time for rural lands; It is approximately a 17-minute drive to the Proposed Project site from the closest County Fire Station, and it is approximately a 12-minute drive to the Proposed Project site from the closest Police Station, the Chula Vista Police Department (County of San Diego 2011e; Google Maps 2019). In the case of special events being held at the Proposed Project site, with up to 400 attendees, the BSA policies would require preparation of an Emergency Action and Fire Prevention Plan for each event. This plan would ensure acceptable service ratios and response times for fire and police protection. Additionally, the majority of attendees would be dropped off at special events in a coordinated fashion, preventing the risk of vehicles blocking emergency access routes. Impacts would be less than significant.

a) iii) – v) Less Than Significant Impact. As previously noted in Section 4.14, the Proposed Project would not result in an increase in a permanent population within the Proposed Project site or surrounding areas; implementation of the Proposed Project would not induce permanent population growth in any way. However, the Proposed Project would result in additional users accessing the park. It should be noted that the site will only be in use during the programmed activities and when other local community groups reserve use of the Proposed Project site through BSA. The intent of the Proposed Project is to develop and reconstruct existing land and facilities to encourage engagement of local boy scouts and community groups to the natural environment in the County of San Diego. Implementation of the Proposed Project would result in

the development of new camping facilities and would not result in additional schools, parks, or other public facilities. Therefore, the Proposed Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities. Consequently, impacts on public services and facilities would be less than significant.

4.16 RECREATION

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporated <input type="checkbox"/>	Less than Significant Impact <input checked="" type="checkbox"/>	No Impact <input type="checkbox"/>
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- b) Less Than Significant Impact.** As part of the Proposed Project, portions of the existing park would be developed and facilities would be reconstructed to encourage engagement of boy scouts and local community groups to the natural environment in the County of San Diego. Implementation of the Proposed Project would increase the number of visitors to the Proposed Project site, which is designated as Open Space. To counteract the potential for physical deterioration from increased use of the facility, the Proposed Project activities would be aligned with goals of the County General Plan's Conservation and Open Space Element. Goal COS-2 of the Conservation and Open Space Element promotes sustainability of the natural environment through protection, restoration, and enhancement of natural habitat and habitat protection through site design; to be consistent with this goal, Proposed Project features have been designed to avoid special status species, and the use of proposed camp facilities would include public outreach and education on the surrounding natural habitat (County of San Diego 2011a). Moreover, as described in Section 3.1.14, campers using the Proposed Project site would be managed and scheduled by the BSA to prevent misuse of the Proposed Project site and its facilities. Additionally, the majority of visitors to the Proposed Project site would be affiliated with the BSA and BSA troops follow an Outdoor Ethics Guide to reduce environmental impacts (BSA 2018). The Proposed Project is not expected to increase the use of existing neighborhood and regional parks as the Project does not encourage or discourage use of such parks. In fact, because the Proposed Project can be seen as a recreational amenity, use of existing neighborhood or regional parks might decrease. Therefore, the impact to existing neighborhood or regional parks is less than significant.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse effect on the environment?	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporated <input checked="" type="checkbox"/>	Less than Significant Impact <input type="checkbox"/>	No Impact <input type="checkbox"/>
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- c) Less Than Significant With Mitigation Incorporated.** The Proposed Project involves the rehabilitation and expansion of recreational facilities in the form of a camping facility and associated outdoor features intended for the engagement of boy scouts and the local community to the natural environment in the County of San Diego. As described throughout this IS/MND, the construction and/or improvement of recreational facilities within the Proposed Project site would

not result in any potentially significant impacts with implementation of mitigation measures MM-AQ-1 and MM-AQ-2, MM-BIO-1 through MM-BIO-58, MM-CUL-1 and MM-CUL-2, MM-HAZ-1, MM-PAL-1, MM-TRA-1, and MM-TRC-1. The Proposed Project would provide an additional recreational facility in the region, which would reduce overall demand on the existing infrastructure, thereby reducing deterioration of existing facilities. This impact is less than significant with mitigation incorporated.

4.17 TRANSPORTATION

This section describes the transportation impacts from implementation of the Proposed Project. A Traffic Scoping Memorandum (LLG 2019a) and a Parking and On-site Circulation Review (LLG 2019b) were prepared for the Proposed Project and are included as Appendix G and Appendix H, respectively.

a) Would the project conflict with a plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle lanes and pedestrian paths?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- a) Less Than Significant Impact With Mitigation Incorporated.** Applicable plans, ordinances, and policies for the Proposed Project include San Diego Forward: The Regional Plan (SANDAG 2015), the County General Plan's Mobility and Safety Elements, the City of San Diego's Traffic Impact Study Manual (1998), and the City of San Diego's Street Design Manual (2017). These plans respectively establish a blueprint for the San Diego region's growth and development, provide thresholds for acceptable roadway and intersection operations, and provide guidance for the design of public right-of-way that accommodates a variety of potential users.

During construction of the Proposed Project, construction vehicles would use the existing roadways that surround the Proposed Project site to deliver materials and haul waste. The main access road into the Proposed Project site is Wueste Road to the north, which connects to Olympic Parkway and Interstate 805 through Chula Vista. Wueste Road also serves as the only paved entry into Otay Lakes County Park. Wueste Road is a two-way street in a rural area, with one lane in each direction. Roadway users could experience temporary delays from material deliveries, but these delays would be both brief and infrequent. Therefore, they would not affect overall traffic circulation in the vicinity of the Proposed Project site. In addition, construction activities would not impede non-motorized travel or public transportation in the immediate vicinity of the Proposed Project site because all construction would occur within the existing park boundary. Any temporary traffic control during construction would meet the requirements of the California Manual on Uniform Traffic Control Devices (Caltrans 2014).

Trip Generation Associated with the Proposed Project

A Traffic Scoping Memorandum (Memo) and Parking and On-site Circulation Review Letter (Letter) were prepared by Linscott Law & Greenspan Engineers (LLG) in May 2019 and September 2019, respectively (Appendix G; Appendix H). The trip generation data in the Memo and Letter was based on the total number of users (campers/attendees and staff). To be conservative, staff trips were included in the arrival/departure trips for the various uses, so on-site parking was not

specifically addressed in the Memo. A factor of approximately 10% of the total population was decided on to reasonably represent staff.

As seen in Table 1 of the Memo, LLG calculated the maximum weekday (Monday-Friday) trip generation during the 7-9 AM and 4-6 PM peak commute hours for adjacent street traffic to be 88 AM peak hour trips (44 in/44 out), 22 PM peak hour trips (11 in/11 out), and 176 average daily trips (ADT). These trips would be generated during a four-week period in the summer months when day camp is programmed to occur. Day camps would typically run from 8:30AM to 3:30PM, with after care provided from 3:30PM to 5:30PM for an additional fee. It was assumed that 25% of the attendees will remain on-site in the aftercare program.

On Friday evenings the Proposed Project would also host drop-off for overnight camping programs between 4:00PM and 6:00PM. These overnight camping programs would not occur during the four-week period day camp is held, therefore maximum trip generation from overnight camping on Friday evenings would be expected to be 22 ADT with 22 PM peak hour trips (22 in/0 out). Weekend camping will be open every weekend to programmed groups, outside the four weeks when day camps are running.

The weekday trip generation forecasts above do not represent typical weekday conditions for Monday through Thursday. These events are limited in occurrence and would not be expected to affect normal day-to-day peak commute operations of the adjacent street network. Summer camp is scheduled for a four-week period in the summer months when ambient traffic volumes in the surrounding area would be expected to be lower.

For Special Events on-site it was assumed that 400 people will access the Camporee Field, 200 of those people staying to camp overnight (after 200 leave). All trips were assumed to be drop-off/pick-up trips. It was assumed that all 400 attendees (176 vehicles) will arrive on Saturday morning for weekend special events, with all 176 trips making a drop-off round-trip from home to camp and back home. On Saturday evening, 200 of those attendees are anticipated to leave site (88 vehicles) making the pick-up round-trip from home to camp and back home again. On Sunday, the remaining 200 attendees who camped are picked up by a driver making a round-trip from home to camp and back home (88 vehicles). Employee and chaperone vehicles were conservatively assumed in the remaining 88 vehicles. As seen in Table 1 of the Memo, weekend trips are therefore forecasted at most to be 528 ADT on a Saturday and 198 ADT on a Sunday. Although, weekend special events at maximum capacity would only occur four (4) to six (6) times annually (Appendix G).

The weekday trip generation calculations forecast 176 ADT with 88 AM and 22 PM peak hour trips. Although the weekday ADT is less than 200 trips which may correlate to the preparation of an Issue Specific TIS, the 88 AM peak hour trips exceed the threshold for a Focused TIS. However, as emphasized in the trip generation section of the Memo, the peak weekday trip generation would only be expected to occur during a limited four-week period when summer camps are offered and ambient traffic volumes on the surrounding street network would be expected to be lower.

As a result of the Trip Generation Memorandum findings, the Applicant prepared a parking and site access study for the Proposed Project given the high accumulation of inbound/outbound drop-off/pick-up trips that will occur during start and end times for special events.

Parking

A review of the existing park reveals that 62 available parking spaces (regular and van-accessible handicapped), are provided in three (3) parking areas along the north and east sides of the park. The developed park area is approximately 5.5 acres, which would require 22 parking spaces for park users based on the County's published off-street parking regulations (4 spaces/acre for "passive" park). This would result in an apparent surplus of 40 parking spaces. However, of these 40 surplus spaces, the 22 angled parking spaces provided along the south side of the park are for employees only, and are not accessible to the public as circulation along the south side of the park is prohibited via gates. Thus, the effective public surplus parking available for the Project is calculated at 18 spaces.

Based on the operational components described above, the maximum on-site parking demand would be 10% of the total attendees of events, as 90% of the attendees would be campers being dropped-off and picked-up, while the remaining 10% of people parking at the event would be staff. Therefore, demand would be estimated at 40 spaces for the Special Events profile (400 attendees and staff, 4-6 times annually). The next highest calculated demand is 27 spaces for overnight camping, which occurs year-round on weekends (Fridays-Sundays). The Day Camp would operate for four weeks of the year and generate the least parking demand at 10 vehicles (for staff) assuming all campers are dropped off and picked up. It is determined that the existing park has sufficient parking to accommodate only the programmed Day Camp. Therefore, the Proposed Project would implement MM-TRA-1 to ensure that there is sufficient parking for Special Events and Overnight Camping.

MM-TRA-1: Given the potential variability of the parking demand by event, the Proposed Project would develop and maintain a Parking Management Plan (PMP). The PMP would provide levels of parking management ranging from "no action" for minor event profiles such as "day camp", up to actions such as vehicles tandem parked and/or parked in the parking drive-aisle, or possibly off-site parking with a shuttle if necessary for the largest events.

On-site Circulation

The highest hourly demand is for Special Events, at 176 peak trips within an hour. This is on average about 3 vehicles/minute. However, hourly distribution is never even, so a peak load can be estimated assuming 50% of the trips (88 vehicles) arrive in 15 minutes, which is 6 vehicles/minute. Assuming each vehicle requires 2 minutes to arrive, organize, pick-up/drop-off and depart, there could be 12 vehicles expected to be circulating in the drop-off/pick-up line during the peak period. A common dimension for linearly queued vehicles is 25-feet/vehicle, which would result in 300 feet of curbside queuing needed for 12 vehicles.

The Letter determined there is tangent queuing area available along the eastern side of the easterly-most north-south drive aisle. As seen in Figure 4 of the Letter (Appendix H), this would be best utilized in a counter-clockwise circulation pattern with vehicles circulating from south to north such that passengers disembark or embark from the curbside adjacent to the entry to the Proposed Project site. This counter-clockwise orientation would require the use of the southerly east-west drive aisle which is currently closed to public use.

The Special Events condition is rare (4 times/year); as such, any disruption to park operations would be limited. The Day Camp also operates for a limited period out of the year (4 one-week

programs). It generates approximately 25% of the peak directional traffic of the Special Events, and would therefore require approximately 25% of the linear curbside queuing for drop-offs and pick-ups (approximately 75 feet). Again, a south-north circulation would be recommended; however, as seen in Figure 5 of the Letter (Appendix H), a U-turn movement at the easterly gate intersection may suffice to allow vehicles to circulate without using the southern east-west drive aisle, given the lower traffic volume.

As described above, LLG determined through the preparation of the Memo and the Letter, that implementation of the Proposed Project would not result in the need for a Traffic Impact Analysis due to limited number of trips required. The Proposed Project site is not determined to have sufficient parking for Special Events and Overnight Camping, but there is ample queuing space for drop-offs and pickups during programmed activities with use of the southerly-east-west drive aisle which is currently gated-off from public use. Implementation of MM-TRA-1 would reduce parking-related impacts to less than significant.

b) For a land use project, would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

b) Less Than Significant Impact. The County Report Format and Content Requirements for Transportation and Traffic states that a Project that generates less than 200 ADT, in most cases, will not result in direct traffic impacts (County of San Diego 2011f). With a maximum of 176 ADT generated from day camp drop-offs and pick-ups, day camps are therefore not expected to have significant traffic impacts. Special events would generate a maximum of 528 ADT, though these events would only occur 4 to 6 times per year so impacts would be temporary. Additionally, implementation of the Proposed Project would provide for the San Diego and Imperial Councils of BSA a facility in the southern part of their District for Boy Scout activities. The southern portion of this District is underserved and providing these facilities would reduce the amount of travel for all boy scouts residing in the southern portion of the District that also attend BSA programmed activities. Land use would remain the same, and no changes to the existing circulation system are proposed. This impact is less than significant.

c) Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curve or dangerous intersections) or incompatible uses (e.g., farm equipment)?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

c) No Impact. The Proposed Project does not include design features or new uses that would change the existing traffic operations. Construction activities would not significantly affect circulation and would not increase hazards due to design features of incompatible uses. If construction traffic control is required, flagging personnel would ensure that traffic congestion or blocked roads do not occur. In order to increase safety, implementation of the Proposed Project may require minor

upgrades to roads in order to allow safe travel through the Proposed Project site. Improvements would include ground leveling and hole filling using decomposed granite. The BSA and construction vehicles accessing the roads within the Proposed Project site would be similar to the utility vehicles that current utilize on-site roads for maintenance activities. Therefore, it would not increase hazards due to design features or incompatible uses. No impact would occur.

d) Would the project result in inadequate emergency access?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- d) No Impact.** Construction activities associated with the Proposed Project would not restrict access for emergency vehicles traveling to the Proposed Project site. During construction, emergency access to the Proposed Project site would remain the same as the existing condition as all construction staging would occur within the Proposed Project site and a limited number of construction vehicles would be required.

Operational activities at the Proposed Project site, including day camps, overnight camping, and special events, have the potential to increase traffic at the Proposed Project area. Though, as described in Impact a), the majority of traffic related to day camps and special events would be drop-offs and pick-ups and overnight camping would only induce 22 ADT. Special events and day camps would expect 12 vehicles to be circulating in the drop-off/pick-up line during the peak period, leading to 300 feet of curbside queuing. 300 feet is not a substantial amount of road space in the Proposed Project area and these events would only occur around four times a year. Implementation of MM-TRA-1 would reduce parking-related impacts to less than significant. Thus, circulation is not anticipated to be significantly affected by the Proposed Project and the Proposed Project would not result in inadequate emergency access; impacts would be less than significant.

4.18 TRIBAL CULTURAL RESOURCES

a) Would the project cause a substantial adverse change in the significance of a Tribal Cultural Resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:					
i.	Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporated <input checked="" type="checkbox"/>	Less than Significant Impact <input type="checkbox"/>	No Impact <input type="checkbox"/>
ii.	A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporated <input checked="" type="checkbox"/>	Less than Significant Impact <input type="checkbox"/>	No Impact <input type="checkbox"/>

- a) and b) Less Than Significant With Mitigation Incorporated.** Pursuant to PRC Section 21080.3.1 (AB 52), California Native American tribes traditionally and culturally affiliated with a Proposed Project site can request notification of projects in their traditional cultural territory. AB 52 Notification Letters were sent to tribes affiliated with the Proposed Project site on April 12, 2019. The tribes include: Barona Band of Mission Indians, Jamul Indian Village, Iipay Nation of Santa Ysabel, Kwaaymii Laguna Band, Sycuan Band of the Kumeyaay Nation, Viejas Band of Kumeyaay Indians, Campo Band of Mission Indians, and the Manzanita Band of Kumeyaay Nation. The County received three responses from Jamul Indian Village, Iipay Nation of Santa Ysabel, and Viejas Band of Kumeyaay Indians. The County met with the Jamul Indian Village and Iipay Nation

of Santa Ysabel on June 7th and the Viejas Band of Kumeyaay Indians on July 16th. All consultation has since been closed.

In order to avoid impacts to Tribal Cultural Resources, mitigation measure **MM-TCR-1** would be implemented to reduce the impact to less than significant.

MM-TCR-1: The Applicant will retain a qualified local Kumeyaay monitor for all ground disturbing activities during construction of the Proposed Project. The role of the Native American monitor would be to work with the Project's Qualified Archaeologist, identify potential Native American Tribal Cultural Resources, represent tribal concerns, and communicate concerns and appropriate handling to the Applicant. Appropriate representatives would be identified, based on the location of the identified traditional location or place.

4.19 UTILITIES AND SERVICE SYSTEMS

a) Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication, the construction or relocation of which could cause significant environmental effects?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- a) Less Than Significant Impact.** The main use of water associated with operation of the Proposed Project is via the renovated restroom facility, which would be connected to the existing Otay Lakes County Park water and septic infrastructure. The septic infrastructure needs updating, thus the County is working on permitting sewer service to the Proposed Project site. The County has reached an agreement with the City of Chula Vista to tie into the municipal sewer system south of the Proposed Project. The City of Chula Vista does not currently operate a wastewater treatment plant, and therefore the wastewater flows are sent to the San Diego Metropolitan Joint Powers Authority (JPA) treatment facilities. The JPA wastewater treatment system capacity is sufficient to meet the projected needs of the service area through at least 2020 (City of San Diego 2017). Water at the Proposed Project site would be provided by the City of San Diego PUD's Water Supply, which is also projected to have available water resources in the foreseeable future and continues to diversify its water sources (City of San Diego 2018). Portable toilets would be used in the southern portion of the Proposed Project site, near the Camporee Field, to accommodate wastewater needs outside of the main camping area near the existing restroom. These portable toilets would also reduce significant water use during special events at the Proposed Project site. As mentioned previously in Section 4.10, Impact a), compliance with the SWPPP would involve incorporation of temporary stormwater drainage BMPs during construction activities, but construction or relocation of permanent stormwater drainage facilities is not expected. Additionally, the Proposed Project does not involve the establishment of any lighting on-site, except for safety lighting for the restroom, which would be solar-powered. The Proposed Project does not require natural gas or telecommunications facilities. Therefore, impacts would be less than significant.

b) Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- b) Less Than Significant Impact.** The majority of water use would be associated with the renovated restroom. The renovated restroom would include twelve single user bathrooms and two showers to support the Proposed Project site. The Proposed Project would result in an increase in visitors to the Proposed Project site; however, the Proposed Project would be connected to the existing Otay Lakes County Park water infrastructure, which utilizes the City of San Diego PUD's Water System to accommodate water needs. The City of San Diego imports the majority of its water and throughout the year the ratio of water from each source changes to adjust for water supply. It is expected that the City of San Diego will continue to have readily available water supply in the reasonably foreseeable future, as they are working towards incorporating more recycled water facilities into the system; one-third of the City of San Diego's water supply is expected to be recycled water by 2035 (City of San Diego 2018). In addition, portable toilets would be used on the south portion of the Proposed Project site, especially during special events, to avoid a significant increase in water usage. Although the restroom would increase in size compared to the existing restroom, and include showers, the water system serving the Proposed Project would remain viable to serve the Project site in the foreseeable future; therefore, this impact is less than significant.

c) Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- c) Less Than Significant Impact.** The majority of water use would be associated with the renovated restroom. The renovated restroom would include twelve single user bathrooms and two showers to support the Proposed Project site. The Proposed Project would result in an increase in visitors to the Proposed Project site; however, the Proposed Project would be connected to the existing, repurposed septic system while the County is working on permitting sewer service to the Proposed Project site. The County has reached an agreement with the City of Chula Vista to tie into the municipal sewer system south of the Proposed Project. While permitting for sewer service is underway, approval is not expected until after completion of the campground upgrades. The City of Chula Vista does not currently operate a wastewater treatment plant, and therefore the wastewater flows are sent to the San Diego Metropolitan Joint Powers Authority (JPA) treatment facilities. The JPA wastewater treatment system capacity is sufficient to meet the projected needs of the service area through at least 2020 (City of San Diego 2017). In addition, portable toilets would be used on the south portion of the Proposed Project site, especially during special events, to avoid a significant increase in wastewater. Although the restroom would increase in size

compared to the existing restroom, and include showers, the wastewater treatment system serving the Proposed Project would remain within capacity; therefore, this impact is less than significant.

d) Would the project generate solid waste in excess of State or local standards or in excess of the capacity of local infrastructure?	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporated <input type="checkbox"/>	Less than Significant Impact <input checked="" type="checkbox"/>	No Impact <input type="checkbox"/>
e) Would the project negatively impact the provision of solid waste services or impair the attainment of solid waste reduction goals?	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporated <input type="checkbox"/>	Less than Significant Impact <input checked="" type="checkbox"/>	No Impact <input type="checkbox"/>

d) and e) Less Than Significant Impact. During construction of the Proposed Project, solid waste generation would include packaging used for Project features and debris from the renovated campsites and bathroom. All construction debris would be recycled to the extent feasible. County Ordinance No. 9840 requires debris from construction and demolition projects 40,000 square feet or greater in the County to be diverted from landfills in the unincorporated County. The Proposed Project would be on a 69-acre lot, but the Proposed Project features would only cover approximately 10,000 square feet of the lot; therefore, this ordinance does not apply to the Proposed Project and non-recyclable solid waste would likely be taken to Otay Landfill. The waste stream would consist primarily of demolished building materials from the restroom and debris from the rehabilitated campsites. It is assumed that the amount of waste generated during construction would be minimal and easily accommodated by the County's permitted solid waste capacity, which is predicted to be available through 2059 (County of San Diego 2017b). During operation, the Proposed Project would generate additional solid when compared to the existing condition; however, the additional waste is assumed to be minimal and consistent with other parts of the park that generate waste. Further, the operational waste would also be accommodated by the County's permitted capacity. Therefore, impacts associated with these issues would be less than significant.

f) Would the project comply with federal, state and local management and reduction statutes and regulations related to solid waste?	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporated <input type="checkbox"/>	Less than Significant Impact <input checked="" type="checkbox"/>	No Impact <input type="checkbox"/>
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f) Less Than Significant Impact. The Proposed Project would generate municipal solid waste during Project operation; however, the solid waste generated is assumed to be minimal considering the land use and would be accommodated by the County's permitted waste disposal capacity, which is predicted to be available through 2059 (County of San Diego 2017b). Additionally, the Proposed Project would comply with applicable federal, State, and local regulations related to solid waste upon completion of the Proposed Project. Applicable regulations the Proposed Project would

comply with include AB 1826, which requires public entities that generate four cubic yards of more of commercial solid waste per week to arrange for organic waste recycling services; and AB 341, which requires public entities that have trash service levels of four cubic yards or greater to arrange for recycling service. The Proposed Project would also align with the goals of County of San Diego Strategic Plan to Reduce Waste. Therefore, a less than significant impact would occur.

4.20 WILDFIRE

a) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project impair an adopted emergency response plan or emergency evacuation plan?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a) Less Than Significant Impact. As discussed in Section 4.9 Impact g), the Proposed Project site is located within a VHFHSZ (CAL FIRE 2007); however, as discussed above in Section 4.9 Impact f), the Proposed Project would not impact an emergency response or evacuation plan according to the County's Guidelines for Determining Significance for Emergency Response Plans. Additionally, the Proposed Project would not interfere with the San Diego County Operational Area Emergency Plan or the Multi-Jurisdictional Hazard Mitigation Plan because the activities at the Proposed Project site would not prohibit subsequent plans from being established or prevent the goals and objectives of existing plans from being carried out. During construction and operation, emergency access to the Proposed Project site would remain the same as the existing condition, except for during special events. In the case of a special event with up to 400 attendees, BSA local councils would be required to prepare an Emergency Action and Fire Prevention Plan detailing how council staff, volunteers, and members should respond during a crisis at the event. The Proposed Project does include the construction of a fire ring; however, no campfires would be allowed on Red Flag days and to counteract the risk of wildfire the Proposed Project would align with Goals S-3, S-4, and S-6 of the County General Plan's Safety Element. These goals focus on minimizing fire hazards, managing fuel loads, and ensuring adequate fire and medical services. This impact is less than significant.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or uncontrolled spread of wildfire?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

b) Less Than Significant Impact. As noted above in Impact a), the Proposed Project site is within a VHFHSZ. Except for the proposed fire ring, the Proposed Project does not include any features that involve the installation or maintenance of associated wildfire infrastructure (such as road, fuel breaks, emergency water sources, or other utilities) that may exacerbate a fire risk. As described in Section 4.9 Impact g), to counteract the risk onset by the fire ring, the fire ring would be banned from use on Red Flag days under MM-HAZ-1. Additionally, the Proposed Project would

align with the Goals S-3, S-4, and S-6 of the County General Plan's Safety Element to minimize fire hazards, manage fuel loads, and ensure adequate fire and medical services.

In accordance with the policies under Goal S-3, the Proposed Project would ensure that access roads within the Project site could provide safe access for emergency equipment and civilian evacuation, that there would be multiple ingress and egress routes, and that the new restroom building would meet current ignition resistance construction codes. To maintain consistency with the policies under Goal S-4, the BSA and the County would coordinate to create a fuel management program for the Project site. In alignment with the policies under Goal S-6, the Proposed Project site would be adjacent to Lower Otay Lake, which would serve as an adequate water supply to combat wildland fire, and fire services would meet the travel time standards from the closest fire station. The closest fire station is County Fire Station 38; fire services from this station could respond to a fire on the Project site in approximately 17 minutes, which is below the 20-minute standard for rural lands (County of San Diego 2011e; Google Maps 2019). Furthermore, the BSA incorporate fire safety into their curriculum and are required to prepare an Emergency Action and Fire Prevention Plan for the camp and each special event held at the Proposed Project site (BSA 2019). With these applicant measures, the risk of wildfire spread would be less than significant.

c) Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water resources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporated <input type="checkbox"/>	Less than Significant Impact <input checked="" type="checkbox"/>	No Impact <input type="checkbox"/>
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- b) Less Than Significant Impact.** As noted above in Impact a), the Proposed Project site is within a VHFHSZ. Except for the fire ring, which would not be in use during Red Flag days, the Proposed Project would not involve the construction or maintenance of any infrastructure that may increase fire risk. Additionally, to reduce the risk onset from the fire ring, the Proposed Project would align with the Goals S-3, S-4, and S-6 of the County General Plan's Safety Element to minimize fire hazards, manage fuel loads, and ensure adequate fire and medical services. The Proposed Project would ensure that access roads within the Project site could provide safe access for emergency equipment and civilian evacuation, that there would be multiple ingress and egress routes, and that the new restroom building would meet current ignition resistance construction codes. The BSA and the County would coordinate to create a fuel management program for the Project site. The Proposed Project site would be adjacent to Lower Otay Lake, which would serve as an adequate water supply to combat wildland fire, and fire services would meet the travel time standards from the closest fire station. The BSA also incorporate fire safety into their curriculum and are required to prepare an Emergency Action and Fire Prevention Plan for the camp and each special event held at the Proposed Project site with implementation of MM-HAZ-1 above (BSA 2019). Impacts would be less than significant.

d) Would the project 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?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- c) **Less Than Significant Impact.** The Proposed Project site is in an area categorized as generally susceptible to landslides, which is the lowest ranking on the State scale of generally susceptible to marginally susceptible to most susceptible. The southern border of the Proposed Project site has moderate to high soil slip risk, but the Proposed Project features would be strategically constructed in the northern portion of the site to avoid those areas. The southern portion of the Proposed Project site is located within the FEMA 100-year floodway and County 100-year floodway, but again, the Proposed Project features would be strategically constructed in the northern portion of the site to avoid the floodway (County of San Diego 2016b). The Proposed Project would not expose people or structures to significant risks related to downslope or downstream flooding or landslides; therefore, impacts would be less than significant.

4.21 MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- a) **Less than Significant With Mitigation Incorporated.** As identified in Section 4.4 of this IS, the Proposed Project has the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, and/or reduce the number or restrict the range of a rare or endangered plant or animal. However, the Proposed Project site is located within a designated "Take Authorized" parcel, under the association of Otay Lakes County Park. This area was previously mitigated for at the inception of San Diego County's MSCP. The Take Authorized qualifier pertains only to species covered within the San Diego County MSCP, which does not include QCB. Since QCB is present within the Proposed Project site, the Proposed Project has been designed to avoid impacts to this species. Implementation of **MM-BIO-1** would reduce impacts to QCB to less than significant. Further, the Proposed Project would

implement **MM-BIO-2** through **MM-BIO-8** to avoid any further impacts to biological resources. Additionally, the Proposed Project was determined to result in potentially significant impacts associated with California history or prehistory. Implementation of **MM-CUL-1** and **MM-CUL-2** would reduce these impacts to less than significant. Therefore, the Proposed Project would result in less than significant impacts with mitigation incorporated.

b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

b) Less Than Significant Impact with Mitigation Incorporated. As noted above, the Proposed Project site is located within a designated “Take Authorized” parcel, under the association of Otay Lakes County Park. This area was previously mitigated for at the inception of San Diego County’s MSCP. Therefore, cumulative impacts associated with biological resources would be less than significant. Additionally, all potentially significant impacts can be reduced to less than significant via the implementation of mitigation measures. The cumulative impacts associated with the Proposed Project are less than significant with mitigation incorporated.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

c) Less Than Significant Impact With Mitigation Incorporated. As noted above, all environmental impacts associated with implementation of the Proposed Project can be reduced to less than significant with implementation of mitigation measures. The Proposed Project would not result in significant impacts on human beings, either directly or indirectly, with implementation of mitigation measures. This impact is less than significant with mitigation incorporated.

CHAPTER 5.0 – REFERENCES

- Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, and T.J. Rosatti, and D.H. Wilken (editors)
2012 The Jepson Manual: Vascular Plants of California, Second Edition. University of California Press, Berkeley, California.
- Boy Scouts of America (BSA)
2019 BSA Safety Moment – Camp Fire Safety. Available Online at:
[https://filestore.scouting.org/filestore/HealthSafety/pdf/680-055\(19\)Camp_Fire_Safety_WEB.pdf](https://filestore.scouting.org/filestore/HealthSafety/pdf/680-055(19)Camp_Fire_Safety_WEB.pdf)
2018 Outdoor Ethics Guide Handbook. Available Online at:
<https://filestore.scouting.org/filestore/outdoorethicsguide/pdf/OutdoorEthicsGuide.pdf>
2011 Preparing Troop Leadership for Summer Camp. Available Online at:
https://filestore.scouting.org/filestore/Outdoor%20Program/pdf/430-135_WB.pdf
- Burks, M.
2017 Otay Reservoir Spills Over Its Dam for The First Time Since 2011. City News Service. Wednesday March 1, 2017.
- Calflora
2019 The Calflora Database. Consortium of California Herbaria [web application] Berkley, California. Accessed spring 2019. <https://www.calflora.org/>.
- California Air Pollution Control Officers Association (CAPCOA)
2008 Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act, on October 24, 2008.
- California Building Standards Commission
2016 California Green Building Standards Code (CALGreen). Available online at:
<https://codes.iccsafe.org/content/chapter/2045/>
- California Department of Conservation (CDC)
2016 Important Farmland Finder. Available Online at:
<https://maps.conservation.ca.gov/DLRP/CIFF/>
2013 State of California Williamson Act Contract Land. Available Online at:
ftp://ftp.consrv.ca.gov/pub/dlrp/wa/San_Diego_w_13_14_WA.pdf
- California Department of Fish and Wildlife (CDFW)
2019 California Natural Diversity Database (CNDDDB). RareFind Version 5.1.0. Database query within five miles of the proposed Otay Lakes Campground project Study Area. Wildlife and Habitat Data Analysis Branch. Accessed spring 2019.
1997 California Gnatcatcher (*Poliophtila californica*). California Interagency Wildlife Task Group, California Wildlife Habitat Relationship System. Written by T. Kucera.
- California Department of Forestry and Fire Protection (CAL FIRE)
2009 Very High Fire Hazard Severity Zones in LRA (as recommended by CAL FIRE). Available Online at: http://frap.fire.ca.gov/webdata/maps/san_diego/fhszl_map.37.pdf.
- California Department of Transportation (Caltrans)
2018 California Scenic Highways Mapping System – San Diego County. Available Online at:
http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/.
- California Native Plant Society (CNPS)
2019 Inventory of Rare and Endangered Plants (online edition). Rare Plant Scientific Advisory Committee, California Native Plant Society, Sacramento, California. Database query

within five miles of the proposed Otay Lakes Campground project Study Area. Accessed spring 2019 from <http://www.cnps.org/inventory>.

Chambers Group

2019a Biological Technical Report for the Proposed Otay Lakes Campground Project.

2019b Phase I Cultural Resources Report for the Otay Lakes Campground Project.

2019c Phase I Paleontological Report for the Otay Lakes Campground Project.

City of Chula Vista

2005 City of Chula Vista General Plan – Environmental Element. Available Online at:
<https://www.chulavistaca.gov/home/showdocument?id=9341>

City of San Diego

2018 Annual Drinking Water Quality Report. Available Online at:

https://www.sandiego.gov/sites/default/files/water_quality_report_2018_final.pdf

2017 Public Utilities – Annual Reports and Summary: Point Loma Wastewater Treatment Plant & Ocean Outfall. Available Online at:

https://www.sandiego.gov/sites/default/files/2017_point_loma_annual_reports.pdf

2009 San Diego Wastewater Systems. Available Online at:

<https://www.metroipa.org/home/showdocument?id=677>

1997 MSCP Subarea Plan. Available Online at:

https://www.sandiego.gov/sites/default/files/legacy/planning/programs/mscp/pdf/sub_area_fullversion.pdf

County of San Diego

2019 BMP Design Manual. Available Online at:

https://www.sandiegocounty.gov/content/dam/sdc/dpw/WATERSHED_PROTECTION_PROGRAM/watershedpdf/Dev_Sup/County_BMPDM.pdf

2018 Parks Master Plan. Available Online at:

<http://www.sdparks.org/content/dam/sdparks/en/pdf/Development/Parks%20Master%20Plan.pdf>

2017a Consolidated Fire Code. Available Online at:

<https://www.sandiegocounty.gov/content/dam/sdc/pds/docs/cosd-fire-code.pdf>

2017b Five-Year Review Report of the Countywide Integrated Waste Management Plan. Available Online at:

https://www.sandiegocounty.gov/content/dam/sdc/dpw/SOLID_WASTE_PLANNING_and_RECYCLING/Files/2.%20Five-YearReview-%20Final.pdf

2016a Otay Valley Regional Park Concept Plan. Available Online at:

<http://www.sdparks.org/content/dam/sdparks/en/pdf/Development/OVRP%20Concept%20Plan%20Signed.pdf>

2016b Planning and Development Services – Preliminary Review of Resources for IS/EA Preparation.

2015 Strategic Energy Plan. Available Online at:

https://www.sandiegocounty.gov/content/dam/sdc/dgs/Doc/Energy_StrategicEnergyPlan.pdf

2012 Building Energy Efficiency Standards – For Residential and Nonresidential Buildings.

Available Online at: <https://www.energy.ca.gov/2012publications/CEC-400-2012-004/CEC-400-2012-004-CMF-REV2.pdf>

- 2011a General Plan – Conservation and Open Space Element. Available Online at:
<https://www.sandiegocounty.gov/content/dam/sdc/pds/gpupdate/docs/GP/ConservationandOpenSpace.pdf>
- 2011b General Plan – Land Use Element. Available Online at:
<https://www.sandiegocounty.gov/content/dam/sdc/pds/gpupdate/docs/GP/LandUseElement.pdf>
- 2011c General Plan – Overview. Available Online at:
<https://www.sandiegocounty.gov/content/dam/sdc/pds/gpupdate/docs/GP/Cover-TOC-Vision.pdf>
- 2011d San Diego County General Plan Update EIR – Mineral Resources. Available Online at:
https://www.sandiegocounty.gov/content/dam/sdc/pds/gpupdate/docs/BOS_Aug2011/EIR/FEIR_2.10_-_Minerals_2011.pdf
- 2011e General Plan – Safety Element. Available Online at:
<https://www.sandiegocounty.gov/content/dam/sdc/pds/gpupdate/docs/GP/SafetyElement.pdf>
- 2011f Report Format and Content Requirements for Transportation and Traffic. Available Online at:
https://www.sandiegocounty.gov/content/dam/sdc/pds/ProjectPlanning/docs/TrafficReport_Format.pdf
- 2010 Community Wildfire Protection Plan – Southwest San Diego. Available Online at:
<http://firesafesdcounty.org/fsc-support/cwpp-plan/>
- 2007 Guidelines for Determining Significance. Available Online at:
<https://www.sandiegocounty.gov/content/sdc/pds/procguid.html#erp>
- 1998 Final Multiple Species Conservation Program (MSCP). Available Online at:
<https://www.sandiegocounty.gov/content/dam/sdc/pds/mscp/docs/SCMSCP/FinalMSCPProgramPlan.pdf>
- Department of Toxic Substances Control (DTSC)
- 2019 EnviStor Database. Available Online at: <http://www.envirostor.dtsc.ca.gov/public/>
- Glassberg, J.
- 2001 Butterflies through Binoculars. The West. A Field Guide to the Butterflies of Western North America. Oxford University Press. New York.
- Google Maps
- 2019 Accessed on: 11/13/2019
- National Oceanic and Atmospheric Administration (NOAA)
- 2004 NOAA Technical Memorandum NWS WR-270 – Climate of San Diego, California. Available Online at:
https://www.weather.gov/media/wrh/online_publications/TMs/TM-270.pdf
- Reynolds, Richard A.
- 2008 "Sweetwater Dam: Then and Now," paper presented at Dickinson dinner, Chula Vista, August 2.
- SanGIS
- 2019 SanGIS. SANBios dataset. SanGIS Regional Data Warehouse, 2015. www.sangis.org/. Accessed Spring 2019.
- State Water Resources Control Board (SWRCB)

- 2019 GeoTracker Database. Available Online at: <https://geotracker.waterboards.ca.gov/>
United States Department of Agriculture (USDA)
- 2019 Web Soil Survey. Available Online at:
<https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>
- U.S. Fish and Wildlife Service (USFWS)
- 2019 Sensitive Species Occurrences. <https://www.fws.gov/carlsbad/gis/cfwogis.html>.
Database query within five miles of the proposed Otay Lakes Campground project Study Area. Accessed spring 2019. Carlsbad Branch.
- 2014a Quino Checkerspot Butterfly Survey Guidelines. December.
- 2014b Draft Comprehensive Conservation Plan and Environmental Assessment – San Diego National Wildlife Refuge, Appendix F. Available Online at:
https://www.fws.gov/uploadedFiles/Region_8/NWRS/Zone_1/San_Diego_Complex/San_Diego/Sections/What_We_Do/Conservation/PDFs/Volume%201_draft%20CCP%20San%20Diego%20NWR.pdf
- 2002 Federal Register / Vol. 67, No. 72. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Quino Checkerspot Butterfly (*Euphydryas editha quino*). April.
- 1997 Federal Register / Vol. 62, No. 11. Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for the Laguna Mountains Skipper and Quino Checkerspot Butterfly. January.
- Vista Environmental
- 2019a Air Quality Sensitive Species Occurrences.
<https://www.fws.gov/carlsbad/gis/cfwogis.html>. Database query within five miles of the proposed Otay Lakes Campground project Study Area. Accessed spring 2019. Carlsbad Branch.

APPENDIX A – AIR QUALITY CALEEMOD MODEL PRINTOUTS



Otay Lakes Campground Project - San Diego County, Summer

Otay Lakes Campground Project
San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	4.52	Acre	4.52	196,891.20	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW/hr)	720.49	CH4 Intensity (lb/MW/hr)	0.029	N2O Intensity (lb/MW/hr)	0.006

1.3 User Entered Comments & Non-Default Data

Otay Lakes Campground Project - San Diego County, Summer

Project Characteristics -

Land Use - 4.52 acres disturbed. Building Area: 300 sq ft Flag Plaza, 1,800 sq ft Restroom, 800 sq ft Storage, 150 sq ft Stage = 3,050 sq ft

Construction Phase - Construction Start 1-31-20 finished 6-30-20

Off-road Equipment - Demolition: 1 Concrete Saw; 1 Tractor/Loader/Backhoe

Off-road Equipment - Site Preparation: 4 Tractor/Loader/Backhoes

Off-road Equipment - Building Construction" 1 Crane, 3 Forklifts, 1 Generator, 3 Tractor/Loader/Backhoe, 1 Welder

Demolition - Existing 450 sq ft Restroom to be demolished

Trips and VMT - 6 vendor truck trips added to Demo and Site Prep to account for water truck emissions

Vehicle Trips - Trip Rates from Traffic Memo of 176 Weekday trips (38.93 trips/acre); 528 Saturday trips (116.8 trips/acre); 198 Sunday trips (43.80 trips/acre)

Construction Off-road Equipment Mitigation - Water Exposed Area 2x per day selected to account for SDAPCD Rules 50 and 55

Otay Lakes Campground Project - San Diego County, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	18.00	84.00
tblConstructionPhase	NumDays	230.00	84.00
tblConstructionPhase	NumDays	20.00	2.00
tblConstructionPhase	NumDays	5.00	22.00
tblConstructionPhase	PhaseEndDate	3/24/2021	6/30/2020
tblConstructionPhase	PhaseEndDate	2/2/2021	6/30/2020
tblConstructionPhase	PhaseEndDate	2/27/2020	2/3/2020
tblConstructionPhase	PhaseEndDate	3/5/2020	3/4/2020
tblConstructionPhase	PhaseStartDate	2/27/2021	3/5/2020
tblConstructionPhase	PhaseStartDate	3/18/2020	3/5/2020
tblConstructionPhase	PhaseStartDate	2/28/2020	2/4/2020
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Demolition
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	WorkerTripNumber	18.00	5.00
tblTripsAndVMT	WorkerTripNumber	18.00	10.00
tblVehicleTrips	ST_TR	22.75	116.80
tblVehicleTrips	SU_TR	16.74	43.80
tblVehicleTrips	WD_TR	1.89	38.93

2.0 Emissions Summary

Otay Lakes Campground Project - San Diego County, Summer

2.1 Overall Construction (Maximum Daily Emission)**Unmitigated Construction**

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
2020	3.6900	24.7254	22.4338	0.0471	18.1890	1.2514	18.7254	9.9642	1.1835	10.4577	0.0000	4,618.1864	4,618.1864	0.7392	0.0000	4,636.6670
Maximum	3.6900	24.7254	22.4338	0.0471	18.1890	1.2514	18.7254	9.9642	1.1835	10.4577	0.0000	4,618.1864	4,618.1864	0.7392	0.0000	4,636.6670

Mitigated Construction

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
2020	3.6900	24.7254	22.4338	0.0471	8.2526	1.2514	8.7890	4.5023	1.1835	4.9959	0.0000	4,618.1864	4,618.1864	0.7392	0.0000	4,636.6670
Maximum	3.6900	24.7254	22.4338	0.0471	8.2526	1.2514	8.7890	4.5023	1.1835	4.9959	0.0000	4,618.1864	4,618.1864	0.7392	0.0000	4,636.6670

ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	54.63	0.00	53.06	54.82	0.00	52.23	0.00	0.00	0.00	0.00	0.00	0.00

Otay Lakes Campground Project - San Diego County, Summer

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Area	0.0947	0.0000	4.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		9.9000e-004	9.9000e-004	0.0000		1.0600e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.9023	3.5134	9.4179	0.0299	2.3900	0.0290	2.4190	0.6388	0.0272	0.6660		3.029.725 ₂	3.029.725 ₂	0.1656		3,033.863 ₉
Total	0.9969	3.5134	9.4184	0.0299	2.3900	0.0290	2.4190	0.6388	0.0272	0.6660		3.029.726₂	3.029.726₂	0.1656	0.0000	3,033.864₉

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Area	0.0947	0.0000	4.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		9.9000e-004	9.9000e-004	0.0000		1.0600e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.9023	3.5134	9.4179	0.0299	2.3900	0.0290	2.4190	0.6388	0.0272	0.6660		3.029.725 ₂	3.029.725 ₂	0.1656		3,033.863 ₉
Total	0.9969	3.5134	9.4184	0.0299	2.3900	0.0290	2.4190	0.6388	0.0272	0.6660		3.029.726₂	3.029.726₂	0.1656	0.0000	3,033.864₉

Otay Lakes Campground Project - San Diego County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/31/2020	2/3/2020	5	2	
2	Site Preparation	Site Preparation	2/4/2020	3/4/2020	5	22	
3	Building Construction	Building Construction	3/5/2020	6/30/2020	5	84	
4	Architectural Coating	Architectural Coating	3/5/2020	6/30/2020	5	84	

Acres of Grading (Site Preparation Phase): 0**Acres of Grading (Grading Phase): 0****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 4,575; Non-Residential Outdoor: 1,525; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

Otay Lakes Campground Project - San Diego County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	7	5.00	6.00	2.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	10.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	83.00	32.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	17.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Otay Lakes Campground Project - San Diego County, Summer

3.2 Demolition - 2020**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					0.2242	0.0000	0.2242	0.0340	0.0000	0.0340			0.0000			0.0000
Off-Road	0.6277	5.4038	5.9663	9.3600e-003		0.3313	0.3313		0.3206	0.3206		893.4332	893.4332	0.1348		896.8036
Total	0.6277	5.4038	5.9663	9.3600e-003	0.2242	0.3313	0.5555	0.0340	0.3206	0.3546		893.4332	893.4332	0.1348		896.8036

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	7.9000e-003	0.2790	0.0633	7.8000e-004	0.0175	8.9000e-004	0.0184	4.7900e-003	8.5000e-004	5.6400e-003			85.6327	7.5400e-003		85.8212
Vendor	0.0224	0.6766	0.1724	1.6400e-003	0.0406	3.3100e-003	0.0439	0.0117	3.1700e-003	0.0149		176.4241	176.4241	0.0130		176.7494
Worker	0.0184	0.0124	0.1417	4.2000e-004	0.0411	2.9000e-004	0.0414	0.0109	2.7000e-004	0.0112		42.1374	42.1374	1.2600e-003		42.1688
Total	0.0487	0.9679	0.3774	2.8400e-003	0.0992	4.4900e-003	0.1037	0.0274	4.2900e-003	0.0317		304.1941	304.1941	0.0218		304.7395

Otay Lakes Campground Project - San Diego County, Summer

3.2 Demolition - 2020**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					0.1009	0.0000	0.1009	0.0153	0.0000	0.0153			0.0000			0.0000
Off-Road	0.6277	5.4038	5.9663	9.3600e-003		0.3313	0.3313		0.3206	0.3206	0.0000	893.4332	893.4332	0.1348		896.8036
Total	0.6277	5.4038	5.9663	9.3600e-003	0.1009	0.3313	0.4322	0.0153	0.3206	0.3359	0.0000	893.4332	893.4332	0.1348		896.8036

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	7.9000e-003	0.2790	0.0633	7.8000e-004	0.0175	8.9000e-004	0.0184	4.7900e-003	8.5000e-004	5.6400e-003			85.6327	7.5400e-003		85.8212
Vendor	0.0224	0.6766	0.1724	1.6400e-003	0.0406	3.3100e-003	0.0439	0.0117	3.1700e-003	0.0149			176.4241	0.0130		176.7494
Worker	0.0184	0.0124	0.1417	4.2000e-004	0.0411	2.9000e-004	0.0414	0.0109	2.7000e-004	0.0112			42.1374	1.2600e-003		42.1688
Total	0.0487	0.9679	0.3774	2.8400e-003	0.0992	4.4900e-003	0.1037	0.0274	4.2900e-003	0.0317			304.1941	0.0218		304.7395

Otay Lakes Campground Project - San Diego County, Summer

3.3 Site Preparation - 2020**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust	0.8380	8.4206	9.1188	0.0124	18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	0.8380	8.4206	9.1188	0.0124	18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Total	0.8380	8.4206	9.1188	0.0124	18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0224	0.6766	0.1724	1.6400e-003	0.0406	3.3100e-003	0.0439	0.0117	3.1700e-003	0.0149			176.4241	0.0130		176.7494
Worker	0.0367	0.0247	0.2835	8.5000e-004	0.0822	5.8000e-004	0.0827	0.0218	5.3000e-004	0.0223			84.2747	2.5200e-003		84.3376
Total	0.0591	0.7013	0.4558	2.4900e-003	0.1228	3.8900e-003	0.1267	0.0335	3.7000e-003	0.0372			260.6988	0.0155		261.0870

Otay Lakes Campground Project - San Diego County, Summer

3.3 Site Preparation - 2020**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Fugitive Dust	0.8380	8.4206	9.1188	0.0124	8.1298	0.0000	8.1298	4.4688	0.0000	4.4688	0.0000	0.0000	0.0000	0.0000		0.0000
Off-Road	0.8380	8.4206	9.1188	0.0124	8.1298	0.0000	8.1298	4.4688	0.0000	4.4688	0.0000	1,203.074 0	1,203.074 0	0.3891		1,212.801 5
Total	0.8380	8.4206	9.1188	0.0124	8.1298	0.5325	8.6623	4.4688	0.4899	4.9587	0.0000	1,203.074 0	1,203.074 0	0.3891		1,212.801 5

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0224	0.6766	0.1724	1.6400e-003	0.0406	3.3100e-003	0.0439	0.0117	3.1700e-003	0.0149		176.4241	176.4241	0.0130		176.7494
Worker	0.0367	0.0247	0.2835	8.5000e-004	0.0822	5.8000e-004	0.0827	0.0218	5.3000e-004	0.0223		84.2747	84.2747	2.5200e-003		84.3376
Total	0.0591	0.7013	0.4558	2.4900e-003	0.1228	3.8900e-003	0.1267	0.0335	3.7000e-003	0.0372		260.6988	260.6988	0.0155		261.0870

Otay Lakes Campground Project - San Diego County, Summer

3.4 Building Construction - 2020**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.063 1	2,553.063 1	0.6229		2,568.634 5
Total	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.063 1	2,553.063 1	0.6229		2,568.634 5

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1196	3.6083	0.9192	8.7600e-003	0.2166	0.0177	0.2343	0.0624	0.0169	0.0793		940.9283	940.9283	0.0694		942.6636
Worker	0.3046	0.2052	2.3527	7.0200e-003	0.6818	4.7800e-003	0.6866	0.1809	4.4100e-003	0.1853		699.4801	699.4801	0.0209		700.0022
Total	0.4242	3.8135	3.2720	0.0158	0.8985	0.0224	0.9209	0.2432	0.0213	0.2645		1,640.408 3	1,640.408 3	0.0903		1,642.665 8

Otay Lakes Campground Project - San Diego County, Summer

3.4 Building Construction - 2020**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.063 1	2,553.063 1	0.6229		2,568.634 5
Total	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.063 1	2,553.063 1	0.6229		2,568.634 5

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1196	3.6083	0.9192	8.7600e-003	0.2166	0.0177	0.2343	0.0624	0.0169	0.0793		940.9283	940.9283	0.0694		942.6636
Worker	0.3046	0.2052	2.3527	7.0200e-003	0.6818	4.7800e-003	0.6866	0.1809	4.4100e-003	0.1853		699.4801	699.4801	0.0209		700.0022
Total	0.4242	3.8135	3.2720	0.0158	0.8985	0.0224	0.9209	0.2432	0.0213	0.2645		1,640.408 3	1,640.408 3	0.0903		1,642.665 8

Otay Lakes Campground Project - San Diego County, Summer

3.5 Architectural Coating - 2020**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Archit. Coating	0.8415					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.8838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	1.0837	1.8838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0624	0.0420	0.4819	1.4400e-003	0.1397	9.8000e-004	0.1406	0.0370	9.0000e-004	0.0379		143.2670	143.2670	4.2800e-003		143.3740
Total	0.0624	0.0420	0.4819	1.4400e-003	0.1397	9.8000e-004	0.1406	0.0370	9.0000e-004	0.0379		143.2670	143.2670	4.2800e-003		143.3740

Otay Lakes Campground Project - San Diego County, Summer

3.5 Architectural Coating - 2020**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Archit. Coating	0.8415					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	1.0837	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0624	0.0420	0.4819	1.4400e-003	0.1397	9.8000e-004	0.1406	0.0370	9.0000e-004	0.0379		143.2670	143.2670	4.2800e-003		143.3740
Total	0.0624	0.0420	0.4819	1.4400e-003	0.1397	9.8000e-004	0.1406	0.0370	9.0000e-004	0.0379		143.2670	143.2670	4.2800e-003		143.3740

4.0 Operational Detail - Mobile

Otay Lakes Campground Project - San Diego County, Summer

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.9023	3.5134	9.4179	0.0299	2.3900	0.0290	2.4190	0.6388	0.0272	0.6660		3,029,725 ₂	3,029,725 ₂	0.1656		3,033,863 ₉
Unmitigated	0.9023	3.5134	9.4179	0.0299	2.3900	0.0290	2.4190	0.6388	0.0272	0.6660		3,029,725 ₂	3,029,725 ₂	0.1656		3,033,863 ₉

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated		
	Weekday	Saturday	Sunday	Annual VMT		Annual VMT		
City Park	175.96	527.94	197.98	489,714		489,714		
Total	175.96	527.94	197.98	489,714		489,714		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271

Otay Lakes Campground Project - San Diego County, Summer

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Otay Lakes Campground Project - San Diego County, Summer

5.2 Energy by Land Use - NaturalGas**Unmitigated**

Land Use	NaturalGas Use kBtu/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																	
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated

Land Use	NaturalGas Use kBtu/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																	
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail**6.1 Mitigation Measures Area**

Otay Lakes Campground Project - San Diego County, Summer

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Mitigated	0.0947	0.0000	4.6000e-004	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000		9.9000e-004	9.9000e-004	0.0000		1.0600e-003
Unmitigated	0.0947	0.0000	4.6000e-004	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000		9.9000e-004	9.9000e-004	0.0000		1.0600e-003

6.2 Area by SubCategory

Unmitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Architectural Coating	0.0194					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0753					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.0000e-005	0.0000	4.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		9.9000e-004	9.9000e-004	0.0000		1.0600e-003
Total	0.0947	0.0000	4.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		9.9000e-004	9.9000e-004	0.0000		1.0600e-003

Otay Lakes Campground Project - San Diego County, Summer

6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0194					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0753					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.0000e-005	0.0000	4.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		9.9000e-004	9.9000e-004	0.0000		1.0600e-003
Total	0.0947	0.0000	4.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		9.9000e-004	9.9000e-004	0.0000		1.0600e-003

7.0 Water Detail**7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment**Fire Pumps and Emergency Generators**

Otay Lakes Campground Project - San Diego County, Summer

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Otay Lakes Campground Project - San Diego County, Winter

Otay Lakes Campground Project
San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	4.52	Acre	4.52	196,891.20	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW/hr)	720.49	CH4 Intensity (lb/MW/hr)	0.029	N2O Intensity (lb/MW/hr)	0.006

1.3 User Entered Comments & Non-Default Data

Otay Lakes Campground Project - San Diego County, Winter

Project Characteristics -

Land Use - 4.52 acres disturbed. Building Area: 300 sq ft Flag Plaza, 1,800 sq ft Restroom, 800 sq ft Storage, 150 sq ft Stage = 3,050 sq ft

Construction Phase - Construction Start 1-31-20 finished 6-30-20

Off-road Equipment - Demolition: 1 Concrete Saw; 1 Tractor/Loader/Backhoe

Off-road Equipment - Site Preparation: 4 Tractor/Loader/Backhoes

Off-road Equipment - Building Construction" 1 Crane, 3 Forklifts, 1 Generator, 3 Tractor/Loader/Backhoe, 1 Welder

Demolition - Existing 450 sq ft Restroom to be demolished

Trips and VMT - 6 vendor truck trips added to Demo and Site Prep to account for water truck emissions

Vehicle Trips - Trip Rates from Traffic Memo of 176 Weekday trips (38.93 trips/acre); 528 Saturday trips (116.8 trips/acre); 198 Sunday trips (43.80 trips/acre)

Construction Off-road Equipment Mitigation - Water Exposed Area 2x per day selected to account for SDAPCD Rules 50 and 55

Otay Lakes Campground Project - San Diego County, Winter

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	18.00	84.00
tblConstructionPhase	NumDays	230.00	84.00
tblConstructionPhase	NumDays	20.00	2.00
tblConstructionPhase	NumDays	5.00	22.00
tblConstructionPhase	PhaseEndDate	3/24/2021	6/30/2020
tblConstructionPhase	PhaseEndDate	2/2/2021	6/30/2020
tblConstructionPhase	PhaseEndDate	2/27/2020	2/3/2020
tblConstructionPhase	PhaseEndDate	3/5/2020	3/4/2020
tblConstructionPhase	PhaseStartDate	2/27/2021	3/5/2020
tblConstructionPhase	PhaseStartDate	3/18/2020	3/5/2020
tblConstructionPhase	PhaseStartDate	2/28/2020	2/4/2020
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Demolition
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	WorkerTripNumber	18.00	5.00
tblTripsAndVMT	WorkerTripNumber	18.00	10.00
tblVehicleTrips	ST_TR	22.75	116.80
tblVehicleTrips	SU_TR	16.74	43.80
tblVehicleTrips	WD_TR	1.89	38.93

2.0 Emissions Summary

Otay Lakes Campground Project - San Diego County, Winter

2.1 Overall Construction (Maximum Daily Emission)**Unmitigated Construction**

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
2020	3.7443	24.7528	22.3726	0.0464	18.1890	1.2517	18.7255	9.9642	1.1838	10.4578	0.0000	4,542.322	4,542.322	0.7422	0.0000	4,560.877
												1	1			9
Maximum	3.7443	24.7528	22.3726	0.0464	18.1890	1.2517	18.7255	9.9642	1.1838	10.4578	0.0000	4,542.322	4,542.322	0.7422	0.0000	4,560.877
												1	1			9

Mitigated Construction

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
2020	3.7443	24.7528	22.3726	0.0464	8.2526	1.2517	8.7890	4.5023	1.1838	4.9959	0.0000	4,542.322	4,542.322	0.7422	0.0000	4,560.877
												1	1			9
Maximum	3.7443	24.7528	22.3726	0.0464	8.2526	1.2517	8.7890	4.5023	1.1838	4.9959	0.0000	4,542.322	4,542.322	0.7422	0.0000	4,560.877
												1	1			9

ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	54.63	0.00	53.06	54.82	0.00	52.23	0.00	0.00	0.00	0.00	0.00	0.00

Otay Lakes Campground Project - San Diego County, Winter

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Area	0.0947	0.0000	4.6000e-004	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000		9.9000e-004	9.9000e-004	0.0000		1.0600e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.8772	3.6032	9.4369	0.0283	2.3900	0.0293	2.4193	0.6388	0.0274	0.6663		2.871.159 ₉	2.871.159 ₉	0.1674		2.875.345 ₀
Total	0.9719	3.6032	9.4374	0.0283	2.3900	0.0293	2.4193	0.6388	0.0274	0.6663		2.871.160₉	2.871.160₉	0.1674	0.0000	2.875.346₀

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Area	0.0947	0.0000	4.6000e-004	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000		9.9000e-004	9.9000e-004	0.0000		1.0600e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.8772	3.6032	9.4369	0.0283	2.3900	0.0293	2.4193	0.6388	0.0274	0.6663		2.871.159 ₉	2.871.159 ₉	0.1674		2.875.345 ₀
Total	0.9719	3.6032	9.4374	0.0283	2.3900	0.0293	2.4193	0.6388	0.0274	0.6663		2.871.160₉	2.871.160₉	0.1674	0.0000	2.875.346₀

Otay Lakes Campground Project - San Diego County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/31/2020	2/3/2020	5	2	
2	Site Preparation	Site Preparation	2/4/2020	3/4/2020	5	22	
3	Building Construction	Building Construction	3/5/2020	6/30/2020	5	84	
4	Architectural Coating	Architectural Coating	3/5/2020	6/30/2020	5	84	

Acres of Grading (Site Preparation Phase): 0**Acres of Grading (Grading Phase): 0****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 4,575; Non-Residential Outdoor: 1,525; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

Otay Lakes Campground Project - San Diego County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	7	5.00	6.00	2.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	10.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	83.00	32.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	17.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Otay Lakes Campground Project - San Diego County, Winter

3.2 Demolition - 2020**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					0.2242	0.0000	0.2242	0.0340	0.0000	0.0340			0.0000			0.0000
Off-Road	0.6277	5.4038	5.9663	9.3600e-003		0.3313	0.3313		0.3206	0.3206		893.4332	893.4332	0.1348		896.8036
Total	0.6277	5.4038	5.9663	9.3600e-003	0.2242	0.3313	0.5555	0.0340	0.3206	0.3546		893.4332	893.4332	0.1348		896.8036

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	8.1200e-003	0.2817	0.0675	7.7000e-004	0.0175	9.1000e-004	0.0184	4.7900e-003	8.7000e-004	5.6600e-003		84.1635	84.1635	7.8000e-003		84.3586
Vendor	0.0235	0.6760	0.1913	1.6000e-003	0.0406	3.3700e-003	0.0440	0.0117	3.2300e-003	0.0149		171.8773	171.8773	0.0138		172.2231
Worker	0.0208	0.0139	0.1336	4.0000e-004	0.0411	2.9000e-004	0.0414	0.0109	2.7000e-004	0.0112		39.5566	39.5566	1.1900e-003		39.5864
Total	0.0524	0.9715	0.3924	2.7700e-003	0.0992	4.5700e-003	0.1037	0.0274	4.3700e-003	0.0317		295.5975	295.5975	0.0228		296.1680

Otay Lakes Campground Project - San Diego County, Winter

3.2 Demolition - 2020**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					0.1009	0.0000	0.1009	0.0153	0.0000	0.0153			0.0000			0.0000
Off-Road	0.6277	5.4038	5.9663	9.3600e-003		0.3313	0.3313		0.3206	0.3206	0.0000	893.4332	893.4332	0.1348		896.8036
Total	0.6277	5.4038	5.9663	9.3600e-003	0.1009	0.3313	0.4322	0.0153	0.3206	0.3359	0.0000	893.4332	893.4332	0.1348		896.8036

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	8.1200e-003	0.2817	0.0675	7.7000e-004	0.0175	9.1000e-004	0.0184	4.7900e-003	8.7000e-004	5.6600e-003		84.1635	84.1635	7.8000e-003		84.3586
Vendor	0.0235	0.6760	0.1913	1.6000e-003	0.0406	3.3700e-003	0.0440	0.0117	3.2300e-003	0.0149		171.8773	171.8773	0.0138		172.2231
Worker	0.0208	0.0139	0.1336	4.0000e-004	0.0411	2.9000e-004	0.0414	0.0109	2.7000e-004	0.0112		39.5566	39.5566	1.1900e-003		39.5864
Total	0.0524	0.9715	0.3924	2.7700e-003	0.0992	4.5700e-003	0.1037	0.0274	4.3700e-003	0.0317		295.5975	295.5975	0.0228		296.1680

Otay Lakes Campground Project - San Diego County, Winter

3.3 Site Preparation - 2020**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust	0.8380	8.4206	9.1188	0.0124	18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	0.8380	8.4206	9.1188	0.0124	18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Total	0.8380	8.4206	9.1188	0.0124	18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0235	0.6760	0.1913	1.6000e-003	0.0406	3.3700e-003	0.0440	0.0117	3.2300e-003	0.0149			171.8773	0.0138		172.2231
Worker	0.0416	0.0278	0.2673	7.9000e-004	0.0822	5.8000e-004	0.0827	0.0218	5.3000e-004	0.0223			79.1132	2.3800e-003		79.1727
Total	0.0650	0.7038	0.4585	2.3900e-003	0.1228	3.9500e-003	0.1267	0.0335	3.7600e-003	0.0372			250.9905	0.0162		251.3958

Otay Lakes Campground Project - San Diego County, Winter

3.3 Site Preparation - 2020**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Fugitive Dust	0.8380	8.4206	9.1188	0.0124	8.1298	0.0000	8.1298	4.4688	0.0000	4.4688	0.0000	1,203.074 0	0.0000	0.3891		1,212.801 5
Off-Road	0.8380	8.4206	9.1188	0.0124	8.1298	0.0000	8.1298	4.4688	0.0000	4.4688	0.0000	1,203.074 0	0.0000	0.3891		1,212.801 5
Total	0.8380	8.4206	9.1188	0.0124	8.1298	0.0000	8.1298	4.4688	0.0000	4.4688	0.0000	1,203.074 0	0.0000	0.3891		1,212.801 5

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.0235	0.6760	0.1913	1.6000e-003	0.0406	3.3700e-003	0.0440	0.0117	3.2300e-003	0.0149		171.8773	171.8773	0.0138		172.2231
Worker	0.0416	0.0278	0.2673	7.9000e-004	0.0822	5.8000e-004	0.0827	0.0218	5.3000e-004	0.0223		79.1132	79.1132	2.3800e-003		79.1727
Total	0.0650	0.7038	0.4585	2.3900e-003	0.1228	3.9500e-003	0.1267	0.0335	3.7600e-003	0.0372		250.9905	250.9905	0.0162		251.3958

Otay Lakes Campground Project - San Diego County, Winter

3.4 Building Construction - 2020**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1252	3.6054	1.0202	8.5400e-003	0.2166	0.0180	0.2346	0.0624	0.0172	0.0796		916.6791	916.6791	0.0738		918.5232
Worker	0.3450	0.2304	2.2182	6.5900e-003	0.6818	4.7800e-003	0.6866	0.1809	4.4100e-003	0.1853		656.6395	656.6395	0.0198		657.1338
Total	0.4702	3.8358	3.2383	0.0151	0.8985	0.0228	0.9212	0.2432	0.0216	0.2648		1,573.3186	1,573.3186	0.0935		1,575.6569

Otay Lakes Campground Project - San Diego County, Winter

3.4 Building Construction - 2020**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.063 1	2,553.063 1	0.6229		2,568.634 5
Total	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.063 1	2,553.063 1	0.6229		2,568.634 5

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1252	3.6054	1.0202	8.5400e-003	0.2166	0.0180	0.2346	0.0624	0.0172	0.0796		916.6791	916.6791	0.0738		918.5232
Worker	0.3450	0.2304	2.2182	6.5900e-003	0.6818	4.7800e-003	0.6866	0.1809	4.4100e-003	0.1853		656.6395	656.6395	0.0198		657.1338
Total	0.4702	3.8358	3.2383	0.0151	0.8985	0.0228	0.9212	0.2432	0.0216	0.2648		1,573.318 6	1,573.318 6	0.0935		1,575.656 9

Otay Lakes Campground Project - San Diego County, Winter

3.5 Architectural Coating - 2020**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Archit. Coating	0.8415					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	1.0837	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0707	0.0472	0.4543	1.3500e-003	0.1397	9.8000e-004	0.1406	0.0370	9.0000e-004	0.0379		134.4924	134.4924	4.0500e-003		134.5937
Total	0.0707	0.0472	0.4543	1.3500e-003	0.1397	9.8000e-004	0.1406	0.0370	9.0000e-004	0.0379		134.4924	134.4924	4.0500e-003		134.5937

Otay Lakes Campground Project - San Diego County, Winter

3.5 Architectural Coating - 2020**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Archit. Coating	0.8415					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	1.0837	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0707	0.0472	0.4543	1.3500e-003	0.1397	9.8000e-004	0.1406	0.0370	9.0000e-004	0.0379		134.4924	134.4924	4.0500e-003		134.5937
Total	0.0707	0.0472	0.4543	1.3500e-003	0.1397	9.8000e-004	0.1406	0.0370	9.0000e-004	0.0379		134.4924	134.4924	4.0500e-003		134.5937

4.0 Operational Detail - Mobile

Otay Lakes Campground Project - San Diego County, Winter

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.8772	3.6032	9.4369	0.0283	2.3900	0.0293	2.4193	0.6388	0.0274	0.6663		2,871.159 ₉	2,871.159 ₉	0.1674		2,875.345 ₀
Unmitigated	0.8772	3.6032	9.4369	0.0283	2.3900	0.0293	2.4193	0.6388	0.0274	0.6663		2,871.159 ₉	2,871.159 ₉	0.1674		2,875.345 ₀

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated		
	Weekday	Saturday	Sunday	Annual VMT		Annual VMT		
City Park	175.96	527.94	197.98	489,714		489,714		
Total	175.96	527.94	197.98	489,714		489,714		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271

Otay Lakes Campground Project - San Diego County, Winter

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Otay Lakes Campground Project - San Diego County, Winter

5.2 Energy by Land Use - NaturalGas**Unmitigated**

Land Use	NaturalGas Use kBtu/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated

Land Use	NaturalGas Use kBtu/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail**6.1 Mitigation Measures Area**

Otay Lakes Campground Project - San Diego County, Winter

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Mitigated	0.0947	0.0000	4.6000e-004	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000		9.9000e-004	9.9000e-004	0.0000		1.0600e-003
Unmitigated	0.0947	0.0000	4.6000e-004	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000		9.9000e-004	9.9000e-004	0.0000		1.0600e-003

6.2 Area by SubCategory

Unmitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Architectural Coating	0.0194					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0753					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.0000e-005	0.0000	4.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		9.9000e-004	9.9000e-004	0.0000		1.0600e-003
Total	0.0947	0.0000	4.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		9.9000e-004	9.9000e-004	0.0000		1.0600e-003

Otay Lakes Campground Project - San Diego County, Winter

6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0194					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0753					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.0000e-005	0.0000	4.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		9.9000e-004	9.9000e-004	0.0000		1.0600e-003
Total	0.0947	0.0000	4.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		9.9000e-004	9.9000e-004	0.0000		1.0600e-003

7.0 Water Detail**7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

10.0 Stationary Equipment**Fire Pumps and Emergency Generators**

Otay Lakes Campground Project - San Diego County, Winter

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

APPENDIX B – BIOLOGICAL TECHNICAL REPORT



**BIOLOGICAL TECHNICAL REPORT
FOR THE PROPOSED OTAY LAKES
CAMPGROUND PROJECT
San Diego County, CALIFORNIA**

**PRIVILEGED AND CONFIDENTIAL COMMENTS
ATTORNEY CLIENT COMMUNICATION / ATTORNEY
WORK PRODUCT**

Prepared for:

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GLOSSARY OF TERMS AND ACRONYMS

California Rare Plant Rank (CRPR)

List 1A	=	Plants presumed extinct in California.
List 1B	=	Plants rare and endangered in California and throughout their range.
List 2	=	Plants rare, threatened, or endangered in California but more common elsewhere in their range.
List 3	=	Plants about which we need more information; a review list.
List 4	=	Plants of limited distribution; a watch list.

CRPR Extensions

0.1	=	Seriously endangered in California (greater than 80 percent of occurrences threatened/high degree and immediacy of threat).
0.2	=	Fairly endangered in California (20-80 percent occurrences threatened).
0.3	=	Not very endangered in California (less than 20 percent of occurrences threatened).

Federal

FE	=	Federally listed; Endangered
FT	=	Federally listed; Threatened

State

ST	=	State listed; Threatened
SE	=	State listed; Endangered
SC	=	State Candidate for listing
RARE	=	State-listed; Rare (Listed "Rare" animals have been re-designated as Threatened, but Rare plants have retained the Rare designation.)
BCC	=	Birds of Conservation Concern
SSC	=	State Species of Special Concern
FP	=	CDFW Fully Protected

Local

MSCP	=	San Diego County Multiple Species Conservation Plan South County Segment; Covered
------	---	---

°F	Degrees Fahrenheit
BGEPA	Bald and Golden Eagle Protection Act
BCC	Birds of Conservation Concern
BMPs	Best Management Practices
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
Chambers Group	Chambers Group, Inc.
CNDDDB	California Natural Diversity Database

CNPS	California Native Plant Society
COPE	Challenging Outdoor Personal Experience
CRPR	California Rare Plant Rank
CWA	Clean Water Act
ESA	Endangered Species Act
FESA	Federal Endangered Species Act
Ft.	Feet
GIS	Geographic Information System
GPS	Global Positioning System
MBTA	Migratory Bird Treaty Act
MSCP	Multiple Species Conservation Plan
NCCP	Natural Community Conservation Plan
NOAA	National Oceanic and Atmospheric Administration
NPPA	Native Plant Protection Act
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
PFO	Potential for Occurrence
RWQCB	Regional Water Quality Control Board
SQ. FT.	Square Feet
SSC	California Species of Special Concern
SWRCB	State Water Resources Control Board
TNW	Traditional Navigable Waterway
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

EXECUTIVE SUMMARY

This Biological Technical Report (BTR) has been prepared for the County of San Diego (County), as the lead agency under the California Environmental Quality Act (CEQA), for the Otay Lakes Campground Project (Proposed Project). The Proposed Project is located within the County's Multiple Species Conservation Program (MSCP) South County Subarea Plan, in an area designated as a "take authorized area" where no additional biological mitigation is required (for impacts to species covered under the plan) for development to occur. The purpose of this report is to document the biological resources identified as present or potentially present on the Project; identify potential biological resource impacts resulting from the Project; and recommend measures to avoid, minimize, and/or mitigate significant impacts consistent with federal, state and local rules and regulations under CEQA and MSCP South County Subarea Plan. This BTR incorporates the results of a biological reconnaissance survey and focused surveys.

The Proposed Project includes the development of new and restoration of existing camping facilities, a flag plaza, archery range, fire ring and amphitheater, zip-line, demolition of existing restroom and construction of a new and larger restroom facility with showers overlapping the existing restroom footprint, development of an activity/program area ('Camporee Field'), construction of a fenced storage facility, development of six Challenging Outdoor Personal Experience (COPE) stations, and minor road improvements on County property adjacent to existing active recreational facilities of Otay Lakes County Park. Each of these elements associated with the Proposed Project are explained in further detail within Section 1.3 of this report. The initial site survey was conducted over an approximately 69-acre parcel surrounding Proposed Project features (Study Area). Impacts to habitat were calculated for all project features and anticipated work areas (Project Area), as described in Section 1.3.

The northern portion of the Study Area includes a developed portion of the Otay Lakes County Park consisting of a playground, picnic area, and public restrooms. The remaining portion of the Study Area primarily consists of open space with previously developed campsites and restrooms that are no longer in use, as well as active hiking trails. The Otay River runs through the southern portion of the Study Area. The Project Area is primarily located within previously developed and disturbed areas and utilizes the existing hiking trails.

No listed plant species were identified within the Study Area. One species, San Diego viguiera (*Bahiopsis laciniata*; California Rare Plant Rank [CRPR] List 4.3 and not MSCP-covered), occurs on or near the edge of several Proposed Project features. This species will be flagged for prior to construction and avoided to the extent feasible. Multiple populations of ashy spike moss (*Selaginella cinerascens*; CRPR List 4.1 and not MSCP-covered), and San Diego barrel cactus (*Ferocactus viridescens*; CRPR List 2B.1 and MSCP-covered) are located adjacent to existing access roads and trails; all impacts associated with these features will occur to the existing bare ground of the feature during routine maintenance, with no added impacts as a result of Proposed Project-related activities. The remaining six sensitive plant species observed within the Study Area are far enough removed from the existing facilities that they are not anticipated to be impacted by Proposed Project-related activities. The remaining 60 plant species known from the vicinity are not expected to occur within the Study Area based on the results of focused surveys. Therefore, no significant impacts to sensitive plants are anticipated as a result of the Proposed Project.

One listed sensitive wildlife species that is not covered by the County of San Diego MSCP, the federally endangered Quino checkerspot butterfly (*Euphydryas editha quino*; QCB), was identified as present in the Study Area. This species was found on a west-facing slope on the eastern side of the Study Area, and suitable habitat with host plant was mapped in several areas of the Study Area. The Proposed Project

features have been designed to maintain a 100-foot buffer from host plants and QCB observation locations. In addition, through coordination with the County of San Diego and United States Fish and Wildlife Service (USFWS), mitigation measures have been developed which require physical barriers between host plant locations and permanent Proposed Project components, and environmental awareness training for personnel entering the site during construction and operation of the Proposed Project. Therefore, impacts to sensitive wildlife are anticipated as a result of the Proposed Project.

In addition to QCB, five sensitive wildlife species were observed within the Study Area, including two-striped gartersnake (*Thamnophis hammondi*), red diamond rattlesnake (*Crotalus ruber*), Cooper's hawk (*Accipiter cooperii*), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), and least Bell's vireo (*Vireo bellii pusillus*). A total of 12 wildlife species have a high potential for Occurrence (PFO) including: western spadefoot (*Spea hammondi*), orange-throated whiptail (*Aspidoscelis hyperythra beldingi*), coastal whiptail (*Aspidoscelis tigris stejnegeri*), coast horned lizard (*Phrynosoma blainvillii*), white-tailed kite (*Elanus leucurus*), yellow-breasted chat (*Icteria virens*), coastal California gnatcatcher (*Polioptila californica californica*), grasshopper sparrow (*Ammodramus savannarum*), western mastiff bat (*Eumops perotis californicus*), western red bat (*Lasiurus blossevillii*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), and mule deer (*Odocoileus hemionus*). A total of eight wildlife species have a moderate PFO including: Baja California coachwhip (*Masticophis fuliginosus*), Townsend's big-eared bat (*Corynorhinus townsendii*), northern harrier (*Circus hudsonius*), southwestern willow flycatcher (*Epidonax trallii extimus*), least bittern (*Ixobrychus exilis*), yellow warbler (*Setophaga petechia*), San Diego desert woodrat (*Neotoma lepida intermedia*), and pocketed free-tailed bat (*Nyctinomops femorosaccus*). Various mitigation measures are proposed to minimize potential impacts to the above listed wildlife and plant species, such as but not limited to: any trimming and/or removal of coastal sage scrub habitat shall be conducted outside of the bird breeding season (outside of the period from February 15 through August 30), a monitor should conduct a nesting bird survey prior to construction related activities, and an environmental awareness training should be conducted prior to construction related activities. Therefore, impacts to sensitive wildlife as a result of the Proposed Project are anticipated to be less than significant.

Although jurisdictional features include the Otay River occur within the Study Area, these features are over 250 feet from Proposed Project features. No historic jurisdictional waters or wetlands are mapped near the Proposed Project features and associated work areas, and no potential water features were observed within the Project Area during the surveys.

Construction related to the Proposed Project would result in approximately 1.73 acres of permanent impacts to the surrounding developed lands and vegetation communities. This includes 1.14 acres of brome grass-wild oat grassland and 0.20 acre of California Sagebrush Scrub habitat. The remaining 0.59 acre of permanent impacts will be to Bare Ground, Developed land, Landscape/Ornamental, and Disturbed areas.

Construction related to the Proposed Project would result in approximately 0.51 acres of temporary impacts to the surrounding developed lands and vegetation communities. There will be a temporary loss of approximately 0.12 acre of brome grass-wild oat grassland and California Sagebrush Scrub habitat during construction, which shall be restored to pre-construction conditions to the extent feasible after the Proposed Project is complete. The remaining 0.39 acre of temporary impacts will be to Bare Ground, Developed land, Landscape/Ornamental, and Disturbed areas.

Section 1.0 – INTRODUCTION

1.1 PURPOSE OF THE REPORT

Chambers Group, Inc. (Chambers Group) was retained by the Boy Scouts of America (BSOA) to conduct a literature review, desktop analysis, and field survey to map vegetation communities and identify rare or sensitive resources within and adjacent to the proposed Otay Lakes Campground project (Proposed Project); the Proposed Project is described in greater detail in Section 1.3, below. During the biological assessment, biologists documented vegetation communities and determined the Potential for Occurrence (PFO) of sensitive species and habitats that could support sensitive plant and wildlife species onsite. Information contained in this Biological Technical Report is in accordance with accepted scientific and technical standards that are consistent with the requirements of United States Fish and Wildlife Service (USFWS), the California Department of Fish and Wildlife (CDFW), and the County of San Diego.

The purpose of this report is to document the biological resources identified as present or potentially present on the Proposed Project; identify potential biological resource impacts resulting from the Proposed Project; and recommend measures to avoid, minimize, and/or mitigate significant impacts consistent with federal, state, and local rules and regulations including the California Environmental Quality Act (CEQA) and the San Diego County Multiple Species Conservation Program (MSCP) South County Subarea Plan.

1.2 PROJECT LOCATION

Otay Lakes County Park is located at 2270 Wueste Road in Chula Vista, California, San Diego County. The Proposed Project would occur within a 69-acre parcel of County of San Diego-owned property (APN: 644-10-019) within Otay Lakes County Park, herein referred to as the “Study Area” for the Proposed Project (Figure 1). The Study Area encompasses a larger area than what will be directly impacted for the Proposed Project in order to 1) adequately assess the biological resources within and adjacent to the Proposed Project features and associated work areas (herein referred to as the “Project Area”) and 2) design the Proposed Project to avoid and minimize impacts to sensitive biological resources to the extent feasible.

The Study Area is located between Lower Otay Lake and Otay River along a gently sloping hillside on the northern escarpment of the Otay River Valley. Elevation in the Study Area ranges from approximately 255 to 662 feet above mean sea level (amsl). The northwestern quadrant of the Study Area is an active recreational site of Otay Lakes County Park consisting of a playground, landscaping, picnic area, restrooms, and parking lot. Well-maintained hiking trails and access roads originate from the parking lot and meander through open space within the remainder of the Study Area. A former campground that has been inactive for a number of years is situated in the approximate center of the Study Area. Existing facilities within this former campground include a large graded area, tent sites, and abandoned restroom facilities. The eastern portions of the Study Area consist of undeveloped lands dominated by a matrix of open scrub and grassland habitat. The southern areas of the Study Area are dominated by the steep rocky gorge of the eastern Otay River Valley. The Otay River is impounded by Savage Dam (located northeast of the Study Area) that last overflowed into the Otay River (Figure 2) in 2017 (Burks 2017). The Otay River flows east to west across the lower portions of the Survey Area and continues for approximately 25 miles before emptying into San Diego Bay. A diverse density and species composition of invasive species are located throughout the native habitat of the Study Area, most heavily concentrated along access roads in the unused portion of the park.

1.3 PROJECT DESCRIPTION

The Proposed Project includes the development of new camping facilities, a flag plaza, archery range, fire ring and amphitheater with an associated stage, zip-line, demolition of existing restroom and construction of a new and larger restroom facility with showers overlapping the existing restroom footprint, development of the Camporee Field, construction of a fenced storage facility, development of six Challenging Outdoor Personal Experience (COPE) stations, restore six existing camping sites, and minor road improvements, as necessary, on County property adjacent to Otay Lakes County Park; the location of each is detailed in Figure 3.

The following sections discuss each component of the Proposed Project.

1.3.1 Camping Facilities

The camping facilities component of the Proposed Project would include the establishment of seven new multipurpose campsites and rehabilitation of six existing campsites that are conducive to family-style or group camping. Each campsite would require surface preparation (i.e. site clearing and ground leveling) to adequately accommodate tents and would be located near a water source. Existing campsites, currently in disrepair, would be restored for camping purposes; work associated with the restoration of existing campsites would also require site clearing and ground leveling. It is anticipated that each campsite would be multipurpose, serving as an instructional and activity area and as a campsite. Each campsite would have a small, hard-covered area for food and personal equipment storage with two picnic tables and would be designed to accommodate 6 to 8 people. It should be noted that the camping facilities will be available for reservation by youth organizations or other not for profit organizations. Reservation approval would be at the sole discretion of BSA. Additionally, BSA would provide appropriate staffing for the days that outside organizations reserve the Proposed Project site.

1.3.2 Flag Plaza

The flag plaza would include construction of a concrete slab that would accommodate three flag poles. The flag plaza would be erected as a place of ceremony, commemoration, and communication, and would be located adjacent to the new campsite associated with the Proposed Project. The Flag Plaza would be approximately 30 feet (ft.) by 10 ft. and the flag poles would be approximately 25 feet in height. The areas adjacent to the Flag Plaza, including the area associated with the new campsites provide a place for youth to stand during ceremonies. A 15-foot temporary impact buffer will be established during construction to account for equipment positioning, staging, and access.

1.3.3 Restroom Facilities

The existing restroom facility, which is currently not in operation, would be demolished and replaced with a new comfort station. The new restroom facility would include twelve single-user bathrooms, two showers to support large group camping, family restrooms, and showers. The footprint of the restroom facility would be approximately 60 ft. by 30 ft. The replacement comfort station would be connected to the existing park sewer infrastructure and the showers would be coin operated. The new restroom facility would be designed for energy efficiency, including solar panels with an auxiliary battery storage system. All restroom facilities will comply with the Americans with Disabilities Act (ADA) and current state regulations. A 15-foot temporary impact buffer will be established during construction to account for equipment positioning, staging, and access.

1.3.4 Camporee Field

The primary activity/program area, or Camporee Field, would be developed to host large groups of up to 400 people; the Camporee Field area would require minor brush clearing to accommodate groups within the designated area. The Camporee Field would be four acres in size and would be used as a large activity field for traditional games (i.e. capture the flag, tag, tug-of-war, relay races, etc.), teambuilding activities, trainings, and ceremonies. Additionally, the Camporee Field area will be used as an overflow camping area. Although Camporee Field will not have a delineated campground area, overflow camping would be possible within the area designated as Camporee Field. These sites would only be available for camping during the special event weekends. The field will be maintained and/or mowed on an 'as needed' basis to keep non-native and shrub species from establishing to facilitate utilization.

Additionally, to serve the Camporee Field in the lower portion of the Proposed Project site, the Proposed Project will utilize portable toilets. The portable toilets would be delivered to the Proposed Project site prior to the special event weekends and picked up following the special event weekends. However, the County of San Diego is currently working on permitting and design of a permitting sewer service connection to the Proposed Project site. The County of San Diego has reached an agreement with the City of Chula Vista to tie into the City of Chula Vista's municipal sewer system south of the Proposed Project site. Although the permitting process for sewer service is underway, approval is expected following completion of this IS/MND.

1.3.5 COPE Course

The COPE Course would include six stations (four stations at 10 ft. by 20 ft., one plot at 20 ft. by 30 ft., and one at 15 ft. by 15 ft.) and would be located adjacent to an existing trail. General activities at each station include team initiative games that would require a group of participants to plan and work together to solve a problem or accomplish a goal. Most involve the team moving some or all members through or across an element made of wood and rope; each activity would be designed to be disabled when not in use. The stations would be designed in a way that guides users from one station to the next with the final station leading to the zip-line platform. When not in use, the COPE Course stations would be disassembled. Site preparation for the COPE Course stations include brush clearing and ground leveling.

1.3.6 Zip-line

The zip-line would include one platform and support columns at the top of the zip-line and one platform and support columns at the end. The upper platform would be approximately 15 ft. by 30 ft. and the lower platform would be 35 ft. by 40 ft. The platform and support column would be made from wood or trex. The distance from the upper platform to the lower platform is approximately 900 ft. The height of the support columns would be approximately 30 ft. high and the height of the zip-line would be approximately 25 ft. Installation of the poles would require a 3 ft. by 3 ft. work area to drill the holes approximately 5 ft. deep. Additionally, two anchor screws approximately 6 to 10 ft. from the support columns would be required for tension. The zip-line proposed is defined under California Labor Code § 7921 as a commercial zip-line; therefore, zip-line is subject to the California Division of Occupational Safety and Health regulatory authority. Prior to issuance of a permit, the zip-line must be evaluated by a professional engineer, and components would be tested to recognized standards. Additionally, the zip-line would always be operated by a trained professional. A 15-foot temporary impact buffer surrounding the zip-line base stations will be established during construction to account for equipment positioning, staging, and access. In addition, the anchors will require a 3 ft. by 3 ft. temporary work area for installation and guy

wire attachment. If a pulling rig is required to ensure proper tension of the zip line, the puller will be located within the adjacent access road at either end of the line.

1.3.7 Fenced Storage

Storage facilities would be constructed with two large cargo containers adjacent to the new campsites; the storage containers would be inside a fenced area. Construction of the storage areas would require minor brush clearing and fence installation. The storage containers are 20 ft. by 20 ft. with a peak height of 12.5 ft. The storage containers would provide a secure storage area for equipment and materials used for instruction and enjoyment of the local surroundings, such as, but not limited to: mountain and road bikes, archery equipment, fishing rods, canoeing accessories, zip-line equipment, and/or COPE course equipment. It should be noted that no hazardous materials, aside from routine maintenance and cleaning supplies, would be stored in the storage facilities.

1.3.8 Proposed Project Site Circulation

The Proposed Project would include minor road improvements, as necessary, to the existing dirt road servicing the Proposed Project site. Improvements would involve minor ground leveling and pothole maintenance (i.e. decomposed granite installation) where needed. All vehicles travelling on access roads within the Proposed Project site, including porta-potty haulers, would be trucks or other utility vehicles capable of travelling on uneven dirt roads. The roads would be improved as needed to ensure safe travel within the Proposed Project site. All vehicles travelling within the Proposed Project site would be limited to 10 miles per hour and vehicles would be restricted to the existing dirt roads within the Proposed Project site. It should be noted that the roads are currently used by City and County vehicles for maintenance activities associated with the park and Lower Otay Reservoir.

1.3.9 Fire Ring and Amphitheater

The Proposed Project would include the construction of an amphitheater which includes an approximately 150 square foot stage and seating for approximately 100 people. Additionally, a fire ring three feet in diameter will be installed. The stage and seating would be constructed of wood. Minor brush clearing and ground leveling may be required; however, the site would not require grading or significant earthwork to accommodate the amphitheater. Events at the amphitheater would likely include programmed activities (i.e. informational presentations or talent shows). It should be noted that campfires contained within the fire ring would not be allowed during National Oceanic and Atmospheric Administration (NOAA) Red Flag days. A 15-foot temporary impact buffer will be established during construction to account for equipment positioning, staging, and access.

1.3.10 Archery Range

The Proposed Project would include the establishment of an archery range along the western edge of the Study Area in a generally northwest-southeast orientation. The range would include temporary bumpers that will be set up along the eastern and western sides of the range to contain any stray arrows and associated impacts associated with retrieval of lost arrows. The archery range is anticipated to be approximately 50 ft. by 100 ft. and south of an existing access road.

1.3.11 Construction Activities

Construction of the Proposed Project is anticipated to occur in a single phase, with the exception of the restroom facility, over a period of 6 months and is anticipated to take place from approximately January 2020 to June 2020. It should be noted that the restroom facility may be constructed at a later date.

Construction equipment utilized for the Project would include: a cement truck, truck mounted crane, augurs, a motograder for ground leveling, and hand tools for minor brush clearing.

1.4 Approvals and Permits Required

The County of San Diego is the lead agency under CEQA and is responsible for the approval and implementation of the Proposed Project. There are no responsible or trustee agencies.

Section 2.0 – APPLICABLE REGULATIONS

The following federal, state, and local regulations and policies pertain to biological resources and are relevant to the Proposed Project.

2.1 FEDERAL

The following are federal policies that apply to the Proposed Project.

2.1.1 Clean Water Act

The purpose of the Clean Water Act (CWA) is to “restore and maintain the chemical, physical, and biological integrity of the nation’s waters.” Section 404 of the CWA prohibits the discharge of fill material into waters of the U.S. without a permit from the U.S. Army Corps of Engineers (USACE). The definition of waters of the U.S. includes rivers, streams, estuaries, the territorial seas, ponds, lakes, and wetlands. Wetlands are defined as those areas “that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 CFR § 328.3(b)). The goals and standards of the CWA are enforced through permit provisions. The U.S. Environmental Protection Agency also has authority over wetlands and may override a USACE permit.

When a project may create impacts for wetlands, the project requires a permit or a waiver. Substantial impacts to wetlands may require an Individual Permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing Nationwide Permits. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required from the Regional Water Quality Control Board (RWQCB) for Section 404 permit actions.

Clean Water Rule

The Clean Water Rule: Definition of Waters of the United States—published in the Federal Register on June 29, 2015 and effective August 28, 2015—was enacted to ensure that waters protected under the CWA are more precisely defined and predictably determined.

2.1.2 Federal Endangered Species Act of 1973

When a private project that has no federal funding and for which no federal action is required may affect a listed species, the private applicant may receive authorization for incidental take of species listed under the Federal Endangered Species Act (FESA). In these situations, Section 10 of the FESA provides for issuance of incidental take permits (ITPs) to private entities with the development of a Habitat Conservation Plan (HCP). An ITP allows take of the species that is incidental to another authorized activity.

Quino checkerspot butterfly (Euphydryas editha quino; QCB) Critical Habitat Definition

The QCB was listed as an endangered species on January 16, 1997 (62 FR 2313) and is protected under the provisions of the Endangered Species Act of 1973, as amended. Primary constituent elements (PCEs) for QCB Critical Habitat defined in the FR designating critical habitat for QCB (74 FR 28775) include, but are not limited to:

- Plant communities in their natural state or those that have been recently disturbed (e.g., by fire or grubbing) that provide populations of host plants, dwarf plantain and wooly plantain (*Plantago patagonica*), and nectar sources for the QCB.
- Habitat suitability is determined by larval host plant density, topographic diversity, nectar resource availability, and climatic conditions.
- PCEs can exist in undeveloped areas that support various types of sage scrub, chaparral, grassland, and similar plant communities that provide habitat for host and nectar sources.

2.1.3 Migratory Bird Treaty Act, as Amended

The Migratory Bird Treaty Act (MBTA) of 1918, as amended (16 USC 703-711), provides legal protection for almost all bird species occurring in, migrating through, or spending a portion of their life cycle in North America by restricting the killing, taking, collecting, and selling or purchasing of native bird species or their parts, nests, or eggs. USFWS determined it was illegal under the MBTA to directly kill or destroy an active nest (nest with eggs or nestlings) of, nearly any bird species (with the exception of non-native species through the MBTA Reform Act of 2004). Certain game bird species are allowed to be hunted for specific periods determined by federal and state governments. The intent of the MBTA is to eliminate any commercial market for migratory birds, feathers, or bird parts, especially for eagles and other birds of prey. As authorized by the MBTA, the USFWS issues permits to qualified applicants for the following types of activities:

- Falconry
- Raptor propagation
- Scientific collecting
- Special purposes, such as rehabilitation, education, migratory game bird propagation, and salvage
- Take of depredating birds, taxidermy, and waterfowl sale and disposal

The regulations governing migratory bird permits can be found in Title 50, Part 13 (General Permit Procedures) and Part 21 (Migratory Bird Permits) of the CFR.

2.1.4 Bald and Golden Eagle Protection Act, as Amended

The Bald and Golden Eagle Protection Act (BGEPA) of 1940, as amended (16 USC. 668-668c), provides legal protection to bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*) in addition to protection afforded under the MBTA. The BGEPA prohibits the “take” (to pursue, shoot, shoot at, wound, kill, capture, trap, collect, molest, or disturb) of bald and golden eagles including their nests, eggs, or parts. “Disturbance” of bald and golden eagles is also prohibited under the BGEPA; and “disturbance” relates to injuries to bald or golden eagles or a disruption to life cycles, productivity, and/or substantial interference of normal bald and golden eagle behavior. The BGEPA also extends to potential impacts to bald and golden eagles caused by human-induced environmental changes near a previously used nest when the eagles are not present.

2.2 STATE

The following sections detail specific California State regulations are applicable to the Proposed Project.

2.2.1 California Endangered Species Act

The California Endangered Species Act (CESA; California Fish and Wildlife Code Sections 2050-2116) parallels the FESA. As a responsible agency, CDFW has regulatory authority over species State listed as endangered and threatened. The State Legislature encourages cooperative and simultaneous findings between State and federal agencies. Consultation with CDFW is required for projects with the potential to affect listed or candidate species. CDFW would determine whether a reasonable alternative would be required for the conservation of the species. CESA prohibits the “take” of these species unless an ITP is granted. Under California Fish and Wildlife Code Section 2081 (ITP), CDFW can authorize the “take” of a listed species (with exception to fully protected species) if the “take” of the listed species is incidental to carrying out an otherwise lawful project that has been approved under the California Environmental Quality Act (CEQA). Section 2080.1 allows for “take” once an applicant obtains a federal ITP which can be approved (Consistency Determination letter) within 30 days by the CDFW Director. If the federal Incidental Take Statement is determined not to be consistent with CESA, then application for a State ITP (2081) is required.

The California Fish and Wildlife Code outlines protection for fully protected species of mammals, birds, reptiles, amphibians, and fish. Species that are “fully protected” (FP) may not be taken or possessed at any time. CDFW has designated certain species native to California as Species of Special Concern to “focus attention on wildlife at conservation risk by the Department, other State, Local and Federal governmental entities, regulators, land managers, planners, consulting biologists, and others; stimulate research on poorly known species; achieve conservation and recovery of wildlife before they meet CESA criteria for listing as threatened or endangered.”

2.2.2 State Fully Protected Species

The State of California designated species as Fully Protected (FP) prior to the creation of CESA and FESA. Lists of FP species were initially developed to provide protection to species that were rare or faced possible extinction/extirpation. Most FP species have since been State listed as threatened or endangered species. Under California Fish and Wildlife Code Section 4700, FP species may not be taken or possessed at any time.

In September 2011, the California Legislature sent the Governor legislation authorizing CDFW to permit the incidental take of 36 FP species pursuant to a NCCP approved by CDFW (Senate Bill 618 [Wolk]). The legislation gives FP species the same level of protection as provided under the NCCP Act for endangered and threatened species (California Fish and Wildlife Code § 2835). The NCCP Act, enacted in the 1990s, authorizes the incidental take of species “whose conservation and management” is provided for in a conservation plan approved by CDFW.

2.2.3 Sections 1600-1602 of the California Fish and Wildlife Code

Pursuant to Division 2, Chapter 6, Sections 1600-1602 of the California Fish and Wildlife Code, CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake, which supports fish or wildlife. CDFW defines a “stream” (including creeks and rivers) as “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation.” CDFW’s definition of “lake” includes “natural lakes or man-made reservoirs.” CDFW limits of jurisdiction include the maximum extent of the uppermost bank-to-bank distance or riparian vegetation dripline.

2.2.4 California Environmental Quality Act

The CEQA (Public Resources Code, Sections 21000-21177) requires that State and local agencies consider environmental consequences and project alternatives before a decision is made to implement a project requiring State or local government approval, financing, or participation by the State of California. In addition, CEQA requires the identification of ways to avoid or reduce environmental degradation or prevent environmental damage by requiring implementation of feasible alternatives or mitigation measures.

2.2.5 California Native Plant Protection Act

The Native Plant Protection Act (NPPA) of 1977 (California Fish and Game Code §§ 1900-1913) was created with the intent to “preserve, protect, and enhance rare and endangered plants in this State.” The NPPA is administered by the CDFW. The California Fish and Game Commission has the authority to designate native plants as “endangered” or “rare” and to protect them from take. Rare plants protected by CDFW generally include species with California Rare Plant Ranking (CRPR) 1A, 1B, 2A, and 2B of the CNPS Inventory of Rare and Endangered Vascular Plants of California. In addition, sometimes CRPR 3 and 4 plants are considered rare if the population has local significance in the area and is impacted by a project.

When the CESA was passed in 1984, it expanded on the original NPPA, enhanced legal protection for plants, and created the categories of “threatened” and “endangered” species to parallel the FESA. The CESA converted all rare wildlife to threatened species under the NPPA, but did not do so for rare plants, which resulted in three listing categories for plants in California: rare, threatened, and endangered. The NPPA remains part of the California Fish and Game Code, and mitigation measures for impacts to rare plants are specified in a formal agreement between the CDFW and a project proponent.

2.2.6 Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 1966 (California Water Code §§ 13000-13999.10) mandates that activities that may affect waters of the State shall be regulated to attain the highest quality.

The State Water Resources Control Board (SWRCB) and the local RWQCB are the relevant permitting agencies. RWQCB provides regulations for a “non-degradation policy” that are especially protective of areas with high water quality. Porter-Cologne reserves the right for the State of California to regulate activities that could affect the quantity and/or quality of surface and/or ground waters, including isolated wetlands, within the State. Waters of the State include isolated waters that are no longer regulated by USACE. If the project is proposed to discharge into waters of the State, a Waste Discharge Report (WDR), or a waiver to WDRs, must be filed before beginning discharge.

2.3 LOCAL

The following discussion of local regulations relating to biological resources is provided for informational purposes.

2.3.1 County of San Diego General Plan

The *County of San Diego General Plan* provides direction for future growth in the unincorporated areas of San Diego County and provides policies related to land use, mobility, conservation, housing, safety, and noise. The *County of San Diego General Plan Land Use Element* provides a framework for managing future development in the County so that it is thoughtful of the existing character of the current communities and the sensitive natural resources within the County.

The *County of San Diego General Plan* contains the following relevant policies:

- **Conservation and Open Space (COS) Policy COS-1.2:** Minimize Impacts. Prohibit private development within established preserves. Minimize impacts within established preserves when the construction of public infrastructure is unavoidable.
- **COS Policy COS-1.3:** Management. Monitor, manage, and maintain the regional preserve system facilitating the survival of native species and the preservation of healthy populations of rare, threatened, or endangered species.
- **COS Policy COS-2.1:** Protection, Restoration and Enhancement. Protect and enhance natural wildlife habitat outside of preserves as development occurs according to the underlying land use designation. Limit the degradation of regionally important natural habitats within the Semi-Rural and Rural Lands regional categories, as well as within Village lands where appropriate.
- **COS Policy COS-2.2:** Habitat Protection through Site Design. Require development to be sited in the least biologically sensitive areas and minimize the loss of natural habitat through site design.

2.3.2 County of San Diego Multiple Species Conservation Plan Subarea Plan

The County of San Diego MSCP Subarea Plan, adopted on October 22, 1997, covers the southwestern portion of the County’s unincorporated area, and applies to unincorporated lands within the Survey Area. It serves to protect designated sensitive plant and wildlife species and their habitats depending on location and site characteristics. The San Diego County MSCP Subarea Plan is divided into three segments, one of which is the South County Segment (SCS), within which the Proposed Project is located. The SCS contains areas in which landowners have negotiated with the Wildlife Agencies and County for areas that will be set aside as preserve lands in perpetuity. In return, there are also areas approved for development. The

Wildlife Agencies have agreed to the placement of conservation and development areas; accordingly, projects approved by the County consistent with the Subarea Plan SCS will not require additional approvals from the Wildlife Agencies. Wetlands impacts throughout the County Subarea will continue to be subject to the Federal Water Pollution Act and Fish and Game Code Section 1600 processes, as appropriate.

The SCS includes approximately 82,767 acres within the County jurisdiction, which includes approximately 48,240 acres of preserve area. The SCS covers substantial areas around the urban fringe of the southwestern portion of the County, from the international border to the Sweetwater River drainage, including major parts of the San Miguel, San Ysidro, and Jamul mountains. MSCP Subarea Plan authorizes use of the Project site as active recreation and excludes the site from preserve requirements.

The native vegetation of the SCS preserve area is dominated by coastal sage scrub and chaparral species. In addition, the largest stands of Tecate cypress (*Hesperocyparis forbesii*) woodland in the U.S. exist on the slopes of Otay and Tecate Peaks in the SCS. Other habitats in the preserve area include grasslands, coast live oak riparian forest, riparian forest, oak woodlands, and disturbed habitats.

2.3.3 Otay Valley Regional Park Concept Plan

The County and the cities of San Diego and Chula Vista adopted the Otay Valley Regional Park Concept Plan after a multi-year planning effort to coordinate an interjurisdictional approach to park and recreational planning for the area. The plan calls for a regional park to extend from the salt ponds on the coast, through the Otay River Valley, to Upper and Lower Otay Lakes. The goal of the Otay Valley Regional Park Concept Plan is to provide policy direction to the three jurisdictions for the acquisition of properties and development of a regional park. The plan also provides for a regional trail system to be developed along the river, as well as viewpoints, recreational areas, and two interpretive centers. The plan calls for sensitive areas within the boundaries established by the San Diego MSCP to be designated as Open Space/Core Preserve Areas. Efforts toward implementation of this plan have been made by the cooperating jurisdictions, including the partial development of a trail system and a large acquisition of open space by the County. The portions of the regional trail system that have been developed are outside of the Proposed Project area, but the land acquired for open space by the County is located immediately south of the Proposed Project.

2.3.4 County of San Diego Tree Ordinance

The San Diego Regulatory Code of Ordinances, Title 7, Division 1, Chapter 5 regulates the planting, trimming, and removal of trees on County-owned property and County highways. The Proposed Project is not anticipated to conflict with the County of San Diego tree ordinance.

2.4 APPLICABLE LISTING ABBREVIATIONS

Below is a list of applicable abbreviations that are applied in the PFO ranking of sensitive plants and animals located within the Study Area.

2.4.1 California Rare Plant Rank (CRPR)

The following details the abbreviations applicable to sensitive plants identified within the Study Area:

- List 1A = Plants presumed extinct in California.
- List 1B = Plants rare and endangered in California and throughout their range.
- List 2 = Plants rare, threatened, or endangered in California but more common elsewhere in their range.
- List 3 = Plants about which we need more information; a review list.
- List 4 = Plants of limited distribution; a watch list.

CRPR Extensions

The following extensions to the above noted Lists serve to further refine the level of threat experienced by sensitive plant species located within the Study Area:

- 0.1 = Seriously endangered in California (greater than 80 percent of occurrences threatened/high degree and immediacy of threat).
- 0.2 = Fairly endangered in California (20-80 percent occurrences threatened).
- 0.3 = Not very endangered in California (less than 20 percent of occurrences threatened).

2.4.2 Federal

Below is a list of abbreviations that are applied to PFO ranking of sensitive plants and animals located within the Study Area that are Federally listed:

- FE = Federally listed; Endangered
- FT = Federally listed; Threatened

2.4.3 State

Below is a list of abbreviations that are applied to PFO ranking of sensitive plants and animals located within the Study Area that are California state listed:

- ST = State listed; Threatened
- SE = State listed; Endangered
- RARE = State-listed; Rare (Listed "Rare" animals have been re-designated as Threatened, but Rare plants have retained the Rare designation.)
- BCC = Birds of Conservation Concern
- SSC = State Species of Special Concern
- FP = CDFW Fully Protected

2.4.4 Local

Below is a list of abbreviations that are applied to PFO ranking of sensitive plants and animals located within the Study Area that are listed within the County of San Diego:

- MSCP = San Diego County Multiple Species Conservation Plan South County Segment; Covered

Section 3.0 – SURVEY METHODOLOGIES

Below is a summary of the various survey methodologies that were used for the initial site survey and subsequent focused surveys.

3.1.1 Biological Reconnaissance Survey

Chambers Group biologists Clark Austin and Laurie Gorman conducted a general reconnaissance survey to map vegetation communities and to identify habitats that could support sensitive plant and wildlife species. All vegetation communities observed within the Study Area were recorded as well as all sensitive plant and animal species observed. The survey was conducted over two site visits. The second site visit included a focused habitat assessment for QCB, in accordance with the USFWS QCB Survey Guidelines (QCB Survey Guidelines; USFWS 2014) to map all areas requiring QCB surveys. Survey conditions are provided below.

Table 1: Conditions for Initial Site Survey

Date	Survey Type	Surveyors	Temp	Weather	Wind (mph)
Nov. 26, 2018	Reconnaissance Survey	Clark Austin	71-74	15-20% Cloud Cover	1-5
Feb. 23, 2019	Reconnaissance Survey and QCB Habitat Assessment	Laurie Gorman and Clark Austin	63-64	0% Cloud Cover	1-7

3.1.2 Flora and Fauna

The most recent records of the California Natural Diversity Database (CNDDDB) managed by the CDFW (CDFW 2019) and the California Native Plant Society's Electronic Inventory (CNPSEI) of Rare and Endangered Vascular Plants of California (CNPS 2019) were reviewed within five miles of the Study Area. These databases contain records of reported occurrences of federally- or state-listed as endangered or threatened species, proposed endangered or threatened species, California Species of Concern (SSC), or otherwise sensitive species or habitats that may occur within or in the immediate vicinity of the Study Area.

All wildlife and wildlife signs observed and detected, including tracks, scat, carcasses, burrows, excavations, and vocalizations, were recorded. Additional survey time was spent in those habitats most likely to be utilized by wildlife (native vegetation, wildlife trails, etc.) or in habitats with the potential to support federally, state-listed, or otherwise sensitive species. Notes were made on the general habitat types, species observed, and the conditions of the Study Area. Focused surveys were conducted for QCB in February, March, and April; and rare plant surveys in April and a second survey in June.

The following table was used to determine the PFO for each of the species identified within the literature search.

Table 2: Criteria for Evaluating Sensitive Species Potential for Occurrence

POTENTIAL FOR OCCURRENCE (PFO)	CRITERIA
Presumed Absent:	Species is restricted to habitats or environmental conditions that do not occur within the Study Area.
Low:	Historical records for this species do not exist within the vicinity (approximately five miles) of the Study Area, and/or habitats or environmental conditions needed to support the species are of poor quality.
Moderate:	Either a historical record exists of the species within the vicinity of the Study Area (approximately five miles) and marginal habitat exists within the site; or the habitat requirements or environmental conditions associated with the species occur within the Study Area, but no historical records exist within five miles of the Proposed Project site.
High:	Both a historical record exists of the species within the Study Area or its vicinity (approximately five miles), and the habitat requirements and environmental conditions associated with the species occur within the Proposed Project site.
Present:	Species was detected within the Study Area site at the time of the survey.

The location of prior CNDDDB and USFWS records of occurrence were used as additional data, but since the CNDDDB is a positive-sighting database; this data was used only in support of the analysis from the previously identified factors. The PFO was determined through a combination of these databases and habitat quality identified during field survey efforts. Species-based assessments were referenced through a variety of tools and publications including, but not limited to: Tremore *et al.* (2017), Unit and Klovstad (2004), and Calflora (2019).

3.1.3 Focused Sensitive Plant Surveys

Due to the spread of anticipated blooming periods and the presence of favorable environmental conditions (prolonged and prolific rain year) for sensitive plant species to occur within the Survey Area, two rounds of sensitive plant surveys were conducted in spring 2019 within the Survey Area to capture the blooming periods for each of the 68 targeted species with a low, moderate or high PFO. Three categories of special-status plant species were targeted. Category 1 species targeted all federally threatened or endangered plant species, Category 2 targeted all state threatened or endangered plant species, and Category 3 targeted plants not listed as federally and/or state threatened or endangered with a CRPR of 1 or 2. Special-status plant species targeted during the surveys are listed and evaluated in Section 4.1.3.

Focused plant surveys were performed in accordance with survey protocols set forth by CDFW, CNPS, and USFWS Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants (CDFW 2009; CNPS 2001; USFWS 2000). Species identified as being sensitive and having the potential to occur within the Survey Area were reviewed by Chambers Group botanists prior to the beginning of surveys each day. Botanists walked transects within the Survey Area spaced approximately 30 feet apart and visually surveyed for any signs of the targeted plant species. A complete inventory of all plant species observed within the Survey Area was prepared. Sensitive plant species observed during the survey were documented by counting individuals or estimating numbers for larger populations, characterizing the approximate population size, and recording a Global Positioning System (GPS) location.

Areas that were designated as private property separated by fences and signs were not accessed on foot; surveys were conducted by binocular from outside the property boundary unless specific permission to enter was granted by the landowner.

The focused sensitive plant surveys were conducted by botanists John and Melanie Dicus. Survey conditions are provided in Table 3, below.

Table 3: Conditions for Focused Plant Surveys

Date	Survey Type	Surveyors	Temp	Weather	Wind (mph)
April 11, 2019	Focused Plant Survey (Round 1)	Melanie and John Dicus	62-67	20-50% Cloud Cover	1-4
May 30, 2019	Focused Plant Survey (Round 2)	Melanie and John Dicus	64-70	30-100% Cloud Cover	2-5

3.1.4 Focused QCB Surveys

Due to the presence of environmental conditions (accumulated rainfall, weather, and temperature conditions) suitable for QCB to occur within the Survey Area, QCB surveys were conducted according to the USFWS QCB Survey Guidelines (QCB Survey Guidelines; USFWS 2014). Surveys throughout all potentially suitable habitat (i.e., where no QCB excluded areas were mapped during the habitat assessment) were initiated at the beginning of the QCB flight season, following a 15-day survey notification submitted to USFWS on February 8, 2019. In order to maximize species detectability, surveys were continued up to twice per week, weather permitting, while maintaining a temporal spacing of at least four days apart.

The QCB surveys were conducted for the required minimum survey timeframe of five continuous weeks. Within the five-week period, QCB had been identified within the Study Area. The QCB Survey Guidelines state that if a QCB is detected during any survey within the first 5 weeks, surveys do not need to be conducted after the fifth week. Therefore, the surveys were concluded after the fifth week. When a QCB was detected in the QCB Survey Area, the USFWS was notified within 24 hours by the permitted QCB biologist.

Surveys were conducted by walking survey routes that were roughly parallel to each other, spaced approximately 30 ft. apart, and within 15 ft. of the Survey Area boundary and/or the perimeter of excluded areas. Chambers Group biologists conducted the surveys at a rate of approximately 5 to 10 acres per person/hour and under suitable weather conditions defined as (1) no significant precipitation (e.g., fog, drizzle, or rain); (2) sustained or gusting winds averaging less than 15 miles per hour over a 30 second period at a height of 4 to 6 ft. above ground level; and (3) temperatures of at least 60 degrees Fahrenheit (°F) in the shade at ground level on a clear, sunny day (i.e., less than 50 percent cloud cover), and temperatures of at least 70°F on cloudy days (i.e., greater than 50 percent cloud cover).

Butterfly species observed and numbers of each species were recorded during each weekly survey. Butterflies observed during the surveys were identified by sight and with the aid of binoculars. Biologists also recorded and updated information on host plant populations, including revised numbers, densities, and new locations, as well as a list of potential nectar sources. Additional observations of larval host plant populations were mapped with the aid of hand-held GPS units and/or hand-drawn onto high-resolution

aerial field maps, and potential nectar plant species were documented. Butterfly identification and nomenclature was based on field guides by Shiraiwa (2009) and Glassberg (2001).

Focused QCB surveys were conducted by USFWS-permitted biologists Laurie Gorman (TE-233367-3) and Travis Cooper (TE-170389-6), assisted by Clark Austin and Kaelin McAtee. Survey conditions are provided in Table 4, below.

Table 4: Conditions for Focused QCB Surveys

Date	Survey Type	Surveyors	Temp	Weather	Wind (mph)
Feb. 23, 2019	Focused QCB Survey (Round 1)	Laurie Gorman and Clark Austin	64-69	0% Cloud Cover	0-7
Mar. 1, 2019	Focused QCB Survey (Round 2)	Laurie Gorman and Clark Austin	70-74	40-80% Cloud Cover	0-3
Mar. 7, 2019	Focused QCB Survey (Round 3)	Laurie Gorman, Travis Cooper, and Clark Austin	70-71	55-90% Cloud Cover	0-3
Mar. 14, 2019	Focused QCB Survey (Round 4)	Travis Cooper	61-66	0% Cloud Cover	0-3
Mar. 15, 2019	Focused QCB Survey (Round 4)	Laurie Gorman and Clark Austin	64-74	30-50% Cloud Cover	0-3
Mar. 18, 2019	Focused QCB Survey (Round 5)	Laurie Gorman	70-72	0-25% Cloud Cover	0-2
Mar. 19, 2019	Focused QCB Survey (Round 5)	Laurie Gorman, Kaelin McAtee, and Clark Austin	62-74	2-5% Cloud Cover	0-2

3.1.5 Soils

Soil maps for San Diego County were referenced online (<http://soils.usda.gov/technical/classification/osd/index.html>) to determine the types of soil found within the Study Area. Soils were determined in accordance with categories set forth by the United States Department of Agriculture (USDA) Soil Conservation Service and by referencing the USDA Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA 2019).

3.1.6 Vegetation

General vegetation communities within the Study Area were identified, qualitatively described, and mapped onto an aerial photograph. Plant communities were determined in accordance with the categories set forth in the Manual of California Vegetation (Sawyer et al. 2007). Plant nomenclature follows that of *The Jepson Manual* (Baldwin, B.G et al. 2012).

The Proposed Project is located within a “Take Authorized” area and therefore no mitigation is required for project related impacts; therefore, habitat sensitivity tier is not reported in this document.

3.1.7 Critical Habitat

USFWS critical habitat maps were consulted and analyzed for any designated areas within the general area of the Proposed Project.

3.1.8 Jurisdictional Waters

A general assessment of potential jurisdictional waters regulated by the USACE, RWQCB, and CDFW was conducted for the Study Area. The assessment was conducted by a desktop survey through the USGS National Hydrography Dataset for hydrological connectivity. In addition, USFWS National Wetlands Inventory (NWI) Maps were referenced to determine potential wetland or other water features occurring within the Study Area.

3.1.9 Preserve, Habitat Connectivity, and Wildlife Corridors

Preserve

The Proposed Project is located within the geographic area covered by the *County of San Diego General Plan* (see Section 2.3.1). As part of the literature review for the Proposed Project, project features and site boundaries were overlain on *County of San Diego General Plan* preserve maps to determine whether the Proposed Project falls within one of the County's designated Subarea preserve units.

Habitat Connectivity and Wildlife Corridors

Wildlife corridors are areas that connect fragmented habitats. They serve as wildlife linkages (wildlife travel corridors) between otherwise fragmented patches of habitat caused by changes in vegetation communities, rugged terrain, and human disturbances. These linkages may be drainages, canyons, or ridgelines that provide access to foraging areas, water, breeding sites, and dispersal areas. These corridors provide cover and shelter during travel. Disturbance to wildlife corridors such as anthropogenic activity and development can cause harm to migrating species, cause species to exceed their population thresholds, and/or prevent healthy gene flow between populations.

Section 4.0 – RESULTS

The following subsections detail the current state of the Study Area as recorded over the course of Spring 2019 initial and focused plant and animal surveys.

4.1 ENVIRONMENTAL SETTING

The following sections provide specific information that pertains to the natural environment within the Study Area; associated results maps are included within Appendix A and representative site photographs in Appendix B.

4.1.1 Soils

After review of USDA Soil Conservation Service and by referencing the USDA NRCS Web Soil Survey (USDA 2019), it was determined that the Study Area is located within the San Diego County Area (CA638). Based on the results of the database search, the Study Area is composed of the following five soil types and is represented in Figure 4:

Huerhuero Loam, 2 to 9 percent, 9 to 15 percent, and 15 to 30 percent

Huerhuero Loam soils are moderately well to somewhat poorly drained, with medium runoff potential and very slow permeability. They form in sandy marine sediments between 10 and 400 ft. above sea level with a clay subsoil. The Huerhuero series have light brownish gray and brown, medium acid, loam Ap and Al horizons, light gray A2 horizons, light yellowish brown, medium acid and moderately alkaline clay and clay loam B2t horizons. The mean annual precipitation is 12 to 20 inches and the mean annual temperature is about 58 °F. The parent material to Huerhuero soils is calcareous alluvium derived from sedimentary rock. These soils are not hydric. Huerhuero Loam soils are present along the western portion of the Study Area, beginning north of Otay River, as well as at the southeastern corner of the Study Area.

Olivenhain Cobbly Loam, 2 to 9 percent

Olivenhain Cobbly Loam is generally well-drained with slow to medium runoff potential and very slow permeability. The Olivenhain series is a member of the clayey-skeletal, kaolinitic, thermic family of Ultic Palexeralfs. Typically, Olivenhain soils have brown and reddish brown, medium acid, very cobbly loam A horizons, reddish brown and red, medium and strongly acid, very cobbly clay B2t horizons, grading to pinkish white cobbly loam C horizons. Olivenhain cobbly loam has moderately deep to deep cobbly loams with very cobbly clay subsoil and is primarily found at 100 ft. to 600 ft. in elevation. The mean annual precipitation is 12 to 16 inches and the mean annual temperature is about 62 °F. The parent material of the Olivenhain series is gravelly alluvium and is derived from mixed sources. These soils are not hydric. Olivenhain Cobbly Loam covers a portion of the northwestern corner of the Study Area, in the developed portion of Otay Lakes County Park.

San Miguel Exchequer Rocky Silt Loams, 9 to 70 percent

The San Miguel Exchequer Rocky Silt Loams are typically well-drained, have medium to very rapid runoff and very slow permeability. They generally have light yellowish brown, medium acid, silt loam A1 horizons, very pale brown, strongly acid, silt loam A2 horizons, strong brown and yellowish brown, strongly and very strongly acidic, clay and gravelly clay B2t horizons over hard metavolcanic bedrock at a depth of 23 inches.

The annual mean precipitation is 13 to 18 inches and the annual mean temperature is about 75°F. The parent material is residuum weathered from metavolcanics. The Exchequer series consists of shallow, somewhat excessively drained soils that formed in material weathered from hard andesitic breccia, schist and metamorphosed volcanic rocks. These soils are generally found on undulating to steep uplands. The mean annual precipitation is about 25 inches and the mean annual air temperature is about 61°F. These soils are somewhat excessively drained with medium to rapid runoff potential and moderate permeability. These soils are not hydric. San Miguel soils comprise the majority of the soils found within the Study Area, covering roughly the eastern two thirds of the Study Area.

Riverwash

Riverwash soils consist of very recent depositions of gravel, sand, and silt alluvium along major stream and their tributaries. These soils are excessively-drained and rapidly permeable, with negligible runoff potential. They are typically sandy, gravelly, or cobbly and are found in intermittent stream or channels that support little to no vegetation. Gravel bars make up the majority of these areas. During floods, alluvial areas are subject to repeated deposition, erosion, and shifting of transported material. Layering and gullyng of soil and gravel brought from upstream areas has resulted in a varying topography. Riverwash provides gravel for commercial production, construction, and road fill. This soil type covers a narrow portion of the Study Area along the bottom of the Otay River Valley.

Terrace Escarpments

Terrace escarpments consist of long, narrow, rocky areas that rise abruptly from the mean tide line to the coastal plain terraces or plateaus. This land type consists of steep faces that separate the terraces from the lower lying land. The faces are composed of soft coastal sandstone, hard shale, or hard, weather-resistant, fine-grained sandstone. Vegetation is sparse and is made up of dwarfed shrubs, a few patches of grass, lichens, and moss. In seepage areas water grasses, a few cypress and oaks, and various weathered conifers also grow. Areas of Terrace escarpments are used mainly for watershed and as wildlife habitat. Most places have 4 to 10 inches of loamy or gravelly soil over soft marine sandstone, shale, or gravelly sediments. This soil type covers a small portion of the southwest corner of the Study Area, south of the Otay River.

4.1.2 Habitat Types/Vegetation Communities

Eight vegetation communities were observed within the Study Area: California Sagebrush Scrub, California Sagebrush-California Brittlebush Scrub, Purple Needlegrass Grassland, Brome Grass-Wild Oat Grassland, Eucalyptus Woodland, Maritime Succulent Bluff, Cattail Marsh, Red Willow Riparian Woodland, and Disturbed. In addition, Landscape/Ornamental, Developed, Bare Ground, and Pavement areas were present within the Study Area. A map showing the vegetation communities and land cover types is provided as Figure 5.

California Sagebrush Scrub

This habitat was located throughout the Study Area but is primarily located along the eastern and southern portions of Study Area and comprises a total of 33.80 acres. Dominant plant species observed within the California Sagebrush Scrub habitat included: Bigelow's spike-moss (*Selaginella bigelovii*), mesa spike-moss (*Selaginella cinerascens*), bird's-foot fern (*Pellaea mucronata*), blue elderberry (*Sambucus nigra* subsp. *caerulea*), laurel sumac (*Malosma laurina*), lemonadeberry (*Rhus integrifolia*), California

sagebrush (*Artemisia californica*), San Diego County viguiera (*Bahiopsis laciniata*), California poppy (*Eschscholzia californica*), California brickellbush (*Brickellia californica*), tocalote (*Centaurea melitensis*), tarplant (*Deinandra* sp.), common goldfields (*Lasthenia gracilis*), common sow thistle (*Sonchus oleraceus*), white fiesta flower (*Pholistoma membranaceum*), popcornflower (*Plagiobothrys* sp.), black mustard (*Brassica nigra*), field mustard (*Brassica rapa*), short-pod mustard (*Hirschfeldia incana*), field peppergrass (*Lepidium campestre*), shining peppergrass (*Lepidium nitidum*), common catchfly (*Silene gallica*), western bindweed (*Calystegia macrostegia*), bindweed (*Convolvulus arvensis*), pygmy-weed (*Crassula connata*), wild cucumber (*Marah macrocarpa*), golondrina (*Chamaesyce polycarpa*), deerweed (*Acmispon glaber*), strigose lotus (*Acmispon strigosus*), Gambell's dwarf locoweed (*Astragalus gambelianus*), wild sweet pea (*Lathyrus vestitus*), Bajada lupine (*Lupinus concinnus*), broad-lobed filaree (*Erodium botrys*), red-stemmed filaree (*Erodium cicutarium*), filaree (*Erodium* sp.), white sage (*Salvia apiana*), cheeseweed (*Malva parviflora*), red maids (*Calandrinia ciliata*), wishbone bush (*Mirabilis laevis*), California wood-sorrel (*Oxalis californica*), Nuttall's snapdragon (*Antirrhinum nuttallianum* subsp. *nuttallianum*), western plantain (*Plantago erecta*), angel gilia (*Gilia angelensis*), coastal California buckwheat (*Eriogonum fasciculatum* var. *fasciculatum*), Padre's shooting star (*Dodecatheon clevelandii* subsp. *clevelandii*), virgin's bower (*Clematis ligusticifolia*), San Diego barrel cactus (*Ferocactus viridescens*), spiny redberry (*Rhamnus crocea*), narrow-leaved bedstraw (*Galium angustifolium*), mesa saxifrage (*Jepsonia parryi*), California figwort (*Scrophularia californica*), jojoba, goatnut (*Simmondsia chinensis*), Johnny-jump-up (*Viola pedunculata*), purple owl's-clover (*Castilleja exserta*), small-flowered amole (*Chlorogalum parviflorum*), our Lord's candle (*Hesperoyucca whipplei*), red-skinned onion (*Allium haematochiton*), wild oat (*Avena fatua*), ripgut grass (*Bromus diandrus*), foxtail chess (*Bromus madritensis* subsp. *madritensis*), small fescue (*Festuca microstachys*), Italian ryegrass (*Festuca perennis*), and blue dicks (*Dichelostemma capitatum*). This habitat is generally open throughout the Project Area with large areas of open space dominated by purple needlegrass and non-native grassland with varying degrees of invasive species dominance.

California Sagebrush Scrub-California Brittlebush Scrub

This habitat was located along the northeastern portion of the Study Area and comprises a total of 2.09 acres. Dominant plant species observed within the California Sagebrush-California Brittlebush Scrub habitat included: California sagebrush, California bush sunflower (*Encelia californica*), white sage, goldenback fern (*Pentagramma triangularis*), wild cucumber, popcorn flower, California poppy, California polypody (*Polypodium californicum*), Nuttall's snapdragon, angel gilia, coastal California buckwheat, virgin's bower, narrow-leaved bedstraw, ripgut grass, small fescue, wild oat, wishbone bush, red-stemmed filaree, common catchfly, short-pod mustard, and field peppergrass.

Purple Needlegrass Grassland

This habitat was located in small patches that resembled the surrounding grassland areas except with the addition of substantial purple needlegrass (*Stipa pulchra*) populations. This habitat comprises a total of 0.56 acres within the Study Area. Dominant plant species observed within the Purple Needlegrass Grassland habitat include: purple needlegrass, wild oat, ripgut grass, foxtail chess, small fescue, Italian ryegrass, red-skinned onion, Johnny-jump-up, Padre's shooting star, purple owl's-clover, California poppy, common catchfly, and black mustard.

Brome Grass-Wild Oat Grassland

This habitat was located throughout the Study Area and comprises the majority of the inter-shrub matrix of the coastal sage scrub located within eastern and southern portions of the Study Area. This habitat was

found in more contiguous patches along the western and northern portions of the Study Area and comprises a total of 17.16 acres. Dominant plant species observed within the Brome Grass-Wild Oat Grassland habitat include: wild oat, ripgut grass, foxtail chess, small fescue, Italian ryegrass, red-skinned onion, Johnny-jump-up, Padre's shooting star, California poppy, common catchfly, short-pod mustard, field mustard, bindweed, pygmy-weed, strigose lotus, popcorn flower, San Diego barrel cactus, common goldfields, tocalote, sharp-toothed sanicle (*Sanicula arguta*), Bajada lupine, broad-lobed filaree, red-stemmed filaree, Bermuda buttercup (*Oxalis pes-caprae*), purple owl's-clover, jimson weed (*Datura wrightii*), Russian thistle (*Salsola* sp.), Mediterranean schismus (*Schismus barbatus*), and black mustard.

Eucalyptus Woodland

This habitat was generally open in nature and provided an overlay to existing habitat located directly below the canopy of the woodland. This habitat overlay is primarily located within the eastern and central portions of the Study Area and comprises a total of 20.02 acres (not included as impacts as the habitat primarily overlays disturbed areas with limited coastal sage scrub and/or grassland habitat. The canopy was generally sparse to open in coverage, with isolated areas containing overlapping branches that created a sparse but overall open woodland canopy. The understory of this habitat generally consisted of Brome Grass-Wild Oat Grassland, California Sagebrush Scrub, Landscape/Ornamental, and Disturbed areas with species compositions similar to those described in each's respective section. Dominant plant species unique to this habitat include: red gum (*Eucalyptus camaldulensis*), blue gum (*Eucalyptus globulus*), lemon-scented gum (*Eucalyptus citriodora*), and silver dollar gum (*Eucalyptus polyanthemos*).

Maritime Succulent Bluff

This habitat was found along the northern escarpment of the Otay River within the southern portion of the Study Area and comprises a total of 2.15 acres. Dominant plant species observed within the Maritime Succulent Bluff habitat include: fish-hook cactus (*Mammillaria dioica*), ladies-fingers (*Dudleya edulis*), chalk dudleya (*Dudleya pulverulenta*), San Diego barrel cactus, natal grass (*Melinis repens* subsp. *repens*), annual bluegrass (*Poa annua*), short-pod mustard, wishbone bush, California buckwheat, and foxtail chess.

Cattail Marsh

This habitat was found within an isolated patch within the Otay River at the southern end of the Study Area and comprises a total of 0.09 acres. Dominant plant species observed within the Cattail Marsh habitat include: cattail (*Typha* sp.), San Diego marsh-elder (*Iva hayesiana*), dock (*Rumex* sp.), and wild oat.

Red Willow Riparian Forest

This habitat was found immediately south of and adjacent to the Otay River and comprises as total of 2.15 acres. Dominant plant species observed within the Red Willow Riparian Forest habitat include: red willow (*Salix laevigata*), southwestern spiny rush (*Juncus acutus* subsp. *leopoldii*), stinging lupine (*Lupinus hirsutissimus*), wild oat, annual bluegrass, natal grass, Italian ryegrass, laurel sumac, wishbone bush, San Diego marsh-elder, and mulefat (*Baccharis salicifolia* subsp. *salicifolia*).

Disturbed

This habitat was found in primarily three areas within the Study Area and generally occurred where the Study Area was adjacent to existing access roads or developed areas and comprised a total of 3.37 acres. This habitat generally consisted primarily of bare ground dominated by non-native annual species including Russian thistle, hairy crabgrass (*Distichlis littoralis*), bristly ox-tongue (*Helminthotheca echinoides*), black mustard, western plantain, fennel (*Foeniculum vulgare*), shortpod mustard, castor bean (*Ricinus communis*), London rocket (*Sisymbrium irio*), tocalote, rip-gut brome, foxtail chess, wild oat, red-stemmed filaree, white sweetclover (*Melilotus albus*), yellow sweetclover (*Melilotus officinalis*), Boccone's sandspurrey (*Spergularia bocconi*), coast cholla (*Cylindropuntia prolifera*), horehound (*Marrubium vulgare*), nightshade (*Solanum* sp.), dwarf nettle (*Urtica urens*), and goldentop (*Lamarckia aurea*).

Landscape/Ornamental

This habitat was found primarily within the northern portions of the Study Area within the developed and highly used portions of the existing County Park. This habitat type also occurred in smaller discontinuous patches surrounding the existing restroom facility. This habitat type comprises a total of 5.60 acres. Dominant Landscape/Ornamental plant species observed include Peruvian pepper tree (*Schinus molle*), red gum, olive (*Olea europaea*), jacaranda (*Jacaranda mimosifolia*), English ivy (*Hedera helix*), oleander (*Nerium oleander*), western sycamore (*Platanus racemosa*), sweetgum (*Liquidambar styraciflua*), star jasmine (*Trachelospermum jasminoides*), freeway iceplant (*Carpobrotus edulis*), Aleppo pine (*Pinus halepensis*), bougainvillea (*Bougainvillea* sp.), common dandelion (*Taraxacum officinale*), Indian hawthorne (*Rhaphiolepis indica*), ornamental rose (*Rosa* sp.), agave (*Agave* sp.), date palm (*Phoenix* sp.), aloe (*Aloe* sp.), bird of paradise (*Strelitzia reginae*), rosemary (*Rosmarinus officinalis*), greater periwinkle (*Vinca major*), and Mexican fan palm (*Washingtonia robusta*).

Developed

Developed areas typically include structures and associated infrastructure areas. These areas are primarily associated with the existing heavily-used portions of the County Park and isolated areas within the central and southern portions of the Study Area. This habitat type comprises a total of 1.10 acres.

Bare Ground

Bare Ground areas are devoid of vegetation. These areas are generally associated with existing dirt access roads and trails throughout the heavily-used portions of the County Park and the larger Study Area. This habitat type comprises a total of 3.27 acres.

Pavement

Areas paved with roads, parking lots, and sidewalks; can be comprised of cement or asphalt. These areas are generally restricted to existing and heavily-used portions of the County Park. This habitat type comprises a total of 2.59 acres.

4.1.3 Sensitive Plant Species

Current database searches (USFWS 2019, CDFW 2019, CNPS 2019) resulted in a list of 68 federal- and/or state-listed threatened and endangered or rare sensitive plant species documented to occur within the

vicinity of the Study Area (Figures 6 and 7). A complete list of plant species observed is located within Appendix C. After the literature review, the assessment of the various habitat types in the area of the site, and two rounds of focused rare plant surveys it was determined that 60 species are not expected to occur or are presumed absent and eight species are considered present within the Study Area. Additional species not identified in the CNDDDB and USFWS databases may require analysis for future studies.

The Project Area is located within a county park that has two distinct areas. A currently active portion of the park features primarily landscape/ornamental vegetation that is regularly irrigated and maintained as well as paved and developed areas. Another portion of the park is currently set aside for limited use and contains a mosaic of grassland and California sagebrush scrub habitat set within the foothill region of Otay Mountain. Access to the Proposed Project site is primarily along existing access roads and trails.

Not Expected to Occur or Presumed Absent

The following 60 plant species are **not expected** within Study Area due to lack of suitable habitat, the species is a conspicuous perennial and was not observed during reconnaissance-level or focused plant surveys, and/or the species is found outside the elevation range. Due to highly favorable survey conditions during the 2019 spring season when focused plant surveys were conducted, annual plants that were not observed during the survey and where favorable habitat is present are considered **presumed absent**. The following species fall within these to absent categories:

- California adolphia (*Adolphia californica*) CRPR List 2B.1
- San Diego bur-sage (*Ambrosia chenopodiifolia*) CRPR 2B.1
- singlewhorl burrobrush (*Ambrosia monogyra*) CRPR 2B.2
- Otay manzanita (*Arctostaphylos otayensis*) CRPR 1B.2, MSCP
- western spleenwort (*Asplenium vespertinum*) CRPR 4.2
- south coast saltscale (*Atriplex pacifica*) CRPR 1.2
- golden-spined cereus (*Bergerocactus emoryi*) CRPR 2B.2
- Orcutt's brodiaea (*Brodiaea orcuttii*) CRPR 1B.1, MSCP
- Brewer's calandrinia (*Calandrinia breweri*) CRPR 4.2
- Dunn's mariposa lily (*Calochortus dunnii*) CRPR 1B.2, MSCP
- lakeside ceanothus (*Ceanothus cyaneus*) CRPR 1B.2, MSCP
- Otay ceanothus (*Ceanothus otayensis*) CRPR 1B.2
- southern mountain misery (*Chamaebatia australis*) CRPR 4.2
- long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*) CRPR 1B.2
- delicate clarkia (*Clarkia delicata*) CRPR 1B.2
- San Miguel savory (*Clinopodium chandleri*) CRPR 1B.2
- small-flowered morning glory (*Convolvulus simulans*) CRPR 4.2
- summer holly (*Comarostaphylis diversifolia* subsp. *diversifolia*) CRPR 1B.2
- San Diego sand aster (*Corethrogyne filaginifolia* var. *incana*) CRPR 1B.1
- Gander's cryptantha (*Cryptantha ganderi*) CRPR 1B.1
- Otay tarplant (*Deinandra conjugens*) FT, SE, CRPR 1B.1, MSCP
- Tecate tarplant (*Deinandra floribunda*) CRPR 1B.2
- Orcutt's bird's-beak (*Dicranostegia orcuttiana*) CRPR 2B.1
- western dichondra (*Dichondra occidentalis*) CRPR 4.2
- variegated dudleya (*Dudleya variegata*) CRPR 1B.2, MSCP
- Palmer's Goldenbush (*Ericameria palmeri* var. *palmeri*) CRPR 1B.1, MSCP
- cliff spurge (*Euphorbia misera*) CRPR 2B.2

- San Diego button-celery (*Eryngium aristulatum* var. *parishii*) FE, SE, CRPR 1B.1
- snake cholla (*Cylindropuntia californica* var. *californica*) CRPR 1B.1, MSCP
- Mexican flannelbush (*Fremontodendron mexicanum*) FE, RARE, CRPR 1B.1
- desert bedstraw (*Galium proliferum*) CRPR 2B.2
- San Diego gumplant (*Grindelia hallii*) CRPR 1B.2
- Palmer's grapplehook (*Harpagonella palmeri*) CRPR 4.2
- Tecate cypress (*Hesperocyparis forbesii*) CRPR 1B.1
- Otay Mountain lotus (*Hosackia crassifolia* var. *otayensis*) CRPR 1B.1
- Coulter goldfields (*Lasthenia glabrata* subsp. *coulteri*) CRPR 1B.1
- Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*) CRPR 4.3
- Gander's pitcher sage (*Lepechinia ganderi*) CRPR 1B.3, MSCP
- Humboldt lily (*Lilium humboldtii* subsp. *ocellatum*) CRPR 4.2
- Douglas' silverpuff (*Microseris douglasii*) CRPR 4.2
- felt-leaved monardella (*Monardella hypoleuca* subsp. *lanata*) CRPR 1B.2, MSCP
- Jennifer's monardella (*Monardella stoneana*) CRPR 1B.2
- willowy monardella (*Monardella viminea*) FE, SE, CRPR 1B.1, MSCP
- little mousetail (*Myosurus minimus* subsp. *apus*) CRPR 3.1
- spreading navarretia (*Navarretia fossalis*) FT, CRPR1B.1, MSCP
- mud nama (*Nama stenocarpa*) CRPR 2B.2
- California adder's tongue fern (*Ophioglossum californicum*) FE, SE, CRPR 1B.1 4.2
- California Orcutt grass (*Orcuttia californica*) FE, SE, CRPR 1B.1, MSCP
- Cooper's rein orchid (*Piperia cooperi*) CRPR 4.2
- Otay mesa mint (*Pogogyne nudiuscula*) CRPR 1B.1, MSCP
- Cedros Island oak (*Quercus cedrosensis*) CRPR 2B.2
- Nuttall's scrub oak (*Quercus dumosa*) CRPR 1B.1
- Engelmann oak (*Quercus engelmannii*) CRPR 4.2
- Munz's sage (*Salvia munzii*) CRPR 2B.2
- chaparral ragwort (*Senecio aphanactis*) CRPR 2B.2
- purple stemodia (*Stemodia durantifolia*) CRPR 2B.1
- Coulter's Matilija poppy (*Romneya trichocalyx*) CRPR 4.2
- small-leaved rose (*Rosa Minutifolia*) SE, CRPR 1B.1
- Laguna Mountains jewelflower (*Streptanthus bernardinus*) CRPR 4.3
- Parry's tetracoccus (*Tetracoccus dioicus*) CRPR 1B.2

Present within the Study Area

The analysis of the database searches as well as reconnaissance-level and focused plant surveys resulted in eight species that are considered **Present** within the Study Area (Figure 8):

- San Diego viguiera (*Bahiopsis laciniata*) CRPR 4.3
- San Diego goldenstar (*Bloomeria clevelandii*) CRPR 1B.1, MSCP
- San Diego barrel cactus (*Ferocactus viridescens*) CRPR 2B.1, MSCP
- decumbent goldenbush (*Isocoma menziesii* var. *decumbens*) CRPR 1B.2
- San Diego marsh-elder (*Iva hayesiana*) CRPR 2B.2
- Leopold's rush (*Juncus acutus* subsp. *leopoldii*) CRPR 4.2
- ashy spike moss (*Selaginella cinerascens*) CRPR 4.1
- San Diego County needle grass (*Stipa diegoensis*) CRPR 4.2

San Diego viguiera is a perennial shrub within the Asteraceae family that grows in coastal sage scrub habitat between 295 and 2,460 ft. elevation and blooms from February to August. This species was observed throughout the Study Area primarily along existing trails and within the coastal sage scrub covered hillside on the eastern portions of the Study Area during reconnaissance-level and focused plant surveys. Majority of the observed San Diego viguiera is located away from Proposed Project features, however, one of the mapped species polygons will be directly impacted by two of the proposed COPE stations as well as the amphitheater. A solitary individual may be impacted by a third COPE station located in close proximity (west) to new campground locations. Two individuals of this species are located within 20 ft. of the proposed restored camp sites and two individuals are located approximately 20 ft. from the proposed archery range. Impacts to this species are further detailed in Section 5.1.1, and the majority of impacts to this plant are anticipated to be avoidable through the use of the mitigation measures proposed in Section 5.3.

San Diego goldenstar is an annual herb in the Themidaceae family that grows in grassland and coastal sage scrub habitats below 328 ft. elevation and blooms from April to May. This species has been observed within the Study Area within grassland habitats east of the proposed campsites and south of the Otay River during the focused plant survey. Recorded occurrences of this species are located approximately 130 ft. east of the closest Proposed Project feature (north zipline base station).

San Diego barrel cactus is a shrub in the Cactaceae family that is grows in grassland and scrub communities between 32 and 492 ft. elevation and blooms from May to June. A large number of this species were observed within the Study Area primarily within the scrub covered slopes north and east of the Project area as well as on the northwest-facing slope between the proposed camp sites and the southern extent of the Study Area. The nearest new Proposed Project feature is located approximately 160 ft. from a San Diego barrel cactus; other cactus individuals are found adjacent to existing trails, however, these are not anticipated to be affected by Proposed Project related activities.

Decumbent goldenbush is a shrub in the Asteraceae family that grows in coastal sage scrub habitat and blooms from April to November. This species was observed within 1-mile of the Proposed Project area in 2015 (CDFW 2019). This species variety has a highly variable morphology and numerous individuals within the Study Area displayed some, but not all, of the traits associated with this variety. Due to the variability of this variety observed within the Study Area, individuals were not mapped, however, there is a high potential that some of the goldenbush present may contain enough characters to be considered valid populations of this variety. The majority of the potential goldenbush populations are located along the northern portions of the Study Area and adjacent to existing dirt access roads.

San Diego marsh elder is a shrub in the Asteraceae family that grows in wetland areas and along streams that blooms from April to October. This species was observed during the reconnaissance and focused plant surveys along the Otay River and is considered present within the Study Area. The proposed amphitheater is the closest new Project feature and is located approximately 615 ft. north of the mapped location of San Diego marsh elder. This same population of San Diego marsh elder is located approximately 290 ft. south of the nearest access road and the population is not anticipated to be affected by Proposed Project related activities.

Leopold's rush is a perennial herb in the Juncaceae family that grows in wetlands that blooms from May to June. This species was observed during reconnaissance and focused plant surveys along the Otay River and is considered present within the Study Area. The proposed amphitheater is the closest new Project feature and is located approximately 650 ft. north of the mapped location of San Diego marsh elder. This

same population of San Diego marsh elder is located approximately 330 ft. south of the nearest access road and the population is not anticipated to be affected by Proposed Project related activities.

Ashy spike moss is a rhizomatous fern in the Selaginellaceae family that grows in coastal sage scrub and chaparral habitats. This species was observed during reconnaissance and focused plant surveys and is considered present within the Study Area, primarily in coastal sage scrub habitat areas within openings between stands of woody perennials located in undeveloped portions of the Study Area. This species has several occurrences adjacent to existing access roads within the northern portion of the Study Area and adjacent to established trails within the southern portions of the Study Area. All observed populations of ashy spike moss are located within the matrix of coastal sage scrub shrubs and do not directly abut existing site features (roads and trails) and are not anticipated to be impacted by Proposed Project related activities.

San Diego County needle grass is a perennial bunchgrass in the Poaceae family that grows in coastal sage scrub and grassland habitats. This species was observed during focused plant surveys and is considered present within the Study Area, within the grassland habitats along the extreme northern areas of the Study Area and approximately 1,100 ft. north of the nearest new Proposed Project Feature. The observed populations of San Diego County needle grass are located approximately 310 ft. northwest of the closest existing access road. No Proposed Project related activities are located in close proximity to the observed occurrences of this species and therefore no impacts are anticipated.

4.1.4 Sensitive Wildlife Species

A current database search (CDFW 2019 and USFWS 2019) resulted in a list of 42 federally, state, and/or locally listed endangered or threatened, SSC, or otherwise sensitive wildlife species that may potentially occur within the Study Area (Figures 6 and 7). A complete list of wildlife species is located in Appendix D. After a literature review and the assessment of the various habitat types within the Study Area, these species were categorized as not expected to occur; having low, moderate, or high PFO; or as present within the Study Area, as described below. Factors used to determine PFO included the type of habitat, quality of habitat, and the location of prior records of occurrence. Note that five avian species are listed under more than one category, depending on their behavior and habitat use; in such incidences an asterisk (*) proceeds the common name of the species. Observed sensitive wildlife species are depicted in Figure 9.

Not Expected to Occur or Low Potential for Occurrence

The following 12 wildlife species are **not expected** to occur within the Study Area due to lack of suitable habitat present or because no historical database records show the existence of these species within 5 miles of the Study Area:

- Thorne's hairstreak (*Callophrys gryneus throni*) – MSCP
- Riverside fairy shrimp (*Streptocephalus woottoni*) – FE, MSCP
- San Diego fairy shrimp (*Branchinecta sandiegonensis*) – FE
- San Diego banded gecko (*Coleonyx variegatus abbotti*) – SSC
- golden eagle (*Aquila Chryses's canadensis*; nesting and wintering) – BCC, WL, FP, MSCP
- coastal cactus wren (*Campylorhynchus brunneicapillus*; nesting and foraging) – BCC, SSC, MSCP
- southwestern willow flycatcher* (*Empidonax traillii extimus*; nesting) – FE, SE, MSCP

- American peregrine falcon (*Falco peregrinus anatum*; nesting and foraging) – BCC, FP, MSCP
- least bittern* (*Ixobrychus exilis hesperis*; nesting) – SSC
- light-footed Ridgeway's rail (*Rallus obsoletus levipes*) – FE, SE, FP, MSCP
- yellow warbler (*Setophaga petechia*; nesting) – BCC, SSC
- northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*) - SSC

The following seven wildlife species have a **Low** PFO within the Study Area due known occurrences within five miles from the Study Area and/or habitat present is of low quality:

- coast patch-nosed snake (*Salvadora hexalepis virgultea*) – SSC
- burrowing owl (*Athene cunicularia*; nesting and wintering) – SSC, MSCP
- northern harrier* (*Circus hudsonius*; nesting) – SSC, MSCP
- loggerhead shrike (*Lanius ludovicianus*; nesting and foraging) – BCC, SSC
- Bell's sage sparrow (*Artemisiospiza belli belli*; nesting and foraging) – BCC, WL
- mountain lion (*Felis concolor*) – MSCP
- American badger (*Taxidea taxus*) – SSC, MSCP

Moderate Potential for Occurrence

The following ten species have a **Moderate** PFO within the Study Area due to known occurrences within three miles of the Study Area and the presence of low to moderate quality suitable habitat within the Study Area:

- Baja California coachwhip (*Masticophis fuliginosus*) - SSC
- Townsend's big-eared bat (*Corynorhinus townsendii*) - SSC
- northern harrier* (foraging) – SSC, MSCP
- Cooper's hawk* (*Accipiter cooperii*; nesting) – WL, MSCP
- southwestern willow flycatcher* (foraging, migration, and dispersal) – FE, SE, MSCP
- least bittern* (foraging) – SSC
- least Bell's vireo* (*Vireo bellii pusillus*; nesting) – FE, SE, MSCP
- yellow warbler (foraging) – BCC, SSC
- San Diego desert woodrat (*Neotoma lepida intermedia*) – SSC
- pocketed free-tailed bat (*Nyctinomops femorosaccus*) - SSC

High Potential for Occurrence within the Study Area

The following 11 species have a **High** PFO within the Study Area due to known occurrences within one mile of the Study Area and the presence of moderate to high quality suitable habitat within the Study Area:

- western spadefoot (*Spea hammondi*) - SSC
- coastal whiptail (*Aspidoscelis tigris stejnegeri*) - SSC
- coast horned lizard (*Phrynosoma blainvillii*) - SSC, MSCP
- white-tailed kite (*Elanus leucurus*; nesting and foraging) - FP
- yellow-breasted chat (*Icteria virens*; foraging and nesting) - SSC
- coastal California gnatcatcher (*Poliophtila californica californica*; nesting and foraging) - FE, SSC, MSCP
- grasshopper sparrow (*Ammodramus savannarum*) - SSC

- western mastiff bat (*Eumops perotis californicus*) - SSC
- western red bat (*Lasiurus blossevillii*) - SSC
- San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) - SSC
- mule deer (*Odocoileus hemionus*) - MSCP

Present within the Study Area

The following seven species were observed within the Study Area during reconnaissance level surveys and are considered **Present**:

- QCB – FE
- orange-throated whiptail (*Aspidoscelis hyperythra beldingi*) – SSC, MSCP
- two-striped gartersnake (*Thamnophis hammondi*) - SSC
- red diamond rattlesnake (*Crotalus ruber*) - SSC
- Cooper's hawk* (foraging) – WL, MSCP
- southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*; foraging) – WL, MSCP
- least Bell's vireo* (foraging and migration/dispersal) – FE, SE, MSCP

Large areas of host-plant for QCB were observed during reconnaissance level survey and was further refined in a QCB host plant mapping survey. In addition, large areas of open California Sagebrush Scrub, grassland, and open areas throughout the Study Area provide potential nectar sources for the QCB. These areas are not found immediately within the Project Area and are located outside of the proposed 100-foot buffer from known sightings and host plant patches. A total of three QCB were identified during the focused surveys and is therefore considered Present within the Study Area. More details pertaining to the occurrence of this species is detailed within the QCB Focused Survey Report (Appendix E).

The western spadefoot toad was located in several areas less than 1 mile from the Study Area between 2013 and 2017 (CDFW 2019). High-quality riparian areas with slow moving water are found in the southern portions of the Study Area, suitable for the spadefoot toad to breed and lay eggs. Project sites are anticipated to be located in upland areas and away from water; however, there is a high potential for this species to occur within the more general Study Area.

The coast horned lizard, coast whiptail, orange-throated whiptail, red-diamond rattlesnake, and San Diego black-tailed jackrabbit were located in several areas less than 1 mile from the Study Area between 2001 and 2015 (CDFW 2019; SanGIS 2019). These species can occur in a variety of early successional stage habitats including forest, chaparral, sagebrush, juniper, and annual grassland habitats (CDFW 1997). Suitable grassland and scrub habitat exists within the southern and eastern portion of the Study Area. Of these species, a solitary orange-throated whiptail was observed along the northern banks of the Otay River and a solitary red-diamond rattlesnake was observed along an access road in the northern portions of the Study Area. These species are highly mobile and can be found in contiguous native habitat adjacent to developed areas; therefore, there is a high potential for these species to occur within the Study Area.

High-quality riparian habitat that supports foraging activities for numerous bird species including least Bell's vireo, yellow-breasted chat, and white-tailed kite is located within the Study Area. No impacts to riparian vegetation are anticipated within the Proposed Project. There are several records for each of these species within the Project Area and within 1 mile, from 2008 to 2013. The white-tailed kite is often found foraging along and above riparian corridors, while the yellow-breasted chat and least Bell's vireo

forage within the vegetation of riparian areas (Unitt 2004). Appropriate habitat exists along the Otay River in the southern portions of the Study Area. Eucalyptus trees within the Study Area provide potential nesting habitat for the white-tailed kite as well. Therefore, there is a high potential for these species to occur within the Study Area. Least Bell's vireo was heard singing from the Otay River during the last focused QCB survey; this individual was foraging and remained more than 500 ft. from the nearest Project feature. Although this species may utilize the southern portion of the Study Area along the Otay River for foraging, this species is not expected to move upland towards the Project Area.

The coastal California gnatcatcher is a FT and SSC. This species was identified within the Project Area boundaries as well as several locations less than 1 mile from the Project Area as recent as 2015 (CDFW and USFWS sensitive species occurrence). This species nests in buckwheat and coastal sage scrub habitats (CDFW 1997) and can exist in close proximity to residential areas. This species was heard calling from an area west of the Study Area along the Otay River, due to the high motility this species was included within the Sensitive Wildlife Observed map (Figure 9). Suitable habitat exists within the Project Area; therefore, this species has a high potential to occur within the Project Area.

The grasshopper sparrow was found in one location less than 1 mile from the Study Area in 2015. This species forages for insects and seeds within grassland habitats. The Study Area has suitable habitat for this species within the Brome Grass-Wild Oat Grassland and Purple Needlegrass Grassland as well as the margins of the California Sagebrush Scrub.

High-quality habitat for the western mastiff bat and western red bat exists along the Otay River and the associated riparian woodland and rocky escarpment. There are several records for these species within the Project Area and within 1 mile, from 2003. These bat species rely on rocky outcroppings and mature, protected riparian woodland (Tremor *et al* 2017). Suitable habitat for these species is located within the Otay River valley and associated rocky gorge located immediately east of the Study Area. These species are highly mobile and can be found in contiguous native habitat adjacent to the Project Area; therefore, there is a high potential for these species to occur within the Study Area.

The mule deer was located in several locations within 1 mile from 2002 to 2015. This species is typically found within open scrub habitats while foraging on herbaceous plant material (Tremore *et al* 2017). High-quality grassland and scrub habitat that is connected to larger areas of native habitat are found throughout the Study Area. Therefore, there is a high potential for this species to occur within the Study Area.

4.1.5 Critical Habitat

One sensitive wildlife species, QCB, has USFWS-designated critical habitat within the Study Area. Otay tarplant critical habitat is located west and adjacent to the Study Area but does not cross into the Study Area (Figure 10).

USFWS (2002)-designated critical habitat for QCB occurs throughout the majority of the Study Area, covering approximately 68.96 acres of the approximately 69-acre parcel. Paved and developed areas account for approximately 3.69 acres of land within the designated critical habitat area, with the remaining area consisting of habitat communities as described in Section 4.1.2. Numerous patches of host plant and multiple nectar sources were observed during the reconnaissance and host-plant mapping surveys.

A total of approximately 55.5 acres of suitable habitat for QCB were identified within the Proposed Project Study Area and surveyed as the QCB Survey Area. A total of two distinct QCB were observed during the 2019 focused surveys for the Proposed Project. Both of these observations were within the USFWS “Recommended Quino Survey Area”.

Based on consultation with the USFWS on April 18, 2019 and August 15, 2019, Proposed Project features have been designed to avoid host plant locations, and the use of proposed camp facilities shall include public outreach and education, and additional protection measures such as access road use restrictions shall be implemented during the QCB flight season (Eric Porter, email communication, August 15, 2019).

4.1.6 Wetlands/Jurisdictional Waters

The Study Area is located in the 1807030410 (Otay River) watersheds (Hydrologic Unit Codes [HUC-10]; USDA 2019) in San Diego County, California. This watershed is the source the Otay River, a traditionally navigable waterway (TNW). The approximately 25-mile Otay River begins at San Miguel Mountain, flows through the Upper and Lower Otay Lakes westward to the Pacific Ocean, where it empties into Egger Highlands at the San Diego Bay National Wildlife Refuge. The Otay River is fed by controlled release from the Lower Otay Reservoir which acts as part of the municipal water supply and the terminus of Pipeline 3 of the Second San Diego Aqueduct. Jamul Creek and Dulzura Creek act as the primary tributaries into the watershed with numerous smaller named and unnamed creeks flowing into the area from the surrounding Jamul and Otay Mountains (Figure 2).

The Otay River flooded in 1916, resulting in widespread alluvium deposits throughout the Otay Valley and San Diego Bay (Reynolds 2008). These deposits were mined from the 1930s to the 1980s and resulted in the valley floor being marked by pits and tailing piles (Schoenherr 2015). Water primarily flows within a shallow groundwater system and is exposed in some of the deeper pits that were formed during aggregate mining operations. These exposed areas of groundwater contain freshwater marsh habitats and provide complex matrix of riparian, wetland, and upland vegetation types.

Savage Dam impounds Lower Otay Lake (Reservoir) and is located northeast of the Project Area. This dam is part of the local water supply and controls flow into the Otay River located within the Project Area buffer. There are several ephemeral drainages that follow the topography of the landscape within the Project Area. These drainages primarily act to facilitate the drainage of large storm events and terminate in the Otay River. The Otay River flows approximately 10 miles to the west and empties into San Diego Bay.

No formal jurisdictional delineation was performed during this report. The general area appears to be dominated by topographical features that facilitate ephemeral drainages that eventually connect to the Otay River to the south. A larger swale feature is located approximately 120 ft. east of the new tent locations that contained standing water during the month of March. Project related activities are not anticipated to impact any of the observed ephemeral drainage features or swales, or the Otay River. Proposed Project features were designed to avoid impacting any drainage or jurisdictional features and associated habitat and the small amounts of new pavement included in the Proposed Project are not expected to significantly contribute to urban runoff.

4.1.7 Preserve, Habitat Connectivity, and Wildlife Corridors

Preserve

The Proposed Project is located within the County of San Diego MSCP South County Subarea, in a region designated as "Take Authorized," within Otay Lakes County Park (Figure 11). In areas designated as "Take Authorized," no additional biological mitigation is required for development to occur. The South County Subarea Plan is intended to provide for the take of covered species and their habitats associated with development. Take of covered species associated with the on-going management of San Diego County Park Lands and construction of facilities consistent with existing (1996) park development plans is authorized consistent with the MSCP Subarea Plan (County of San Diego 1998).

Habitat Connectivity and Wildlife Corridors

The Study Area functions as part of the Otay River wildlife corridor. The approximately 25-mile Otay River begins at San Miguel Mountain, flows through the Upper and Lower Otay Reservoirs westward to the Pacific Ocean, where it empties into Egger Highlands at the San Diego Bay National Wildlife Refuge. The Otay River serves as a wildlife corridor for insect, amphibian, reptile, amphibian, mammal, and avian species. Riparian systems harbor a high abundance of diversity in southern California. Portions of the Otay River watershed have been ravaged by fire, overtaken with nonnative plant and wildlife species, and has diminished in wildlife corridor habitat values due to agriculture, urban development, gravel mining, and infrastructure developments.

The Study Area is located immediately south of the Lower Otay Reservoir and is within the Otay River floodplain. A mountain ridge separates the Otay River from the Study Area as the river flows southeast from the Lower Otay Reservoir for approximately 0.5 mile before curving southwest and crossing through the southern portion of the Study Area. Therefore, the southern portion of the Study Area functions to facilitate wildlife movement along the Otay River wildlife corridor.

The Project Area is situated on a hill outside of the Otay River floodplain and is not within the path of the wildlife corridor; however, the Project Area contributes to the functionality of the corridor by providing open space for foraging and dispersal of wildlife. Where the Otay River crosses through the Study Area, a steep, approximately 30-foot tall cliff face separates the Otay River floodplain from Proposed Project features, which are located approximately 250 feet north of the Otay River floodplain. This steep cliff decreases the quality of connectivity between the Otay River and the Project Area.

No direct impacts to wildlife corridors are anticipated as a result of the Proposed Project. None of the Proposed Project features are anticipated to be large enough to create physical barriers to wildlife movement, with the remodeled restroom facility comprising the largest new developed area at 0.03 acres. The tallest Proposed Project features are the 30-foot masts for the zipline, each of which will comprise of a single pole and will have negligible impact on surrounding wildlife. The quality of habitat for foraging and dispersal of wildlife may be diminished on a temporary basis from noise during construction; however, the surrounding area consists primarily of undeveloped open space containing high-quality habitat. Therefore, indirect impacts to wildlife movement corridors as a result of the Proposed Project are anticipated to be less than significant.

Section 5.0 – PROJECT IMPACTS

5.1 ANALYSIS OF PROJECT EFFECTS

Physical impacts associated with this site are anticipated to consist of a mix of permanent and temporary impacts to a variety of habitats detailed below in Table 5 and in Figure 5.

Table 5: Summary of Permanent and Temporary Impacts Associated with Project Related Activities

Habitat/Vegetation Community	Permanent Impacts (acres)	Temporary Impacts (acres)
Bare Ground	0.18	0.05
Brome Grass-Wild Oat Grassland	1.14	0.02
California Sagebrush Scrub	0.20	0.10
Developed	0.01	0.01
Disturbed	0.15	0.27
Landscape/Ornamental	0.05	0.06
Total	1.73	0.51

5.1.1 Direct Impacts

Direct impacts associated with the Proposed Project include: permanent removal or significant alteration of existing native habitat, increased land use and disturbance by humans, and potential temporary fragmentation of movement corridors for various species. Other permanent impacts associated with this Project are generally small in size and are not expected to affect the surrounding habitat or habitat functionality greatly.

Temporary direct project impacts will result from construction crews moving about a Project Area, or by the laydown of tools or equipment while the specific Proposed Project feature is being built or maintained. Impacts to surrounding vegetation are anticipated to be light and consist primarily of crushing and trimming rather than grubbing and vegetation root structure and functionality is expected to be recovered through natural means. Both permanent and temporary direct impacts for each Proposed Project feature are detailed below with the total impacts to each habitat detailed in acreage and in square feet (sq. ft.).

Work areas have been specifically designed to maintain a minimum of a 100-foot buffer from QCB host plant patches and recorded observations from the QCB focused survey. Therefore, no impacts to the QCB are expected from Proposed Project facilities. In addition, best management practices (BMPs) will alleviate many of the direct impacts to habitat, sensitive plant species, and potential and observed sensitive wildlife species associated with construction of Proposed Project related facilities (Section 5.3).

Direct impacts can be minimized through the appropriate implementation of mitigation measures proposed below. These mitigation measures address topics including but not limited to: limiting the location of earth-moving machinery to already developed areas; working within a specific time of year to avoid impacting nesting birds; and implementing proper methods of revegetation seedling recruitment so as to maximize erosion control by the next rainy season.

Camping Facilities

The restoration of existing camping facilities will result in only temporary impacts to: Disturbed habitat (0.167 acre; 7,285 sq. ft.) and Bare Ground (0.004 acre; 194 sq. ft.). These sites are located within the mapped Eucalyptus Woodland and impacts will only occur to the habitat located at ground level. Therefore, no additional impacts are anticipated to the Eucalyptus Woodland.

Sensitive plant resources, San Diego viguiera, are located within close proximity (within 20 ft.) of the location of two of the existing camping sites. This is a CRPR List 4 species and while afforded special protection by encouraging avoidance from unnecessary impacts, there are no regulations regulating take of this species. No direct impacts the species are expected at these camp sites.

The establishment of seven new camping locations will result in only permanent impacts to Bare Ground (0.087 acre; 3,789 sq. ft.) and Disturbed habitat (0.092 acre; 4,018 sq. ft.). Three of the proposed new campsites are located within the mapped Eucalyptus Woodland and impacts will only occur to the habitat located at ground level. Therefore, no additional impacts are anticipated to the Eucalyptus Woodland.

Flag Plaza

Establishment of the flag plaza will result in permanent impacts to Disturbed habitat (0.012 acre; 521 sq. ft.) and Landscape/Ornamental vegetation (0.000 acre; 8.5 sq. ft.). In addition, a 15-foot temporary impact buffer has been established around the permanent impact area and will result in temporary impacts to: Disturbed habitat (0.064 acre; 2,784 sq. ft.), Brome Grass-Wild Oat Grassland (0.006 acre; 246 sq. ft.), Landscape/Ornamental vegetation (0.007 acre; 312 sq. ft.), bare ground (0.013 acre; 572 sq. ft.), and developed land (0.009 acre; 382 sq. ft.).

Restroom Facilities

The demolition of the existing restroom facilities and the construction of a new larger restroom will result in permanent impacts to Disturbed habitat (0.010 acre; 440 sq. ft.), Brome Grass-Wild Oat Grassland (0.000 acre; 5 sq. ft.), Landscape/Ornamental vegetation (0.012 acre; 504 sq. ft.), Developed land (0.012 acre; 518 sq. ft.), and Bare Ground (0.008 acre; 353 sq. ft.). In addition, a 15-foot temporary impact buffer has been established around the permanent impact area and will result in temporary impacts to: Coastal Sage Scrub (0.002 acre; 87 sq. ft.), Brome Grass-Wild Oat Grassland (0.004 acre; 154 sq. ft.), Disturbed habitat (0.003 acre; 122 sq. ft.), and Landscape/Ornamental vegetation (0.027 acre; 1,166 sq. ft.).

Camporee Field

Establishing Camporee Field will only result in permanent impacts to: Coastal Sage Scrub (0.002 acre; 93 sq. ft.), Brome Grass-Wild Oat Grassland (1.045 acre; 45,522 sq. ft.), Landscape/Ornamental vegetation (0.015 acre; 643 sq. ft.), and Bare Ground (0.075 acre; 3,273 sq. ft.).

Camporee Field will be a drill field that will be cleared of its current primarily Brome Grass-Wild Oat Grassland and replace it with a field more indicative of landscape/ornamental settings. While the conversion of the non-native grassland will result in a decrease of habitat complexity, the area will still provide foraging opportunities for birds and mammals.

COPE Course

Establishing the six COPE course stations will result in permanent impacts to Brome Grass-Wild Oat Grassland habitat (0.006 acre; 278 sq. ft.), California Sagebrush Scrub (0.029 acre; 1,276 sq. ft.), Disturbed habitat (0.008; 344 sq. ft.), Landscape/Ornamental vegetation (0.001 acre; 60 sq. ft.), and bare ground (0.001; 26 sq. ft.). In addition, a 15-foot temporary impact buffer has been established around the permanent impact area and will result in temporary impacts to: Brome Grass-Wild Oat Grassland habitat (0.005 acre; 219 sq. ft.), California Sagebrush Scrub (0.028 acre; 1,201 sq. ft.), Disturbed habitat (0.031; 1,369 sq. ft.), Landscape/Ornamental vegetation (0.024 acre; 1,028 sq. ft.), and bare ground (0.030; 1,298 sq. ft.) The COPE stations are designed to be able to be collapsed and partially disassembled when not in use, resulting in less long-term impacts to the surrounding habitat.

Sensitive plant resources, San Diego viguiera, are located within the proposed location of three of the COPE stations. Proposed Project features have been designed to minimize the total impacts required to sensitive species, however, trimming and occasional grubbing of this species may be required to facilitate construction. Individuals of this species range in the 1,000s to 10,000s within the Study Area and long-term impacts to the species from Project related activities are not anticipated.

Zip-line

Establishing the two zip-line base stations and associated anchors will result in permanent impacts to Brome Grass-Wild Oat Grassland habitat (0.004 acre; 176 sq. ft.), California Sagebrush Scrub (0.007 acre; 324 sq. ft.), Disturbed habitat (0.008 acre; 347 sq. ft.), Landscape/Ornamental vegetation (0.024 acre; 1,052 sq. ft.), and bare ground (0.002 acre; 105 sq. ft.). In addition, a 15-foot temporary impact buffer has been established around the permanent impact area and will result in temporary impacts to: Brome Grass-Wild Oat Grassland habitat (0.009 acre; 384 sq. ft.), California Sagebrush Scrub (0.045 acre; 1,979 sq. ft.), and bare ground (0.001; 40 sq. ft.)

Fenced Storage

Establishing the fenced storage areas will only result in permanent impacts to the following habitats: Disturbed habitat (0.010 acre; 422 sq. ft.), Landscape/Ornamental vegetation (0.001 acre; 29 sq. ft.), and Bare Ground (0.010 acre; 451 sq. ft.).

Proposed Project Site Circulation

Direct permanent and temporary Proposed Project related impacts to the existing road and trail network are not addressed in this study. All impacts associated with these features will occur to the existing bare ground of the feature and is considered routine maintenance.

A solitary red-diamond rattlesnake was observed within an existing access road along the northern portions of the Study Area. This species is highly mobile and will likely flee from areas of activity (construction or general use) if given the opportunity. No lasting impacts to this sensitive species are anticipated from Proposed Project related activities.

Fire Ring and Amphitheater

Establishing the fire ring and amphitheater will result in permanent impacts to California Sagebrush Scrub (0.076 acre; 3,313 sq. ft.) and Brome Grass-Wild Oat Grassland (0.062 acre; 2,710 sq. ft.). In addition, a 15-foot temporary impact buffer has been established around the proposed stage location for construction purposes and will result in temporary impacts to: Brome Grass-Wild Oat Grassland habitat (0.000 acre; 10 sq. ft.) and California Sagebrush Scrub (0.026 acre; 1,145 sq. ft.).

Archery Range

Establishing the archery range will only result in permanent impacts to the following habitats: California Sagebrush Scrub (0.083 acre; 3,625 sq. ft.), Brome Grass-Wild Oat Grassland (0.026 acre; 1,115 sq. ft.), and Disturbed habitat (0.006 acre; 267 sq. ft.).

Sensitive plant resources, San Diego viguiera, are located within close proximity (within 20 ft.) of the location of the archery range and are not anticipated to be impacted by Proposed Project-related activities.

5.1.2 Indirect Effects

Temporary indirect project effects are anticipated to occur within the Project and larger Study Areas; and are expected to include diurnal and nocturnal noise and dust production from utilization of the camp ground and associated facilities. These may be alleviated through the use of proper implementation of mitigation measures detailed below. The majority of indirect Project-related impacts will occur a few times a year (3 to 4 occasions), when large numbers of people will be within the general area. Impacts associated with human use of the Proposed Project facilities will occur on a temporary basis, therefore, majority of the indirect project impacts will be short term. Construction is anticipated to occur during daylight hours and therefore, light pollution is not expected to be an issue with the Proposed Project.

Additionally, implementation of the Proposed Project may result in indirect effects to existing wild animals altering land use patterns while the campsite and associated facilities are being used. These effects are anticipated to be short term (2 to 3 days maximum) and are not anticipated to negatively affect long-term animal land use patterns.

Overall, the Proposed Project has been designed to minimize impacts to native habitat as well as minimize habitat fragmentation. Proposed Project features were located adjacent to existing access roads and areas of non-native vegetation (e.g. Disturbed Habitat, Landscape/Ornamental, and Bare Ground). The COPE stations have been designed to be collapsible to minimize potential impacts when not in use. The anticipated sporadic use of the Proposed Project facilities also contributes to the minimal overall impact expected from the Project. Impacts expected to Coastal Sage Scrub habitat will occur to areas with minimal shrub density and impacts will affect annual species to a greater extent than perennial species.

5.2 CUMULATIVE IMPACT ANALYSIS

Cumulative impacts that may impact listed plant and animal species are expected to be temporary in nature. The Study Area is primarily composed of gentle slopes of coastal sage scrub as well as native and non-native grassland. The majority of the impacts are not expected to impact sensitive species or habitats within the Study Area. The Project Area has a large amount of connectivity to other native habitat and is

not located adjacent to any MHPA Preserve areas. A majority of the permanent impacts occur to Brome Grass-Wild Oat grassland that exhibits a high degree of disturbance indicated by the presence of various invasive weed species.

Furthermore, with the implementation of appropriate mitigation measures, any unexpected impacts to sensitive habitat can be minimized or eliminated.

5.3 MITIGATION MEASURES AND DESIGN CONSIDERATIONS

It is recommended that the following mitigation measures be implemented to minimize impacts to sensitive habitat or species:

MM-BIO-1: The following measures will be implemented to avoid all impacts to the quino checkerspot butterfly.

- All direct impacts to locations of host plants, including a 100 ft buffer, as mapped during the QCB focused surveys and refined during the 2019 rare plant surveys conducted by Chambers Group;
- Prior to construction, but no more than two weeks prior to ground disturbing activities, pre-construction surveys to identify QCB host plant locations will be conducted;
- All construction or other ground-disturbing maintenance activities within a 100-ft. buffer of mapped QCB host plants will be prohibited during the QCB flight season (defined as the third week of February through the second Saturday of May).
- BSA will conduct environmental awareness training for all personnel entering the site during construction and operation of the Proposed Project.
- During flight season, limit activities within the campground to Project features or currently established and maintained trails; no activities will be permitted within area inhabited by host plants and their buffers.
- Due to the inherent sensitivity of QCB host plants and the proximity of suitable habitat to existing trails, larger events where the trails may be utilized increasing the propensity for people to venture off the established trails. Educational campaigns should be conducted to minimize potential impacts to host plant patches during host plant booming season (generally March to April).
- Install permanent physical barrier(s) (i.e., fence) and signage, as appropriate, between locations of host plants and project components to facilitate avoidance of host plant areas. Placement of fencing should be located immediately adjacent to developed areas rather than within habitat such that movement of QCB and other wildlife is not impeded; these areas include the entrance to and along the existing trails and roads in the northeastern portion of the campground, at the entrance to and along the existing trails and roads in the southern portion of the campground that connect the campsites to the Amphitheatre, and along the eastern edge of the campsites. Signage should clearly state that entry into the host plant area is prohibited.
- A speed limit of 10 miles per hour will be instituted for all access roads during the QCB flight season.

MM-BIO-2: To avoid the destruction of active nests and to protect the reproductive success of birds protected by Migratory Bird Treaty Act, nesting bird surveys shall be performed not more than 3 days (72 hours) prior to the scheduled construction in the Proposed Project site and surrounding area. In the event that active nests are discovered, a suitable buffer should be established around such active nests and no construction within the buffer allowed until a qualified biologist has determined that the nest is no longer active (e.g. the nestlings have fledged and are no longer reliant on the nest). No ground disturbing

activities shall occur within this buffer until the qualified biologist has confirmed that breeding/nesting is complete, and the young have fledged the nest. Survey results shall be presented in a letter report and submitted to the County. Nesting bird surveys are not required for construction activities occurring between September 16 and January 31.

MM-BIO-3: A qualified biological monitor should conduct an environmental awareness training prior to the start of any construction related activities. Special focus should be made on sensitive animals and plants that are present or have a PFO and sensitive habitat located adjacent to the Project Area and within the Study Area.

MM-BIO-4: Heavy equipment shall work from existing access roads, footpaths, and bare ground areas as much as possible to avoid unnecessary soil compaction or impacts.

MM-BIO-5: Environmentally sensitive areas, including sensitive plant resources, within 20 ft. of construction areas should be flagged for avoidance.

MM-BIO-6: A qualified biologist will monitor all construction activities to ensure that standard and special-status species-specific avoidance and minimization recommendations are adhered to. The biological monitor will conduct a general preconstruction survey no more than 14 days prior to the start of construction to verify that no special-status species are in the Proposed Project area or its buffers. The monitor shall also conduct a daily survey in and around work areas before activities start.

MM-BIO-7: BMPs should be implemented to prevent new erosional features from developing in any newly contoured areas (including access roads and footpaths).

MM-BIO-8: Newly exposed bare ground should be covered with native hydroseed appropriate to the immediately surrounding habitat.

5.4 CONCLUSIONS

Through the implementation of the above mitigation measures it is expected the Proposed Project will have a less than significant impact on species diversity or richness of the Study Area or surrounding ecosystem. Wildlife movement corridors may shift slightly when the newly development camp sites are in use; however, minimal disruption is expected while the Project Area is not in use. The implementation of the above suggested mitigation measures will help to alleviate any potential negative impacts to the existing habitat.

The observed sensitive plant species, San Diego viguiera, is located in close proximity to three of the proposed COPE stations as well as the northwestern edge of the Amphitheater. Additional populations of San Diego viguiera are located adjacent to existing access roads and footpaths. In addition, ashy spike moss and San Diego barrel cactus were recorded in close proximity to existing access roads in the northern portion of the Study Area (ashy spike moss only) and along the existing trail network in the southern portion of the Study Area (ashy spike moss and San Diego barrel cactus). Populations of these species that are located within 20 ft. of Proposed Project features will be flagged prior to construction and will be avoided to the extent feasible. Impacts to these species are not anticipated as a result of by project related activities.

Minor vegetation trimming may be required to facilitate construction activities, and minimal grubbing of vegetation may be required. Crews should remain within the Project Area boundary to minimize effects to sensitive habitat and resources.

Section 6.0 – SUMMARY OF PROJECT IMPACTS AND MITIGATION

6.1.1 Mitigation

This Proposed Project is located within a designated “*Take Authorized*” parcel, under the association of Otay Lakes County Park. This area was previously mitigated for at the inception of San Diego County’s MSCP. The Take Authorized qualifier pertains only to species covered within the San Diego County MSCP, which does not include QCB. Since QCB is present within the Study Area, the Proposed Project has been designed to avoid impacts to this species. Project features will be placed more than 100 ft. from all QCB sightings and host plant patches, and project-specific mitigation measures were developed (Section 5.3 above). Through the implementation of these measures, no impacts are anticipated as a result of Proposed Project-related activities. Therefore, no additional mitigation specifically targeted for QCB is proposed at this time.

6.1.2 Sensitive Flora and Fauna

With the use of the project-specific mitigation measures listed in Section 5.3 above, no impacts to any listed species are anticipated. No sensitive animal resources were identified within any of the expected Proposed Project areas. San Diego viguiera is located within three areas associated with COPE stations and at the northwestern edge of the proposed Amphitheater location, and impacts are anticipated to include vegetation trimming and limited vegetation removal. Additional San Diego viguiera populations are located in close proximity to existing access roads and trails; however, with implementation of the mitigation measures above and the utilization of established work areas, no additional impacts are anticipated.

Multiple populations of ashy spike moss and San Diego barrel cactus are located adjacent to existing access roads and trails; however, these populations are far enough removed from the existing facilities that they are not anticipated to be impacted by Project-related activities.

6.1.3 Larger Project Effects

Permanent impacts are anticipated to be minimal and restricted to previously disturbed areas where feasible, and Proposed Project features are designed to collapse when not in use. The Proposed Project will utilize existing access roads and trails such that no new roads or trails will be created. Overall, the Proposed Project aims to rehabilitate and improve a former campground site for the occasional use of a civically-minded and environmentally-conscious group (BSOA). The Proposed Project provides an opportunity to expose BSOA youth to the urban-wildland interface and gain an understanding of the importance of ecological conservation.

Section 7.0 – REFERENCES

Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, and T.J. Rosatti, and D.H. Wilken (editors)

2012 *The Jepson Manual: Vascular Plants of California, Second Edition*. University of California Press, Berkeley, California.

Burks, M.

2017 *Otay Reservoir Spills Over Its Dam for The First Time Since 2011*. City News Service. Wednesday March 1, 2017.

Calflora

2019 *The Calflora Database*. Consortium of California Herbaria [web application] Berkley, California. Accessed spring 2019. <https://www.calflora.org/>.

California Department of Fish and Wildlife (CDFW)

2019 *California Natural Diversity Database* (CNDDB). RareFind Version 5.1.0. Database query within five miles of the proposed Otay Lakes Campground project Study Area. Wildlife and Habitat Data Analysis Branch. Accessed spring 2019.

1997 *California Gnatcatcher* (*Polioptila californica*). California Interagency Wildlife Task Group, California Wildlife Habitat Relationship System. Written by T. Kucera.

California Native Plant Society (CNPS)

2019 *Inventory of Rare and Endangered Plants* (online edition). Rare Plant Scientific Advisory Committee, California Native Plant Society, Sacramento, California. Database query within five miles of the proposed Otay Lakes Campground project Study Area. Accessed spring 2019 from <http://www.cnps.org/inventory>.

Chambers Group, Inc.

2019 *Results of the 2019 Quino Checkerspot Butterfly* (*Euphydryas Editha Quino*) *Focused Surveys For The Proposed Otay Lakes Campground Project, San Diego County, California*.

Glassberg, J.

2001 *Butterflies through Binoculars*. The West. A Field Guide to the Butterflies of Western North America. Oxford University Press. New York.

Reynolds, Richard A.

2008 "Sweetwater Dam: Then and Now," paper presented at Dickinson dinner, Chula Vista, August 2.

San Diego, County of

1998 Final Multiple Species Conservation Program (MSCP Plan). August.

SanGIS

2019 SanGIS. SANBios dataset. SanGIS Regional Data Warehouse, 2015. www.sangis.org/. Accessed Spring 2019.

Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens

- 2009 *A Manual of California Vegetation, Second Edition*. California Native Plant Society, Sacramento, California.

Schoenherr, Steve

- 2015 Mining in the Otay Valley. South Bay Historical Society Bulletin. Issue 7. January 2015.

Shiraiwa, Kojiro

- 2009 *The Butterflies of San Diego County Introduction and Identification Guide*. May.

Tremore, Scott, D. Stokes, W. Spencer, J. Diffendorfer, H. Thomas, S. Chivers, and P. Unitt

- 2017 *San Diego County Mammal Atlas*. Proceedings of the San Diego Society of Natural History. No. 46. August 1, 2017.

United States Fish and Wildlife Service (USFWS)

- 1997 Federal Register / Vol. 62, No. 11. Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for the Laguna Mountains Skipper and Quino Checkerspot Butterfly. January.
- 2002 Federal Register / Vol. 67, No. 72. Endangered and Threatened Wildlife and Plants; *Designation of Critical Habitat for the Quino Checkerspot Butterfly* (*Euphydryas editha quino*). April.
- 2014 *Quino Checkerspot Butterfly Survey Guidelines*. December.
- 2019 *Sensitive Species Occurrences*. <https://www.fws.gov/carlsbad/gis/cfwogis.html>. Database query within five miles of the proposed Otay Lakes Campground project Study Area. Accessed spring 2019. Carlsbad Branch.

Unitt, Phillip and A. Klovstad

- 2004 *San Diego Bird Atlas*. Proceedings of the San Diego Society of Natural History. No. 39. 2004.

United States Department of Agriculture (USDA)

- 2019 USDA. USDA-NRCS Soil Survey Geographic Database (SSURGO), dated February 4, 2018. Available at: <https://catalog.data.gov/dataset/soil-survey-geographic-ssurgo-database-for-various-soil-survey-areas-in-the-united-states->. Accessed spring 2019.

Section 8.0 – LIST OF PREPARERS

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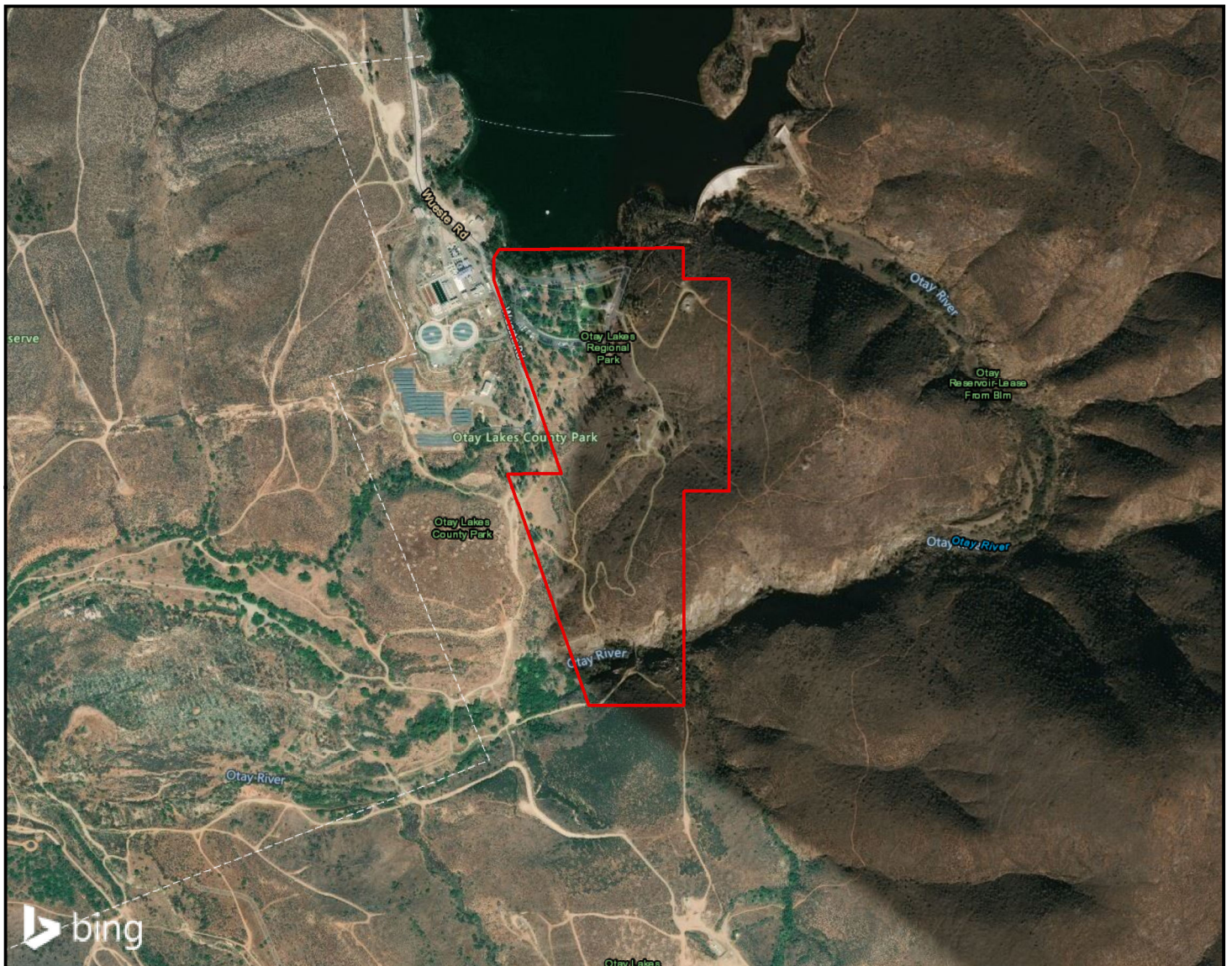
Clark Austin – Staff Biologist, report author

Laura Gorman – Senior Biologist, report author

Philip Carlos – GIS Technician, map designer

APPENDIX A – FIGURES





Legend

Study Area

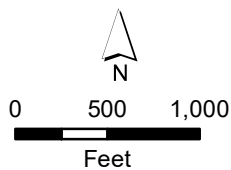
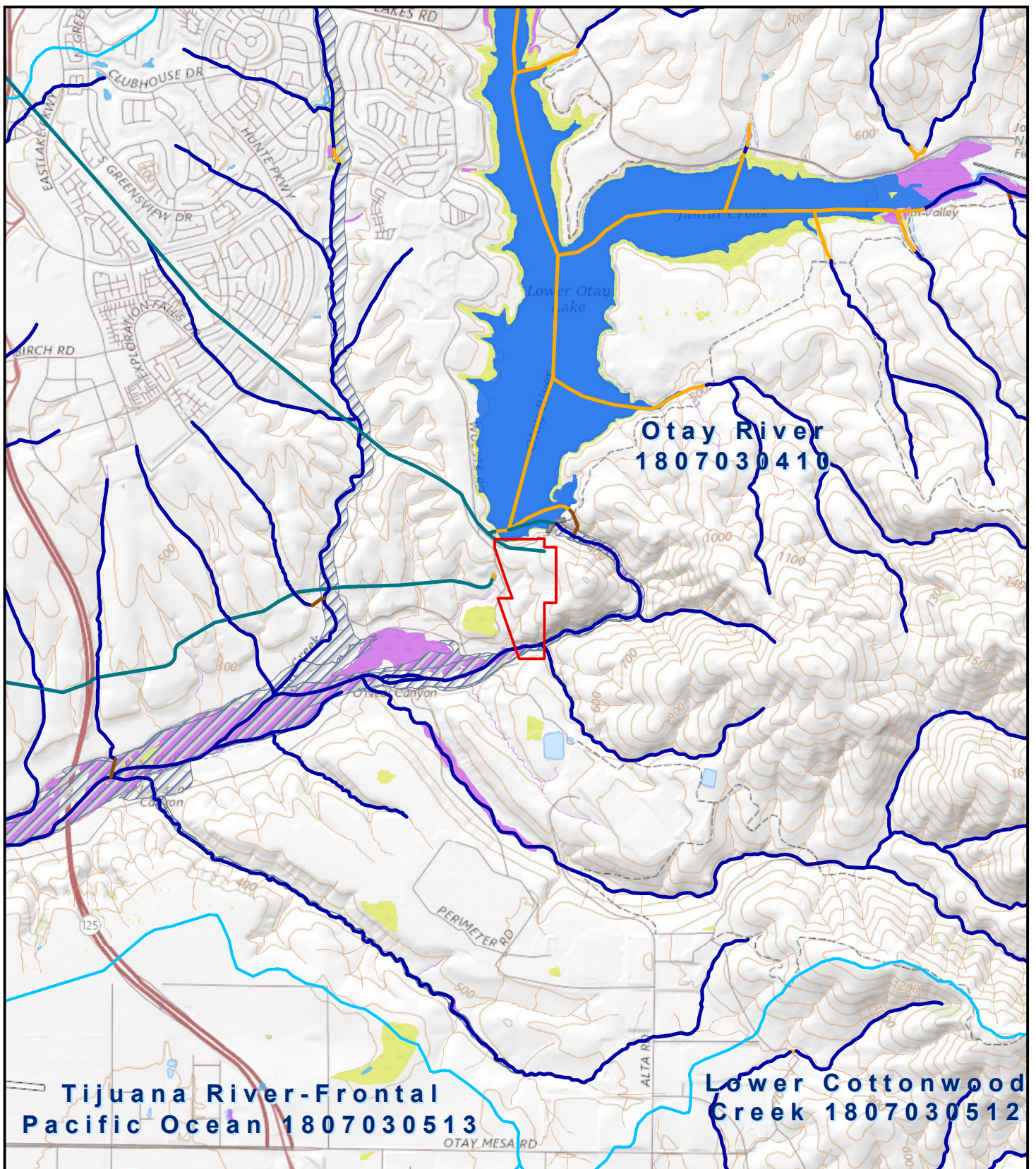


Figure 1
Project Location & Vicinity



Legend

- | | |
|---|--|
| Study Area | — Stream/River |
| FEMA 100-Year Flood Zone | USFWS Mapped NWI Type |
| HUC-10 Watershed Boundary | Freshwater Emergent Wetland |
| USGS NHD Flowlines | Freshwater Forested/Shrub Wetland |
| — Artificial Path | Freshwater Pond |
| — Connector | Lake |
| — Pipeline | Riverine |

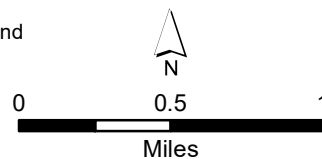
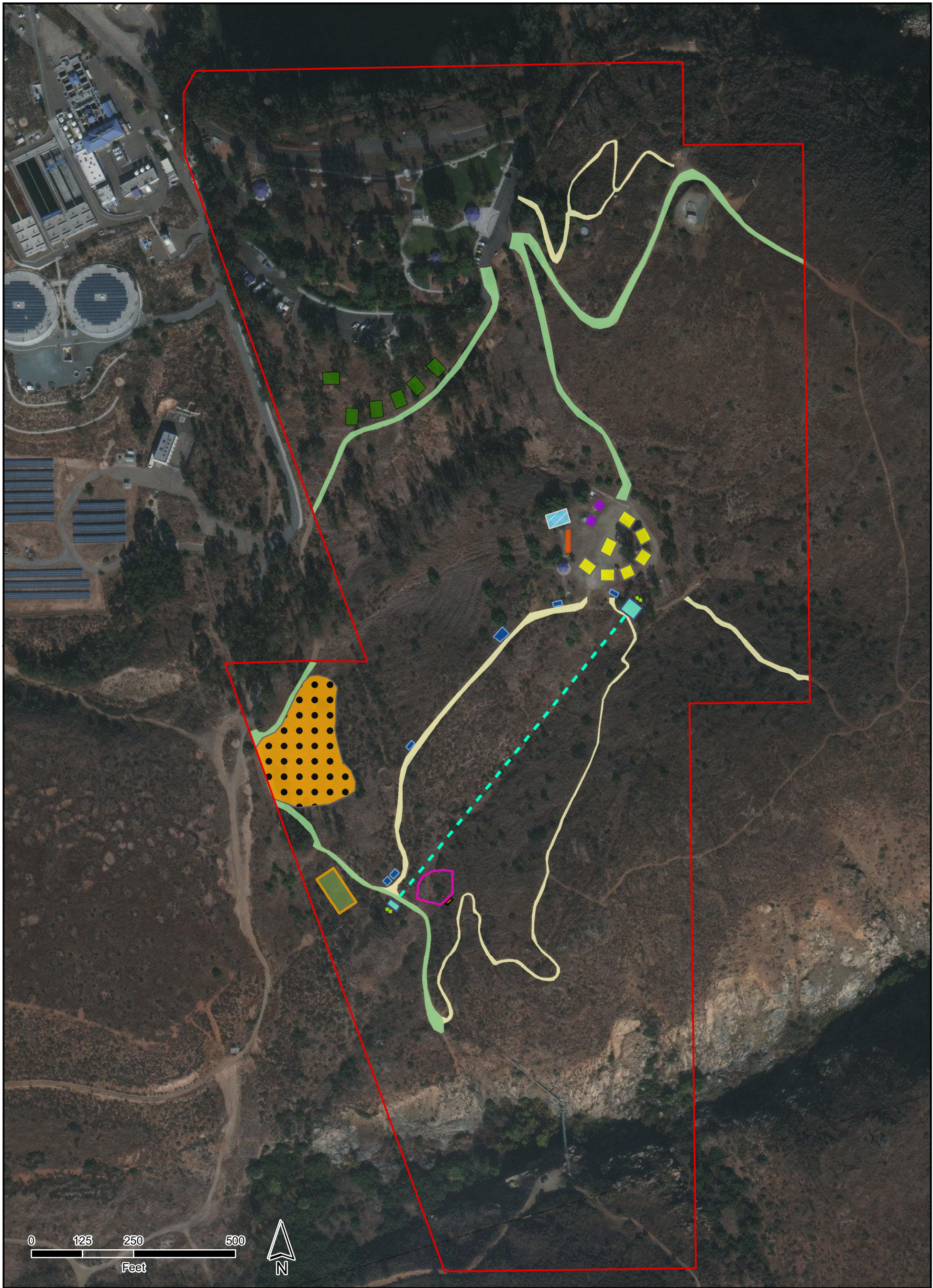


Figure 2
Water Resources



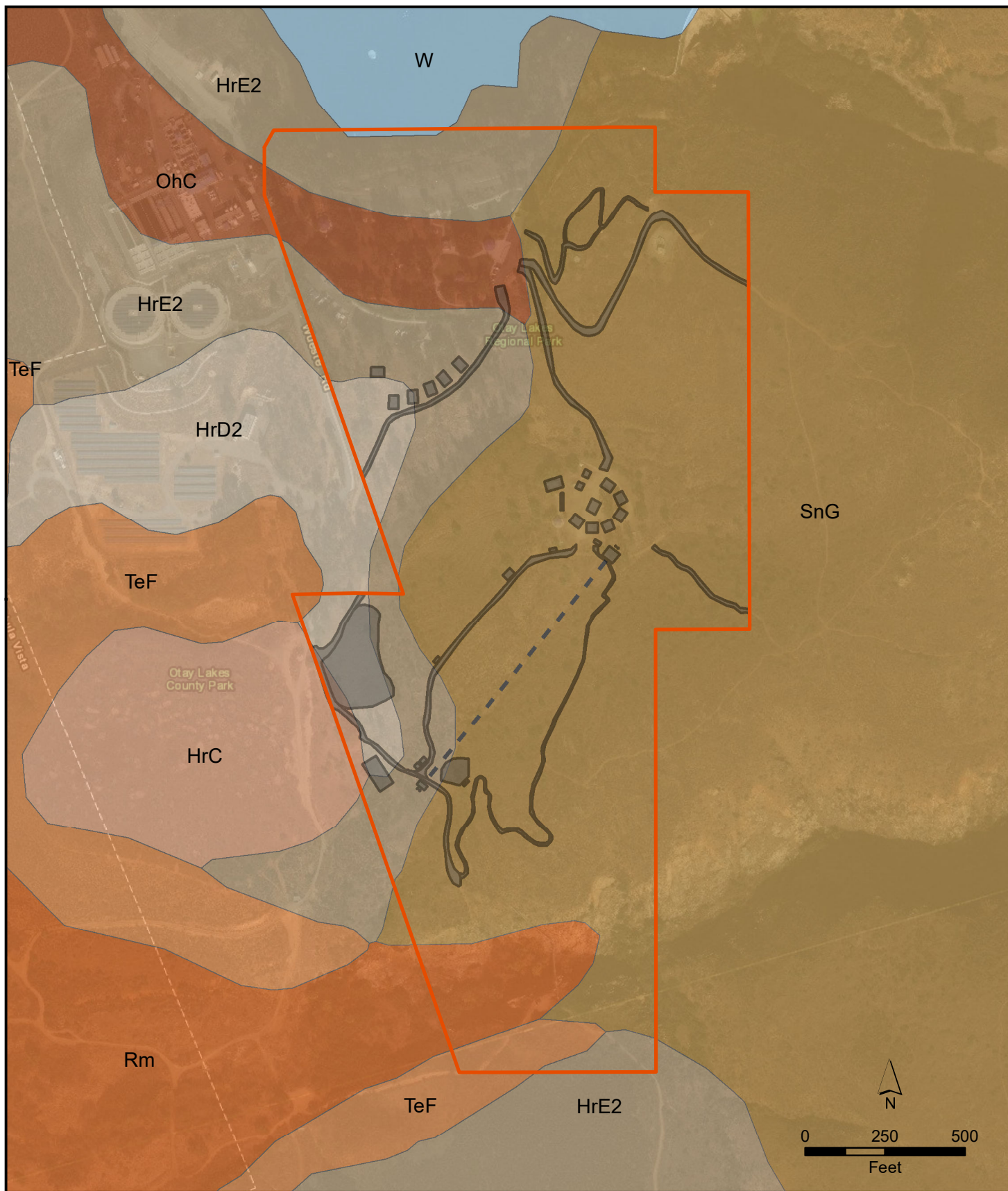
Legend

- | | | |
|----------------------------------|---------------|--------------------|
| Study Area | Existing Road | COPE Station |
| Zip Line Anchor | Storage | Camporee Field |
| Potential Rehabilitated Campsite | Archery Range | Flag Plaza |
| Restroom | Seating | Zip Line Platforms |
| New Campsite | Stage | Zipline |
| Existing Trail | Fire Ring | |

Figure 3
Project Features



Name: 21134 BIO Fig 3 Project Features.Mxd
Print Date: 9/9/2019, Author: pcarlos



Legend

Study Area

Project Features

SSURGO Soils

HrC- Huerhuero loam, 2 to 9 percent slopes

HrD2- Huerhuero loam, 9 to 15 percent slopes, eroded

HrE2- Huerhuero loam, 15 to 30 percent slopes, eroded

OhC- Olivenhain cobbly loam, 2 to 9 percent slopes

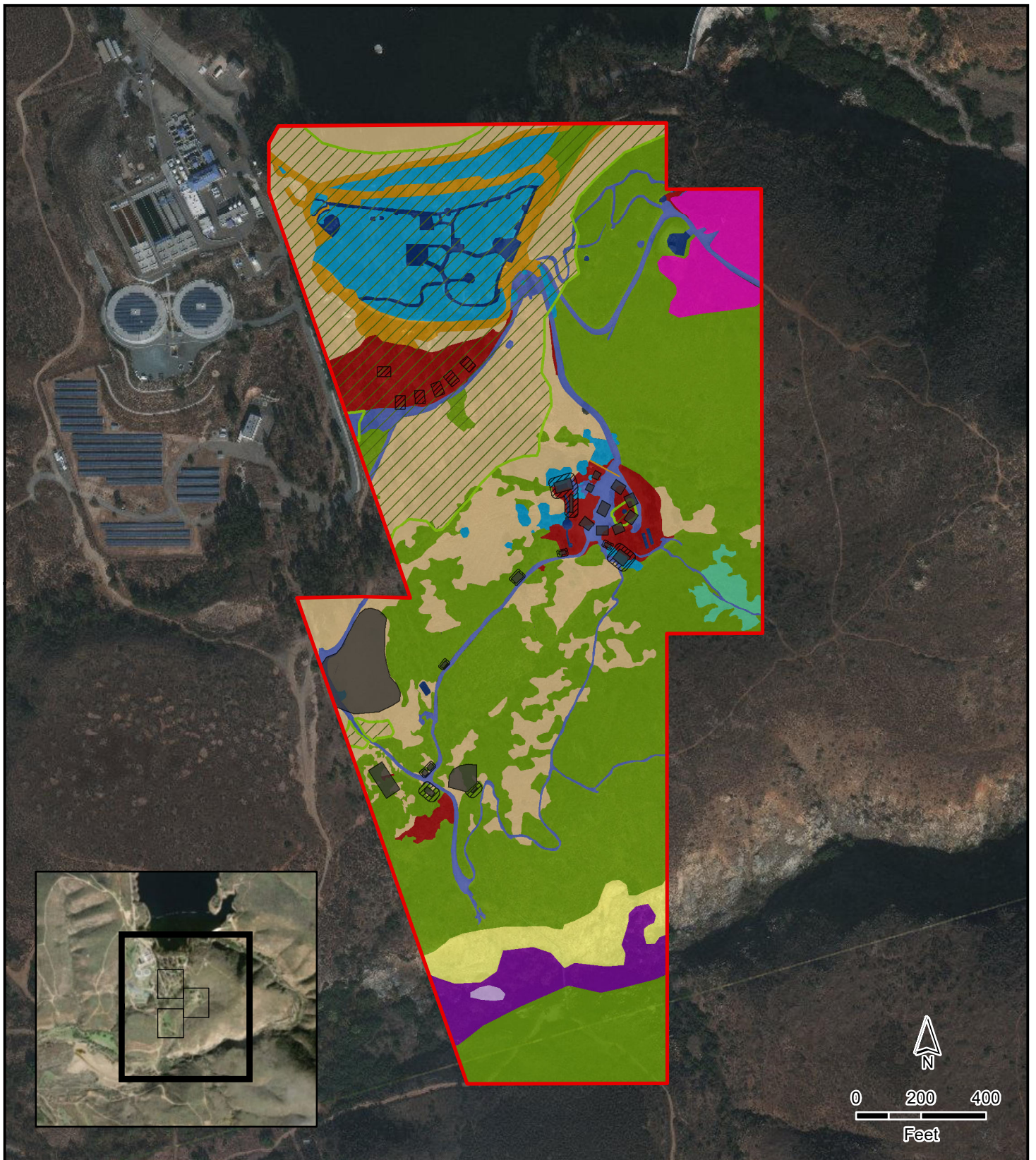
SnG- San Miguel-Exchequer rocky silt loams, 9 to 70 percent slopes

TeF- Terrace escarpments

Rm- Riverwash

W- Water

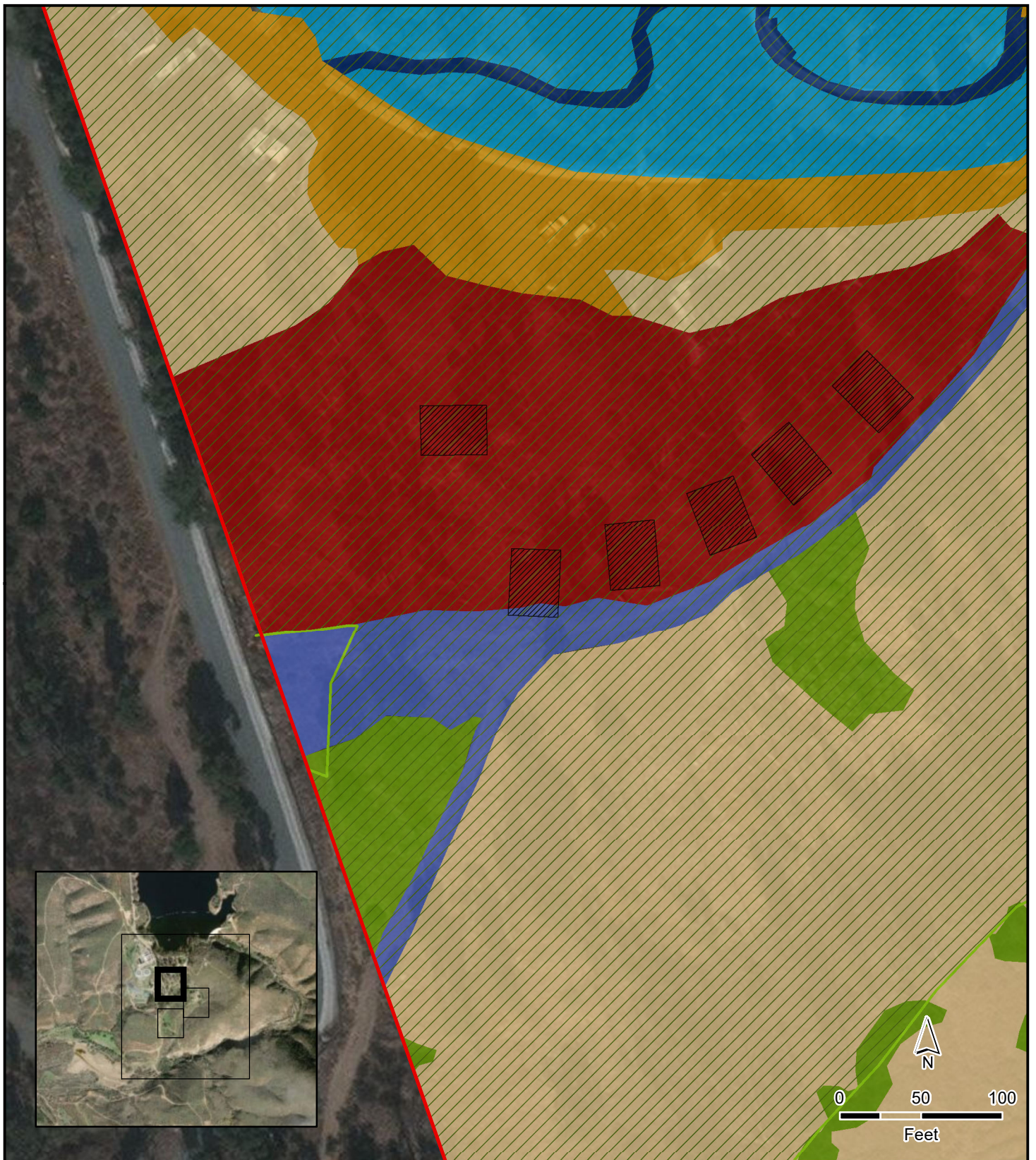
Figure 4
SSURGO Soils



Legend

 Study Area	Vegetation Communities	 Purple Needlegrass Grassland
Impacts	 Maritime Succulent Bluff	 Red Willow Riparian Forest
 Permanent	 Developed	 Cattail Marsh
 Temporary	 Disturbed	 Bare Ground
	 Eucalyptus Woodland	 Brome Grass - Wild Oat Grassland
	 Landscape/Ornamental	 California Sagebrush - California Brittlebush Scrub
	 Pavement	 California Sagebrush Scrub

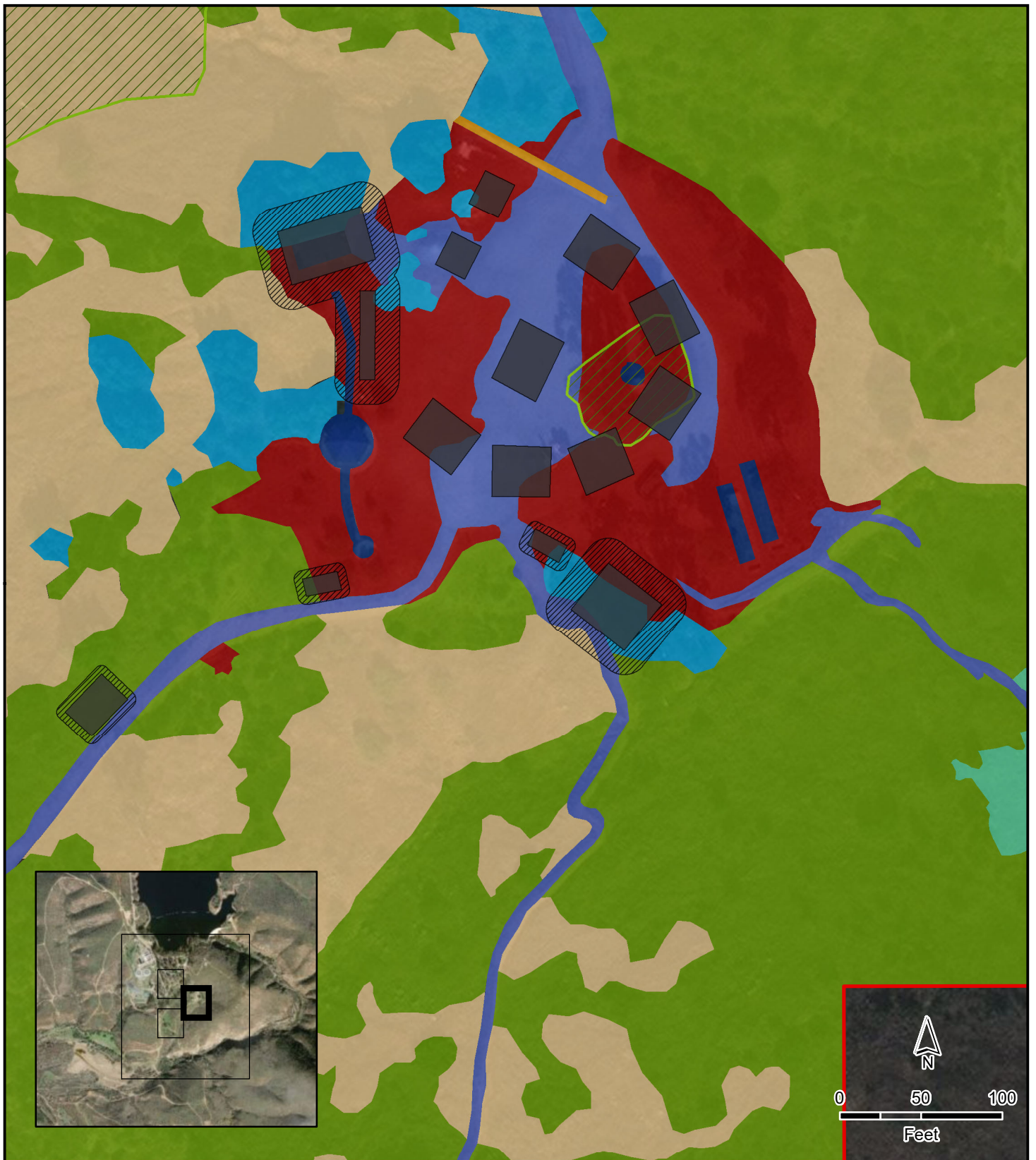
Figure 5a
Vegetation Communities
& Project Impact Areas



Legend

 Study Area	Vegetation Communities	 Pavement
Impacts	 Developed	 Bare Ground
 Temporary	 Disturbed	 Brome Grass - Wild Oat Grassland
	 Eucalyptus Woodland	 California Sagebrush Scrub
	 Landscape/Ornamental	

Figure 5b
Vegetation Communities
& Project Impact Areas



Legend

Study Area	Vegetation Communities	Pavement
Impacts	Developed	Purple Needlegrass Grassland
Permanent	Disturbed	Bare Ground
Temporary	Eucalyptus Woodland	Brome Grass - Wild Oat Grassland
	Landscape/Ornamental	California Sagebrush Scrub

Figure 5c
Vegetation Communities
& Project Impact Areas



Legend

 Study Area	Vegetation Communities	 Landscape/Ornamental
Impacts	 Developed	 Bare Ground
 Permanent	 Disturbed	 Brome Grass - Wild Oat Grassland
 Temporary	 Eucalyptus Woodland	 California Sagebrush Scrub

Figure 5d
Vegetation Communities
& Project Impact Areas

Legend

Legend













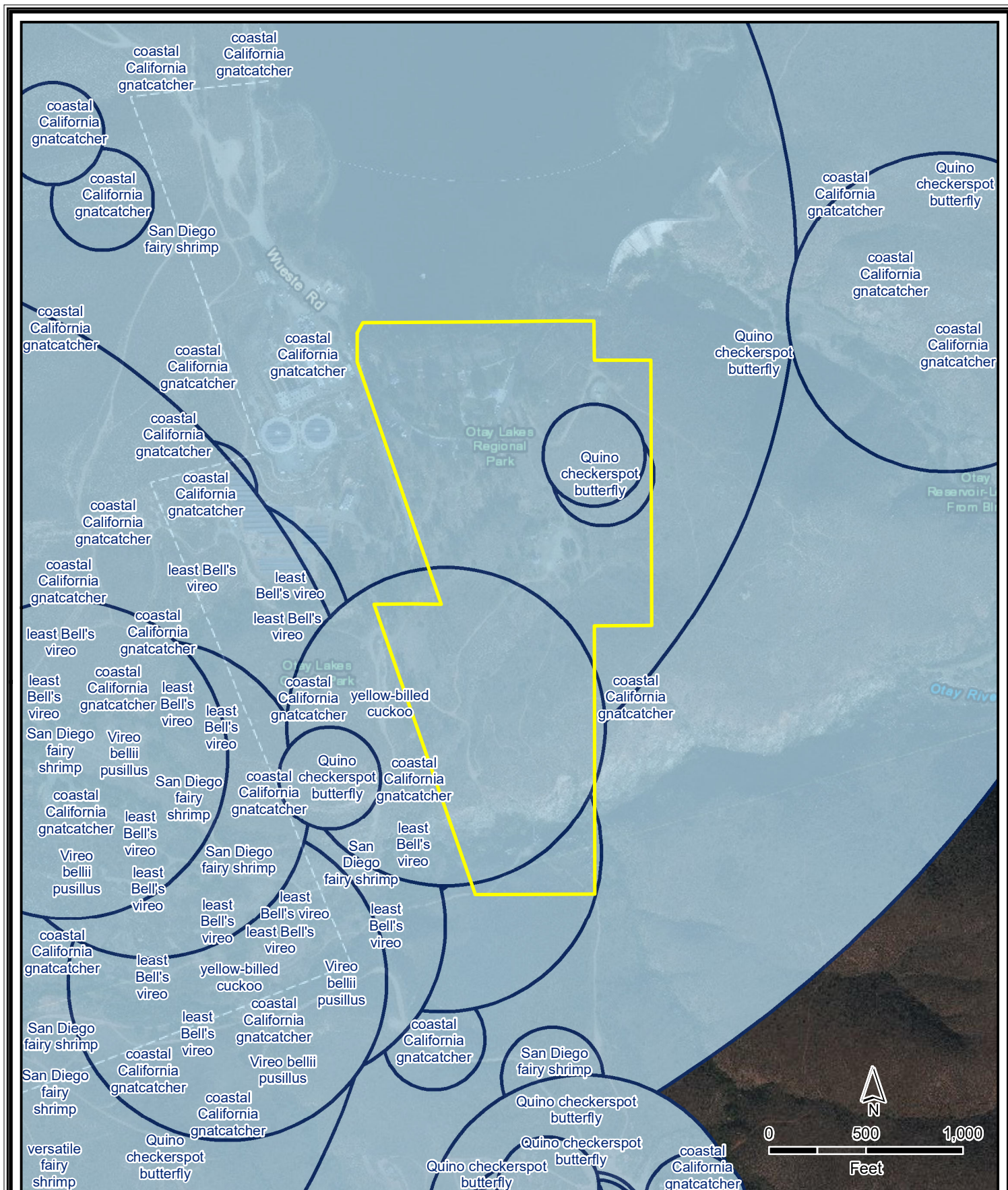
 Study Area	 Animal (80m)	 Multiple (80m)
CNDDb selection	 Animal (specific)	 Multiple (specific)
Symbology	 Animal (non-specific)	 Multiple (non-specific)
 Plant (specific)	 Animal (circular)	 Multiple (circular)
 Plant (non-specific)	 Terrestrial Comm. (circular)	

Figure 6
CNDDDB Documented
Occurrences

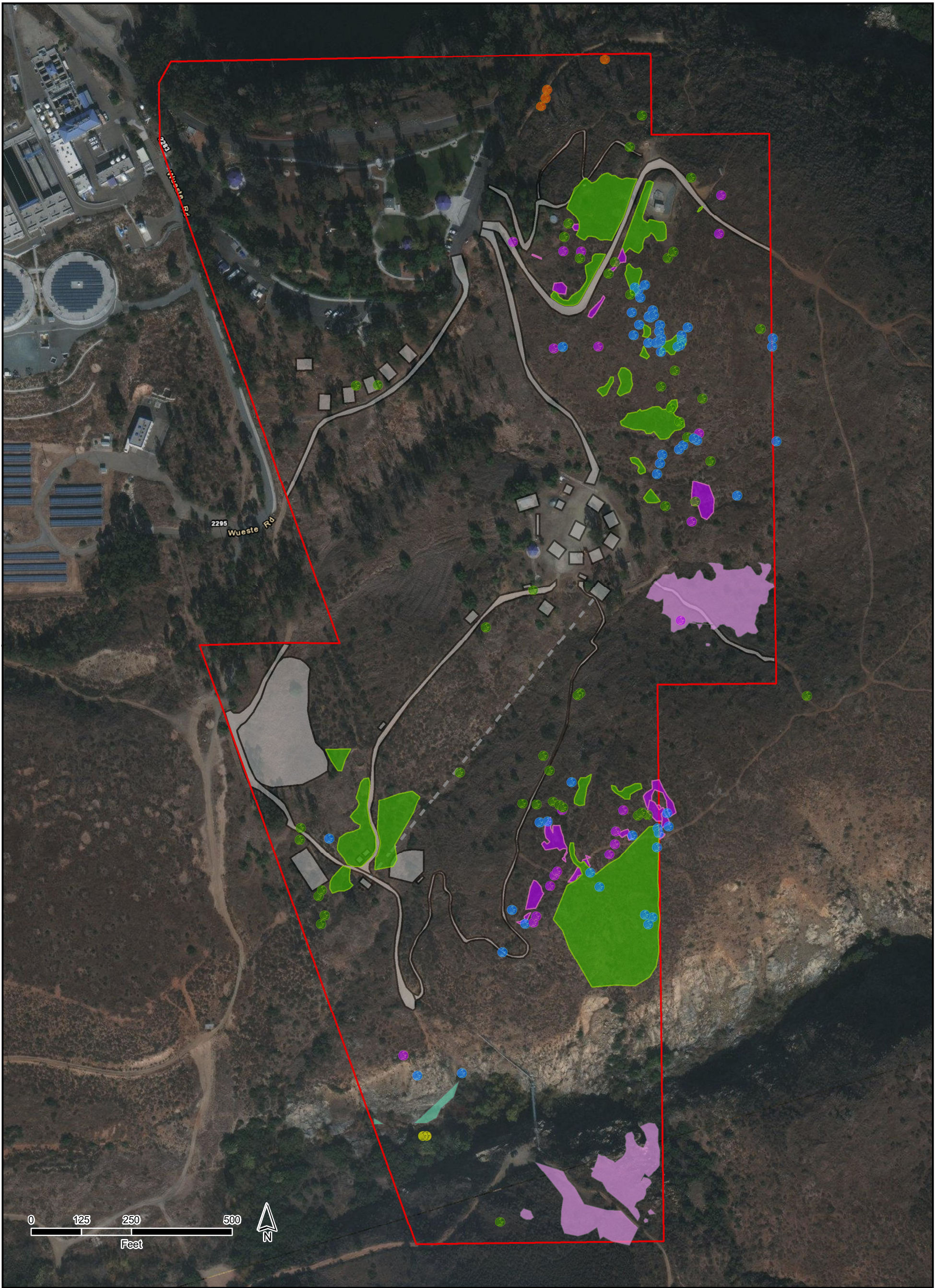


Legend

- Study Area
- USFWS Documented Occurrence

Figure 7 USFWS

Documented Occurrences



- Legend**
- | | |
|-------------------------------|--------------------------------|
| Survey Area | Focused Plant (Polygon) |
| Project Features | Bahiopsis laciniata |
| Focused Plant (Point) | Bloomeria clevelandii |
| Bahiopsis laciniata | Iva hayesiana |
| Ferocactus viridescens | Selaginella cinerascens |
| Juncus arcutus var. leopoldii | |
| Selaginella cinerascens | |
| Stipa diegoensis | |

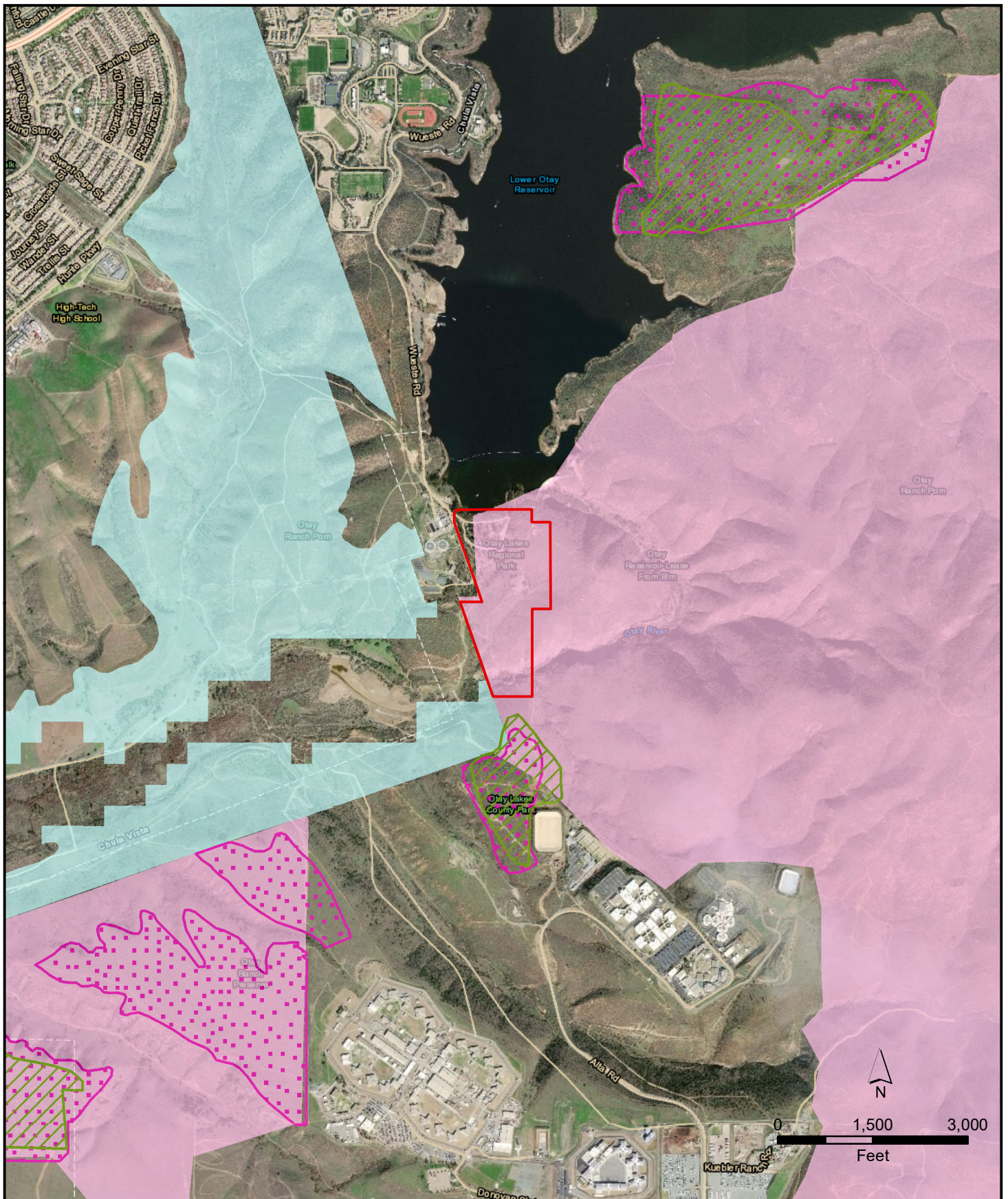
Figure 8
Observed Sensitive
Plant Species



- Legend**
- Survey Area
 - Project Features
- Species Observations**
- Least Bell's vireo
 - orangethroat whiptail
 - quino checkerspot butterfly
 - California gnatcatcher
 - two-striped garter snake
 - red-diamond rattlesnake

Figure 9
Observed Sensitive
Wildlife Species

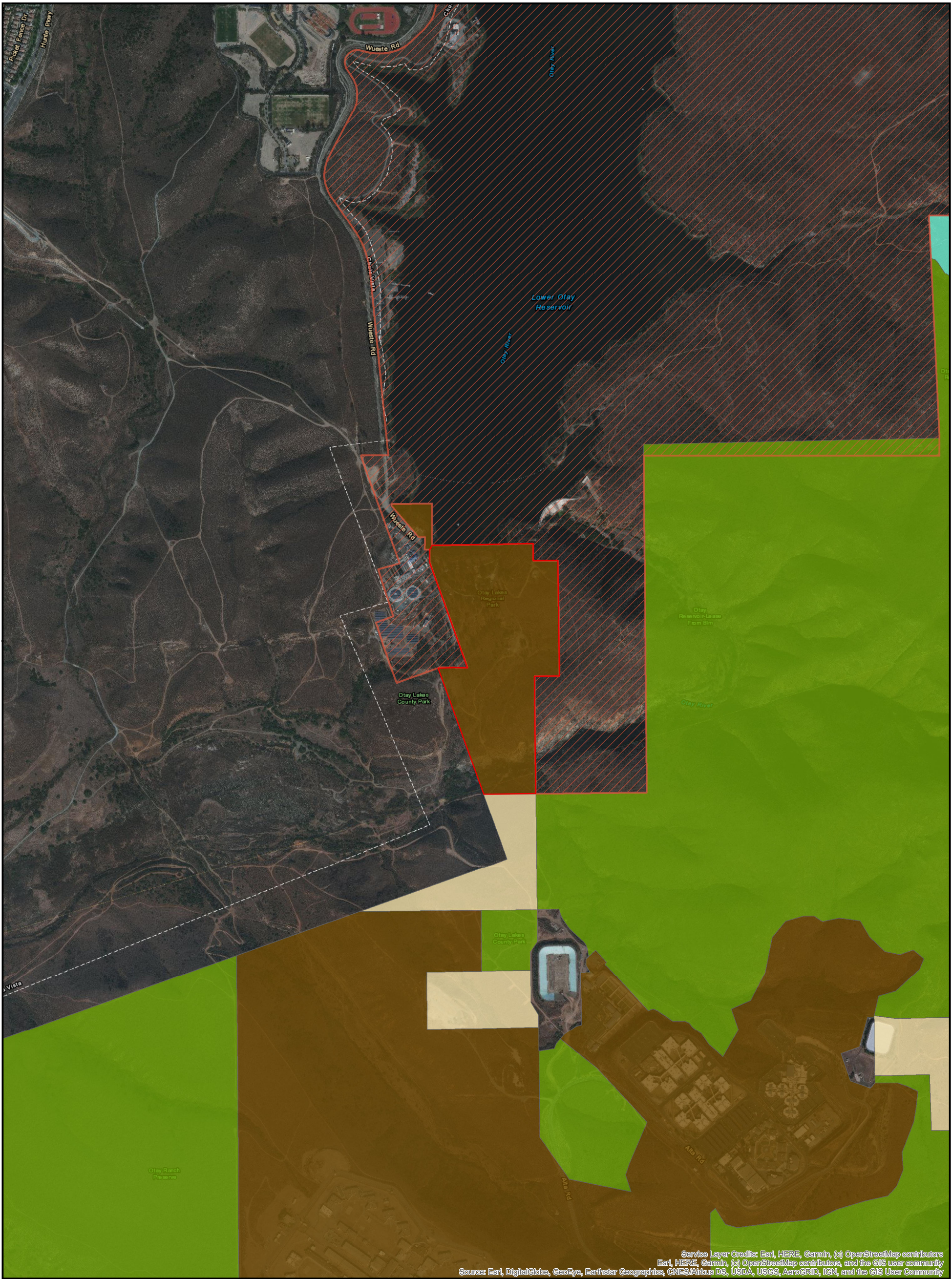




Legend

- | | |
|--|--|
| Study Area | Quino checkerspot butterfly |
| USFWS Critical Habitat | San Diego fairy shrimp |
| Olay tarplant | Spreading navarretia |

Figure 10
USFWS Designated
Critical Habitat



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Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community
Sources: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



- Legend**
- Site Boundary
 - City of San Diego Multi-Habitat Planning Area
 - Multiple Species Conservation Program Designations**
 - Conserved Subject to Agreement with Wildlife Agencies
 - Hardline Preserve
 - Minor Amendment Area
 - Take Authorized Area

Figure 11
Preserves



APPENDIX B – SITE PHOTOGRAPHS



ATTACHMENT B – SITE PHOTOGRAPHS



Photo 1. Overview of Project and Study Area with open California Sagebrush Scrub and Brome Grass-Wild Oat Grassland habitats. View southwest.



Photo 2. Overview of Project and Study Area with Landscape/Ornamental Vegetation, Brome Grass-Wild Oat Grassland, and California Sagebrush Scrub habitats. View west.



Photo 3. Overview of Study Area showing open California Sagebrush Scrub where Quino checkerspot butterfly (*Euphydryas editha quino*) was observed during 2019 focused surveys. View north.



Photo 4. Purple Needlegrass Grassland and open California Sagebrush Scrub. View east.



Photo 5. The Project Area (lower campground) with Disturbed and Brome Grass-Wild Oat Grassland habitats with the Eucalyptus Woodland overstory. View northwest.



Photo 6. The Project Area (upper campground and flag plaza) with Bare Ground and Disturbed habitat with a small patch of Eucalyptus Woodland overstory. View south.



Photo 7. The Project Area (drill field) with Bare Ground access road and Brome Grass-Wild Oat Grassland habitat. View south.



Photo 8. Brome Grass-Wild Oat Grassland with a sparse Eucalyptus Woodland overstory. View southeast.



Photo 9. Overview of habitat within the Otay River Valley near the southern edge of the Study Area. Habitats shown include: Cattail Marsh, Red Willow Riparian Forest, Maritime Succulent Bluff, and open California Sagebrush Scrub on top of the bluff. View northeast.



Photo 10. Overview of the maintained and actively used portion of the Otay Lakes County Park including Developed Land, Landscape/Ornamental vegetation, and the Eucalyptus Woodland overstory. View north.



Photo 11. Overview of the California Sagebrush-California Brittlebush Scrub habitat near the northeastern corner of the Study Area. View north.

APPENDIX C – PLANT SPECIES OBSERVED



APPENDIX C – PLANT SPECIES OBSERVED

Scientific Name	Common Name	Vegetation Community*
LYCOPHYTES		
SELAGINELLACEAE	Spike-Moss Family	
<i>Selaginella bigelovii</i>	Bigelow's spike-moss	1
<i>Selaginella cinerascens</i>	mesa spike-moss	1
FERNS		
POLYPODIACEAE	POLYPODY FAMILY	
<i>Polypodium californicum</i>	California polypody	2
PTERIDACEAE	BRAKE FAMILY	
<i>Pellaea mucronata</i>	bird's-foot fern	1
<i>Pentagramma triangularis</i>	goldenback fern	2
GYMNOSPERMS		
PINACEAE	PINE FAMILY	
<i>Pinus halepensis</i>	Aleppo pine	10
ANGIOSPERMS (EUDICOTS)		
ADOXACEAE	MUSKROOT FAMILY	
<i>Sambucus nigra</i> subsp. <i>caerulea</i>	blue elderberry	1
AIZOACEAE	FIG MARIGOLD FAMILY	
<i>Carpobrotus edulis</i>	freeway iceplant	10
ANACARDIACEAE	SUMAC OR CASHEW FAMILY	
<i>Malosma laurina</i>	laurel sumac	1, 8
<i>Rhus integrifolia</i>	lemonadeberry	1
<i>Schinus molle</i>	Peruvian pepper tree	10
APIACEAE	CARROT FAMILY	
<i>Foeniculum vulgare</i>	fennel	9
<i>Sanicula arguta</i>	sharp-toothed sanicle	4
APOCYNACEAE	DOGBANE FAMILY	
<i>Nerium oleander</i>	oleander	10
<i>Vinca major</i>	greater periwinkle	10
ARALIACEAE	GINSENG FAMILY	
<i>Hedera helix</i>	English ivy	10
ASTERACEAE	SUNFLOWER FAMILY	
<i>Artemisia californica</i>	California sagebrush	1, 2
<i>Baccharis pilularis</i>	coyote brush	1, 9
<i>Baccharis salicifolia</i> subsp. <i>salicifolia</i>	mule fat	8
<i>Baccharis sarothroides</i>	broom baccharis	-
<i>Bahiopsis laciniata</i>	San Diego County viguiera	1
<i>Brickellia californica</i>	California brickellbush	1

<i>Centaurea melitensis</i>	totalote	1, 4, 9
<i>Deinandra</i> sp.	tarplant	1
<i>Encelia californica</i>	California bush sunflower	2
<i>Glebionis coronaria</i>	garland daisy	9
<i>Hedypnois cretica</i>	crete hedypnois	1, 2, 4, 9, 10
<i>Helminthotheca echioides+</i>	bristly ox-tongue	9
<i>Iva hayesiana</i>	San Diego marsh-elder	7, 8
<i>Lasthenia gracilis</i>	common goldfields	4
<i>Pseudognaphalium californicum</i>	California everlasting	1, 2, 4
<i>Silybum marianum</i>	milk thistle	9, 10
<i>Sonchus oleraceus</i>	common sow thistle	1
<i>Taraxacum officinale</i>	common dandelion	10
BIGNONIACEAE	BIGNONIA FAMILY	
<i>Jacaranda mimosifolia+</i>	jacaranda	10
BORAGINACEAE	BORAGE FAMILY	
<i>Amsinckia intermedia</i>	Rancher's fiddleneck	1, 2, 4, 9
<i>Phacelia cicutaria</i>	caterpillar phacelia	1, 4
<i>Pholistoma membranaceum</i>	white fiesta flower	1
<i>Plagiobothrys</i> sp.	popcorn flower	1, 2, 4
BRASSICACEAE	MUSTARD FAMILY	
<i>Brassica nigra</i>	black mustard	1, 3, 4, 9
<i>Brassica rapa</i>	field mustard	1, 4
<i>Hirschfeldia incana</i>	shortpod mustard	1, 2, 4, 6, 9
<i>Lepidium campestre</i>	field peppergrass	1, 2
<i>Lepidium nitidum</i>	shining peppergrass	1
<i>Raphanus sativus</i>	radish	1, 9
<i>Sisymbrium irio</i>	London rocket	9
CACTACEAE	CACTUS FAMILY	
<i>Cylindropuntia prolifera</i>	coast cholla	9
<i>Ferocactus viridescens</i>	San Diego barrel cactus	1, 4, 6
<i>Mammillaria dioica</i>	fish-hook cactus	6
CARYOPHYLLACEAE	PINK FAMILY	
<i>Silene gallica</i>	common catchfly	1, 2, 3, 4
<i>Spergularia bocconi+</i>	Boccone's sandspurrey	9
CHENOPODIACEAE	GOOSEFOOT FAMILY	
<i>Salsola</i> sp.	Russian thistle	4, 9
CONVOLVULACEAE	MORNING-GLORY FAMILY	
<i>Calystegia macrostegia</i>	western bindweed	1
<i>Convolvulus arvensis</i>	bindweed	1, 4
CRASSULACEAE	STONECROP FAMILY	
<i>Crassula argentea</i>	jade plant	10

<i>Crassula connata</i>	pygmy-weed	1, 4
<i>Dudleya edulis</i>	ladies-fingers	6
<i>Dudleya pulverulenta</i>	chalk dudleya	6
CUCURBITACEAE	GOURD FAMILY	
<i>Marah macrocarpa</i>	wild cucumber	1, 2
EUPHORBIACEAE	SPURGE FAMILY	
<i>Chamaesyce polycarpa</i>	golondrina	1
<i>Croton setiger</i>	turkey-mullein	1, 4, 9, 10
<i>Ricinus communis</i>	castor-bean	9
FABACEAE	LEGUME FAMILY	
<i>Acmispon glaber</i>	deerweed	1
<i>Acmispon strigosus</i>	strigose lotus	1, 4
<i>Astragalus gambelianus</i>	Gambell's dwarf locoweed	1
<i>Lathyrus vestitus</i>	wild sweet pea	1
<i>Lupinus concinnus</i>	Bajada lupine	1, 4
<i>Lupinus hirsutissimus</i>	stinging lupine	8
<i>Medicago polymorpha</i>	bur clover	1, 9, 10
<i>Melilotus albus</i>	white sweetclover	9
<i>Melilotus officinalis</i>	yellow sweetclover	9
FAGACEAE	OAK FAMILY	
<i>Quercus agrifolia</i> var. <i>agrifolia</i>	coast live oak, encina	10
GERANIACEAE	GERANIUM FAMILY	
<i>Erodium botrys</i>	broad-lobed filaree	1, 4
<i>Erodium cicutarium</i>	red-stemmed filaree	1, 2, 4, 9
<i>Erodium</i> sp.	erodium	1
HAMAMELIDACEAE	WITCH-HAZEL FAMILY	
<i>Liquidambar styraciflua</i>	sweetgum	10
LAMIACEAE	MINT FAMILY	
<i>Marrubium vulgare</i>	horehound	9
<i>Rosmarinus officinalis</i>	rosemary	10
<i>Salvia apiana</i>	white sage	1, 2
<i>Salvia clevelandii</i>	fragrant sage	10
MALVACEAE	MALLOW FAMILY	
<i>Malva parviflora</i>	cheeseweed	1
MONTIACEAE	MINER'S LETTUCE FAMILY	
<i>Calandrinia ciliata</i>	red maids	1
MYRTACEAE	MYRTLE FAMILY	
<i>Eucalyptus camaldulensis</i>	red gum	5, 10
<i>Eucalyptus citriodora</i>	lemon-scented gum	5
<i>Eucalyptus globulus</i>	blue gum	5
<i>Eucalyptus polyanthemus</i> +	silver dollar gum	5

NYCTAGINACEAE	FOUR O'CLOCK FAMILY	
<i>Bougainvillea</i> sp.	Bougainvillea	10
<i>Mirabilis laevis</i>	wishbone bush	1, 2, 6, 8
OLEACEAE	OLIVE FAMILY	
<i>Olea europaea</i>	olive	10
OROBANCHACEAE	BROOM-RAPE FAMILY	
<i>Castilleja exserta</i>	purple owl's-clover	1, 3, 4
OXALIDACEAE	OXALIS FAMILY	
<i>Oxalis californica</i>	California wood-sorrel	1
<i>Oxalis pes-caprae</i>	Bermuda buttercup	4
PAPAVERACEAE	POPPY FAMILY	
<i>Eschscholzia californica</i>	California poppy	1, 2, 3, 4
PLANTAGINACEAE	PLANTAIN FAMILY	
<i>Antirrhinum nuttallianum</i> subsp. <i>nuttallianum</i>	Nuttall's snapdragon	1, 2
<i>Plantago erecta</i>	western plantain	1, 9
PLATANACEAE	SYCAMORE FAMILY	
<i>Platanus racemosa</i>	western sycamore	10
POLEMONIACEAE	PHLOX FAMILY	
<i>Gilia angelensis</i>	angel gilia	1, 2
POLYGONACEAE	BUCKWHEAT FAMILY	
<i>Eriogonum fasciculatum</i> var. <i>fasciculatum</i>	coastal California buckwheat	1, 2, 6
<i>Rumex</i> sp.	dock	7
PRIMULACEAE	PRIMROSE FAMILY	
<i>Dodecatheon clevelandii</i> subsp. <i>clevelandii</i>	Padre's shooting star	1, 3, 4
RANUNCULACEAE	BUTTERCUP FAMILY	
<i>Clematis ligusticifolia</i>	virgin's bower	1, 2
RHAMNACEAE	BUCKTHORN FAMILY	
<i>Rhamnus crocea</i>	spiny redberry	1
ROSACEAE	ROSE FAMILY	
<i>Rhaphiolepis indica</i>	Indian hawthorne	10
<i>Rosa</i> sp.	ornamental rose	10
RUBIACEAE	MADDER FAMILY	
<i>Galium angustifolium</i>	narrow-leaved bedstraw	1, 2
SALICACEAE	WILLOW FAMILY	
<i>Salix laevigata</i>	red willow	8
SAPINDACEAE	SOAPBERRY FAMILY	
<i>Cupaniopsis anacardioides</i>	carrotwood	10
SAXIFRAGACEAE	SAXIFRAGE FAMILY	
<i>Jepsonia parryi</i>	mesa saxifrage	1
SCROPHULARIACEAE	FIGWORT FAMILY	
<i>Scrophularia californica</i>	California figwort	1

SIMMONDSIACEAE	JOJOBA FAMILY	
<i>Simmondsia chinensis</i>	jojoba, goatnut	1
SOLANACEAE	NIGHTSHADE FAMILY	
<i>Datura wrightii</i>	jimson weed	4
<i>Solanum</i> sp.	nightshade	9
URTICACEAE	NETTLE FAMILY	
<i>Urtica urens</i>	dwarf nettle	9
VERBENACEAE	VERVAIN FAMILY	
<i>Lantana montevidensis</i>	trailing lantana	10
VIOLACEAE	VIOLET FAMILY	
<i>Viola pedunculata</i>	johnny-jump-up	1, 3, 4
ANGIOSPERMS (MONOCOTS)		
AGAVACEAE	AGAVE FAMILY	
<i>Agave</i> sp.	Agave	10
<i>Chlorogalum parviflorum</i>	small-flowered amole	1
<i>Hesperoyucca whipplei</i>	Our Lord's candle	1
<i>Yucca schidigera</i>	Mojave yucca	10
ALLIACEAE	ONION FAMILY	
<i>Allium haematochiton</i>	red-skinned onion	1, 3, 4
<i>Allium</i> sp.	onion	10
ARECACEAE	PALM FAMILY	
<i>Phoenix</i> sp.	Date palm	10
<i>Phoenix canariensis</i>	Canary Island date palm	10
<i>Washingtonia robusta</i>	Mexican fan palm	10
ASPHODELACEAE	ASPHODEL FAMILY	
<i>Aloe</i> sp.	aloe	10
IRIDACEAE	IRIS FAMILY	
<i>Sisyrinchium bellum</i>	blue-eyed grass	1, 2, 3, 4, 6
JUNCACEAE	RUSH FAMILY	
<i>Juncus acutus</i> subsp. <i>leopoldii</i>	southwestern spiny rush	8
POACEAE	GRASS FAMILY	
<i>Arundo donax</i>	giant reed	9, 10
<i>Avena fatua</i>	wild oat	1, 2, 3, 4, 7, 8, 9
<i>Bromus diandrus</i>	ripgut grass	1, 2, 3, 4, 9
<i>Bromus madritensis</i> subsp. <i>madritensis</i>	foxtail chess	1, 3, 4, 6, 9
<i>Distichlis littoralis</i>	hairy crabgrass	9
<i>Festuca microstachys</i>	small fescue	1, 2, 4
<i>Festuca perennis</i>	Italian ryegrass	1, 3, 4, 8
<i>Lamarckia aurea</i>	goldentop	9
<i>Melinis repens</i> subsp. <i>repens</i>	natal grass	6, 8
<i>Poa annua</i>	annual bluegrass	6, 8

<i>Schismus barbatus</i>	Mediterranean schismus	4
<i>Stipa pulchra</i>	purple needlegrass	3
STRELITZIACEAE	BIRD OF PARADISE FAMILY	
<i>Strelitzia reginae</i>	bird of paradise	10
THEMIDACEAE	BRODIAEA FAMILY	
<i>Dichelostemma capitatum</i>	blue dicks	1
TYPHACEAE	CATTAIL FAMILY	
<i>Typha</i> sp.	cattail	7

*Vegetation Community Key

- 1 - California Sagebrush Scrub
- 2 - California Sagebrush Scrub-California Brittlebush Scrub
- 3 - Purple Needlegrass Grassland
- 4 - Brome Grass-Wild Oat Grassland
- 5 - Eucalyptus Woodland
- 6 - Maritime Succulent Bluff
- 7 - Cattail Marsh
- 8 - Red Willow Riparian Forest
- 9 - Disturbed
- 10 - Landscape/Ornamental

APPENDIX D – WILDLIFE SPECIES DETECTED



APPENDIX D – WILDLIFE SPECIES DETECTED

Scientific Name	Common Name
CLASS INSECTA	INSECTS
NYMPHALIDAE	BRUSH-FOOTED BUTTERFLIES
<i>Junonia coenia grisea</i>	common buckeye
<i>Euphydryas editha quino</i>	Quino checkerspot butterfly
<i>Vanessa atalanta rubria</i>	American red admiral
<i>Vanessa annabella</i>	west coast lady
<i>Vanessa cardui</i>	painted lady
PAPILIONIDAE	SWALLOWTAILS
<i>Papilio eurymedon</i>	pale swallowtail
<i>Papilio zelicaon</i>	anise swallowtail
SATYRINAE	SATYRS
<i>Coenonympha tullia californica</i>	California ringlet
HESPERIDAE	SKIPPERS
<i>Erynnis funeralis</i>	funereal duskywing
LYCAENIDAE	HAIRSTREAKS, COPPERS, BLUES
<i>Callophrys rubi</i>	green hairstreak
<i>Glaucopsyche lygdamus australis</i>	southern blue
<i>Brephidium exilie</i>	western pygmy-blue
RIODINIDAE	METALMARKS
<i>Apodemia mormo virgulti</i>	Behr's metalmark
PIERIDAE	WHITES AND SULPHURS
<i>Anthocharis sara sara</i>	Sara's orangetip
<i>Colias eurytheme</i>	orange sulphur
<i>Phoebus sennae marcellina</i>	cloudless sulfur
<i>Pieris protodice</i>	checkered white
CLASS MALACOSTRACA	CRUSTACEANS
CAMBARIDAE	CRAYFISH
<i>Procambarus clarkii</i>	red swamp crawfish
CLASS REPTILIA	REPTILES
PHRYNOSOMATIDAE	ZEBRA-TAILED, EARLESS, FRINGE-TOED, SPINY, TREE, SIDE-BLOTCHED, AND HORNED LIZARDS
<i>Sceloporus occidentalis</i>	western fence lizard
<i>Uta stansburiana</i>	side-blotched lizard
ANGUIDAE	ALLIGATOR LIZARDS
<i>Elgaria multicarinata multicarinata</i>	California alligator lizard
COLUBRIDAE	COLUBRID SNAKES
<i>Hypsiglena ochrorhynchus klauberi</i>	San Diego night snake
<i>Masticophis lateralis lateralis</i>	California striped racer

<i>Thamnophis hammondi</i>	two-striped garter snake
CROTALIDAE	PIT VIPERS
<i>Crotalus ruber</i>	red diamond rattlesnake
CLASS AVES	BIRDS
PHALACROCORACIDAE	CORMORANTS
<i>Phalacrocorax auritus</i>	double-crested cormorant
ACCIPITRIDAE	HAWKS, KITES, EAGLES
<i>Accipiter cooperii</i>	Cooper's hawk
<i>Buteo jamaicensis</i>	red-tailed hawk
<i>Buteo lineatus</i>	red-shouldered hawk
PANDIONIDAE	OSPREYS
<i>Pandion haliaetus</i>	Osprey
CHARADRIIDAE	PLOVERS
<i>Charadrius vociferus</i>	killdeer
COLUMBIDAE	PIGEONS & DOVES
<i>Zenaida macroura</i>	mourning dove
APODIDAE	SWIFTS
<i>Aeronautes saxatalis</i>	white-throated swift
TROCHILIDAE	HUMMINGBIRDS
<i>Calypte anna</i>	Anna's hummingbird
PICIDAE	WOODPECKERS
<i>Colaptes auratus</i>	northern flicker
<i>Picoides nuttallii</i>	Nuttall's woodpecker
TYRANNIDAE	TYRANT FLYCATCHERS
<i>Empidonax difficilis</i>	Pacific-slope flycatcher
<i>Tyrannus vociferans</i>	Cassin's kingbird
CORVIDAE	JAYS & CROWS
<i>Aphelocoma californica</i>	Western scrub-jay
<i>Corvus corax</i>	common raven
AEGITHALIDAE	BUSHTITS
<i>Psaltiriparus minimus</i>	bushtit
TROGLODYTIDAE	WRENS
<i>Salpinctes obsoletus</i>	rock wren
<i>Thryomanes bewickii</i>	Bewick's wren
SYLVIIDAE	OLD WORLD WARBLERS
<i>Chamaea fasciata</i>	wrentit
POLIOPTILIDAE	GNATCATCHERS
<i>Poliophtila californica californica</i>	coastal California gnatcatcher
MIMIDAE	MOCKINGBIRDS, THRASHERS
<i>Mimus polyglottos</i>	northern mockingbird
<i>Toxostoma redivivum</i>	California thrasher

VIREONIDAE	VIREOS
<i>Vireo bellii pusillus</i>	least Bell's vireo
PARULIDAE	WOOD WARBLERS
<i>Oreothlypis celata</i>	orange-crowned warbler
<i>Setophaga coronata</i>	yellow-rumped warbler
ICTERIDAE	BLACKBIRDS
<i>Sturnella neglecta</i>	western meadowlark
EMBERIZIDAE	EMBERIZIDS
<i>Aimophila ruficeps canescens</i>	southern California rufous-crowned sparrow
<i>Melospiza melodia</i>	song sparrow
<i>Melospiza crissalis</i>	California towhee
<i>Pipilo maculatus</i>	spotted towhee
<i>Zonotrichia leucophrys</i>	white-crowned sparrow
FRINGILLIDAE	FINCHES
<i>Spinus psaltria</i>	lesser goldfinch
<i>Carpodacus mexicanus</i>	house finch
CLASS MAMMALIA	MAMMALS
SCIURIDAE	SQUIRRELS
<i>Otospermophilus beecheyi</i>	California ground squirrel
MURIDAE	MICE, RATS, AND VOLES
<i>Neotoma lepida</i>	desert woodrat
CANIDAE	WOLVES & FOXES
<i>Canis latrans</i>	coyote
PROCYONIDAE	RACCOONS
<i>Procyon lotor</i>	Raccoon

APPENDIX E – QCB FOCUSED SURVEY REPORT



July 23, 2019

21134

Mr. Karl Shelton
Director of Support Services
Boy Scouts of America
San Diego – Imperial County
1207 Upas Street
San Diego, CA 92103

SUBJECT: RESULTS OF THE 2019 QUINO CHECKERSPOT BUTTERFLY (*EUPHYDRYAS EDITHA QUINO*) FOCUSED SURVEYS FOR THE PROPOSED OTAY LAKES CAMPGROUND PROJECT, SAN DIEGO COUNTY, CALIFORNIA

Dear Mr. Shelton:

Chambers Group, Inc. (Chambers Group) was contracted the Boy Scouts of America to conduct focused surveys for Quino checkerspot butterfly (*Euphydryas editha quino*; QCB) during the spring season of 2019 for the proposed Otay Lakes Campground project located in San Diego County, California (Proposed Project; Attachment 1: Project Location and Vicinity Map). The primary purpose of this effort was to identify QCB and habitat within the proposed work areas.

Project Background

The Proposed Otay Lakes Campground Project (Proposed Project) includes the development of new camping facilities (seven campsites to accommodate up to eight people) and rehabilitation of existing campsites (six campsites to accommodate up to eight people), a flag plaza, archery range, fire ring and amphitheater, Zip Line and Challenging Outdoor Personal Experience (COPE) course, demolition and reconstruction of a restroom, development of an activity/program area (also to be used as an overflow camping), construction of a fenced storage facility, and minor road improvements on County property adjacent to Otay Lakes County Park.

QCB Natural History

The following QCB background information was written by QCB-permitted biologist Ken Osborne (Chambers Group 2010) and updated per the 2014 Survey Guidelines:

The QCB, a subspecies of Edith's checkerspot, is a small brush-footed butterfly (family Nymphalidae) that flies once a year. Like most *Euphydryas* sp., it has a small, approximately 2.5 to 4 cm wingspan and is checkered with black, red, and yellowish markings. This species is distributed in local colonies over much of western North America (Scott 1986, Parmesan 1996). Many subspecies have been described including at least 18 from California (Emmel 1998).

QCB colonies are primarily associated with low elevation (sea level to 3,000 feet) open grasslands, vernal pools, and sunny openings within chaparral, coastal-sage scrub, and juniper woodlands. Colonies are found frequently near clay soils and soils that possess cryptogamic crusts (soil infused with algae and lichen in the soil surface) (Osborne 1998). According to the 2014 Survey Guidelines, known QCB larval host plants include dot-seed plantain (*Plantago erecta*, Plantaginaceae) also known as dwarf plantain, woolly plantain (*Plantago patagonica*, Plantaginaceae), Coulter's snapdragon (*Antirrhinum coulterianum*, Plantaginaceae), bird's beak (*Cordylanthus rigidus*, Orobanchaceae), purple owls' clover (*Castilleja exserta*, Orobanchaceae) and southern Chinese houses (*Collinsia concolor*, Plantaginaceae). Dwarf plantain is the primary host plant of QCB. Larvae may use other plantain (*Plantago*) species (e.g. *P. ovata*, and *P.*



insularis) as well (Pratt and Pierce 2010). Introduced Mediterranean plantain species such as *P. lanceolata* and *P. major* - common weeds of residential lawns and city lots - although suitable in the laboratory (Osborne 2009) and used by some wild *E. editha* populations in Oregon, are not likely used where they occur in habitats not frequented by QCB. Nevertheless, these exotic host plants may be of potential use to QCB where they occur in wild habitats proximal to QCB populations. Although QCB are oligophagous (feed upon a limited range of plant species) and feed primarily upon plants contained within the Orobanchaceae (formerly Scrophulariaceae) and Plantaginaceae families, most local populations tend to be monophagous (feed on only one plant species) (White 1974, Scott 1986).

QCB mating activity occurs in or near the meadows, clearings, and open areas on slopes and ridgelines inhabited by the host plants, where the larvae previously developed, and on open or sparsely vegetated hilltops, ridgelines, and occasionally rocky hilltops (with or without the host plant being present nearby). Inordinately large numbers of adult males are found on hilltops (usually only one or two per hilltop), where they exhibit “territorial behavior” – flying sorties from various perches to chase other butterflies, including conspecifics. QCB males often chase each other high into the air, only to return to different parts of the hilltop. Hilltopping, where male butterflies await the arrival of unmated females in order to secure mates, is common in many species of butterflies and the behavior in QCB is well known among experienced southern California lepidopterists (Shields 1967). When QCB adult densities are relatively low, mating success derived from facultative hilltopping behavior may be critical to long term viability.

Females lay egg masses that contain approximately 20-75 eggs and may produce up to 1,200 eggs in several batches during their lifetime. The eggs hatch in about ten days under favorable conditions and the larvae immediately begin to feed. In coastal California, the early larval stages undergo an obligatory aestival diapause (dormant period from late spring through winter), which is broken after fall or winter rains (Murphy and White 1984, Osborne 1998). The larvae then quickly complete their development, usually on the native annual plant dot-seed plantain and emerge as adults during the same spring (Emmel and Emmel 1973, White 1974, Orsak 1977, Murphy and White 1984). Adult flight typically occurs between late January and mid-May, with peak activity generally in March and April. The flight period varies from year to year, depending upon the annual rainfall and other weather conditions. The timing and abundance of rainfall are important factors affecting the timing of host seed germination, growth, maturity, and senescence of the host plant (Murphy and White 1984, Dobkin et al. 1987), which in turn affects the survivorship of the larvae (Ehrlich et al. 1980). Solar insolation on hillsides (determined in part by topography), where the larvae live, affects both the rate of host development and that of the larvae (White 1974, Weiss et al. 1988). In the race against host senescence, post-diapause larvae seek microclimates with high solar insolation in order to bask (Osborne 1998, Osborne and Redak 1999). This behavior increases their rate of development (Weiss et al. 1987). During periods of extended drought, the butterfly’s populations decline, and individual butterflies may become difficult to find. It is hypothesized that extended periods of diapause, lasting up to five or six years, occur during these droughts.

Populations of QCB, which were once distributed through much of lowland coastal southern California from northern Baja California, Mexico to Point Dume, Los Angeles County, have been declining since the late 1960’s (Thorne 1970; Emmel and Emmel 1973; Orsak 1977, 1988). It has been hypothesized that this decline is primarily due to habitat loss by urban and agricultural expansion (Thorne 1970, Emmel and Emmel 1973, Orsak 1988), and possibly because of global warming and drought (Parmesan 1996), fire and overgrazing (Orsak 1977, 1988). After an extended drought in the late 1980’s and early 1990’s, only one known population of QCB remained. Populations are now known to exist only at a few sites, in small isolated colonies, in southwestern Riverside and southern San Diego counties. The decline of QCB may have started long before these modern observations after the early Spanish explorers and settlers introduced exotic grasses and forbs. These plants are highly competitive with the native QCB host plants. QCB received federal protection under the Endangered Species Act in 1997 (United States Federal Register, January 17, 1997) and is currently federal-listed as endangered.



Methods

Habitat Assessment

The Proposed Project is located at the southern end of Lower Otay Lake in the City of Chula Vista within the County of San Diego, California. The QCB habitat assessment was conducted within the Proposed Project Biological Survey Area (BSA). The Survey Area is composed primarily of grassland, coastal sage scrub, and landscape/ornamental habitats with lesser amounts of disturbed and developed areas along with eucalyptus and riparian woodlands (Figure 2). The habitat assessment was conducted in accordance with the *USFWS Quino Checkerspot Butterfly Survey Guidelines* (2014 Survey Guidelines; USFWS 2014). The assessment was used to identify suitable QCB habitat. "Suitable QCB Habitat" is defined as all areas of the BSA that are not excluded under the 2014 Survey Guidelines criteria, below:

"Excluded Areas not recommended for Quino surveys:

- Orchards, developed areas, or small in-fill parcels (plots smaller than an acre completely surrounded by urban development) largely dominated by nonnative vegetation;
- Active/in-use agricultural fields without natural or remnant inclusions of native vegetation or that are completely without any fallowed or unplowed areas;
- Closed-canopy woody vegetation including forests, riparian areas, shrub-lands, and chaparral. "Closed-canopy woody vegetation" describes shrubs or trees growing closely together in which the upper portions of the vegetation converge (are touching) to the point that the open space between two or more plants is not significantly different than the open space within a single plant. Closed canopy shrub-land and chaparral are defined as vegetation so thick that it is inaccessible to humans except by destruction of woody vegetation (branches)."

Prior to entering the field, a literature search was performed of the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB; CDFW 2019) and the USFWS Species Occurrences Database (USFWS 2019) for QCB records of occurrence within 5 miles of the BSA. In addition, Google Earth satellite images and results from the 2019 updated vegetation mapping effort for the BSA were reviewed to identify habitat potentially suitable for QCB, based on the suitable habitat definition above.

Permitted QCB biologists conducted a field habitat assessment to map all areas requiring QCB surveys (QCB Survey Area), which included all potentially suitable habitat within the Proposed Project BSA. The biologists recorded the location of all larval host plants electronically with the aid of hand-held GPS units and/or by hand onto high-resolution aerial field maps. Information characteristic of QCB suitable habitat, including locations of breaks in vegetation, rocky outcrops, and hilltops, were noted and mapped as the "QCB Survey Area". Areas that were developed or contained closed-canopy habitat were mapped and excluded from focused surveys as "QCB Excluded Habitat". The QCB Survey Area is identified in Attachment 2: Vegetation Communities and QCB Survey Area Map. The remaining habitat within the QCB Survey Area was deemed appropriate to survey, regardless of the presence of host plants, per the definition above.

Focused Surveys

Chambers Group biologists conducted QCB focused surveys within the QCB Survey Area according to the USFWS 2014 Survey Guidelines. Surveys throughout all potentially suitable habitat (i.e., where no QCB excluded areas were mapped during the habitat assessment) were initiated at the beginning of the QCB flight season, following a 15-day survey notification submitted to USFWS on February 8, 2019. In order to maximize species detectability, surveys were continued up to twice per week, weather permitting, while maintaining a temporal spacing of at least 4 days apart.



Surveys were conducted for 5 continuous weeks at a minimum. If no QCB were detected during the first 5 weeks of surveys, surveys would continue until QCB were detected or until the end of the season, defined as the second Saturday in May (May 11, 2018). If a QCB was detected in the QCB Survey Area, the USFWS was notified within 24 hours by the permitted QCB biologist, and the surveys would cease after the fifth survey was completed.

Surveys were conducted by walking survey routes that were roughly parallel to each other, spaced approximately 30 feet apart, and within 15 feet of the Survey Area boundary and/or the perimeter of excluded areas. Chambers Group biologists conducted the surveys at a rate of approximately 5 to 10 acres per person/hour and under suitable weather conditions defined as (a) no significant precipitation (e.g., fog, drizzle, or rain); (b) sustained or gusting winds averaging less than 15 miles per hour over a 30 second period at a height of 4 to 6 feet above ground level; and (c) temperatures of at least 60 degrees Fahrenheit (°F) in the shade at ground level on a clear, sunny day (i.e., less than 50 percent cloud cover), and temperatures of at least 70°F on cloudy days (i.e., greater than 50 percent cloud cover).

Chambers Group biologists recorded butterfly species observed and numbers of each species during each weekly survey. Butterflies observed during the surveys were identified by sight and with the aid of binoculars. Biologists also recorded and updated information on host plant populations, including revised numbers, densities, and new locations, as well as a list of potential nectar sources. Additional observations of larval host plant populations were mapped with the aid of hand-held Global Positioning System (GPS) units and/or hand-drawn onto high-resolution aerial field maps, and potential nectar plant species were documented. Butterfly identification and nomenclature was based on field guides by Shiraiwa (2009) and Glassberg (2001).

Focused surveys of potential QCB habitat were conducted by the following USFWS-permitted QCB biologists (Table 1).

Table 1: USFWS-Permitted QCB Biologists

<i>Biologist</i>	<i>USFWS Permit Number</i>
Laurie Gorman	TE-233367-3
Travis Cooper	TE-170389-6

Results

Habitat Assessment

Based on the literature search, there have been nearly over 30 historical records of occurrence for QCB documented within one mile of the BSA. One occurrence was within the BSA from 1971. The remaining occurrences were from outside of the BSA, mainly between 2009 and 2018 (USFWS 2019, CDFW 2019).

Habitats and land-cover types present within this QCB Survey Area include bare ground, landscape/ornamental vegetation, purple needlegrass grassland, red willow riparian forest, cattail marsh, brome grass-wild oat grassland, eucalyptus woodland, maritime succulent bluff and low-density coastal sage scrub habitats with the potential to support host plants and nectar sources. These habitat types are displayed on aerial maps of the Proposed Project as Attachment 2: Vegetation Communities Map.

Pursuant to the USFWS 2014 Survey Guidelines criteria for designating Excluded Areas, developed areas were excluded as suitable QCB habitat, including paved areas and developed land. In addition, closed-canopy vegetation communities including dense scrub and forest habitats were excluded. As a result, a total of approximately 55.5 acres of suitable habitat for QCB was identified within the Proposed Project BSA and surveyed as the QCB Survey Area (Attachment 3: QCB Host Plant Location and Survey Results Map).



Potential QCB host plants mapped within the QCB Survey Area included dwarf plantain with occasional purple owl's clover intermixed. Host plant patches were lush and provided high-quality habitat for QCB. Host plant density was recorded and categorized as low (approximately 1-10 individual plants per square meter), moderate (approximately 10 to 100 individual plants per square meter), high (approximately 100 to 999 individual plants per square meter), and very high (approximately over 1,000 individual plants per square meter). The results of the 2019 host plant mapping effort are provided as Attachment 3: QCB Host Plant Location and Survey Results Map.

Focused Surveys

Permitted biologists (Table 1) conducted a total of five QCB focused surveys within the QCB Survey Area from February 23, 2019 to March 19, 2019. Two distinct QCB individuals were observed within the same host plant patch during the fourth and fifth focused surveys.

One QCB was observed during the fourth focused survey on March 14 and 15, 2019, as well as during the fifth focused survey on March 19, 2019. Based on close comparison of photographs taken of the butterflies, the same individual was observed on March 14 and 15, and a second individual was observed on March 19. All observations were made in the afternoon between the hours of 1220 and 1550, temperatures in the 70s (degrees Fahrenheit), wind speeds up to 7 miles per hour, and clear skies.

Table 2: QCB Observation Locations

Date	Time	Permitted Biologist	GPS Location (UTM)	GPS Location (Decimal Degrees)
03/14/2019	1550	Travis Cooper	11S 3607701 mN, 506786 mE	32.60680889, -116.92767416
03/15/2019	1435	Laurie Gorman	11S 3607699 mN, 506774 mE	32.60678890, -116.92779940
03/19/2019	1220	Laurie Gorman*	11S 3607725 mN, 3607724 mE	32.60701820, -116.92772346

*Kaelin McAtee and Clark Austin were also present as supervised observers.

The QCB individuals were found in a dense patch of dwarf plantain on a west-facing slope, with scattered nectar sources primarily ground pink (*Linanthus dianthiflorus*) and blue dicks (*Dichelostemma capitatum*), bordered by non-native grassland and a patch of California buckwheat (*Eriogonum fasciculatum*). Photographs of the host plant patches where QCB were observed, as well as general site overview and habitat photographs, are provided as Attachment 4: Site Photographs.

In addition to QCB, a total of 17 butterfly species were observed. A complete list of butterfly species observed is provided as Attachment 5: Butterfly Species Detected. A complete list of flowering plant species (as potential nectar sources) observed is provided as Attachment 6: Flowering Plant Species Observed. Weather conditions during the QCB surveys are provided as Attachment 7: Weather Conditions. A Biologist Signature Page certifying these results are an accurate representation of the permitted biologists' findings is provided as Attachment 8: QCB Survey Project Biologists Signature Page. Field survey forms of the survey results are provided as Attachment 9: Field Survey Forms; these forms contain notes on the quantity of each butterfly species observed, flowering plants observed, and habitat quality per survey.

Discussion

A total of approximately 55.5 acres of suitable habitat for QCB were identified within the Proposed Project BSA and surveyed as the QCB Survey Area. A total of two distinct QCB were observed during the 2019 focused surveys for the Proposed Project. Both of these observations were within the USFWS Recommended Quino Survey Area.

Based on consultation with the USFWS on April 18, 2019, Proposed Project features have been designed to avoid host plant locations, and the use of proposed camp facilities shall include public outreach and education, and additional protection measures such as access road use restrictions shall be implemented during the QCB flight season.

Please call me at (949) 933-9432 or email me at lgorman@chambersgroupinc.com if you have any questions or comments regarding this letter report.

Sincerely,

CHAMBERS GROUP, INC.



Laurie Gorman
Senior Biologist

Attachments

- Attachment 1 – Project Location and Vicinity Map
- Attachment 2 – Vegetation Communities Maps
- Attachment 3 – QCB Host Plant Location and Survey Results Map
- Attachment 4 – Site Photographs
- Attachment 5 – Butterfly Species Detected
- Attachment 6 – Flowering Plant Species Observed
- Attachment 7 – Weather Conditions
- Attachment 8 – QCB Survey Project Biologists Signature Page
- Attachment 9 – Field Survey Forms



References

California Department of Fish and Wildlife (CDFW)

- 2019 California Natural Diversity Database (CNDDDB). RareFind Version 5.1.0. Database Query for a 5-mile radius from the Proposed Project boundary. Database query for QCB within the survey areas accessed February 2019. Wildlife and Habitat Data Analysis Branch.

Chambers Group, Inc.

- 2010 Quino Checkerspot Butterfly (*Euphydryas editha quino*) Focused Survey Report for the San Diego Gas & Electric Sunrise Powerlink Project, San Diego, California.

Dobkin, D. S., I. Olivieri, and P. R. Ehrlich.

- 1987 Rainfall and the interaction of microclimate with larval resources in the population dynamics of checkerspot butterflies (*Euphydryas editha*) inhabiting serpentine grassland. *Oecologia* 71:161-166.

Ehrlich, P. R., D. D. Murphy, M. C. Singer, C. B. Sherwood, R. R. White, and I. L. Brown.

- 1980 Extinction, reduction, stability and increase: the responses of checkerspot butterfly (*Euphydryas*) populations to the California drought. *Oecologia* 46: 101-105.

Emmel, Thomas C.

- 1998 Systematics of Western North American Butterflies. Mariposa Press. Gainesville, FL.

Emmel, T. C. and J. F. Emmel.

- 1973 The Butterflies of Southern California. Natural History Museum of Los Angeles County Science Series No. 26.

Glassberg, J.

- 2001 Butterflies through Binoculars. The West. A Field Guide to the Butterflies of Western North America. Oxford University Press. New York.

Murphy, D. D., and R. R. White.

- 1984 Rainfall, Resources, and Dispersal in Southern Populations of *Euphydryas editha* (Lepidoptera: Nymphalidae). *Pan-Pac Entomologist*. 60: 350-354.

Orsak, L. J.

- 1977 The butterflies of Orange County, California. University of California Irvine.

Osborne, K.H.

- 1998 A Description of Arthropod Community Structure in Southern Californian Coastal Sage Scrub (Chapter 4). Masters Thesis, Univ. of California, Riverside, CA.

- 2009 Personal Communication.

Parmesan, C.

- 1996 Climate and species range. *Nature* 382(6594):765–766.

Pratt, G. F. & C. L. Pierce.

- 2010 A new larval food plant, *Collinsia concolor*, for the endangered Quino checkerspot, *Euphydryas editha quino*. *Journal of the Lepidopterists' Society* 64: 55-56.

Scott, J.A.

- 1986 The butterflies of Northern California: A Natural History and Field Guide. Stanford University Press, Stanford, California.



Shields, O.

- 1967 Hilltopping. An ecological study of summit congregation behavior of butterflies on a southern California hill. *Journal of Research on the Lepidoptera* 6(2): 69-178.

Shiraiwa, Kojiro

- 2009 The Butterflies of San Diego County Introduction and Identification Guide. May.

Thorne, F.

- 1970 Habitat: *Euphydryas editha wrighti*. *J. Res. Lepid.* 7:167-168.

United States Fish and Wildlife Service (USFWS)

- 1997 Federal Register / Vol. 62, No. 11. Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for the Laguna Mountains Skipper and Quino Checkerspot Butterfly. January.
- 2002 Federal Register / Vol. 67, No. 72. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Quino Checkerspot Butterfly (*Euphydryas editha quino*). April.
- 2003 Recovery Plan for the Quino Checkerspot Butterfly (*Euphydryas editha quino*). Region 1 USFWS. Portland, Oregon. August 11.
- 2014 Quino Checkerspot Butterfly Survey Guidelines. December.
- 2019 Sensitive Species Occurrences. <https://www.fws.gov/carlsbad/gis/cfwogis.html>. Database query for QCB within the survey areas accessed February 2019. Carlsbad Branch.

Weiss, S. B, D. D. Murphy, and R. R. White.

- 1988 Sun, slope, and butterflies: Topographic determinants of habitat quality for *Euphydryas editha*. *Ecology* 69:1486-1496.

White, R. R.

- 1974 Food plant defoliation and larval starvation of *Euphydryas editha*. *Oecologia* 14: 307-315. American Ornithologists' Union. 1998. Checklist of North American birds (7th ed.). A.O.U., Lawrence, Kansas.

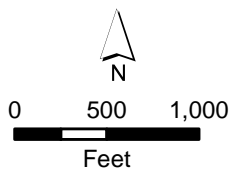


ATTACHMENT 1 – PROJECT LOCATION AND VICINITY MAPS



Legend

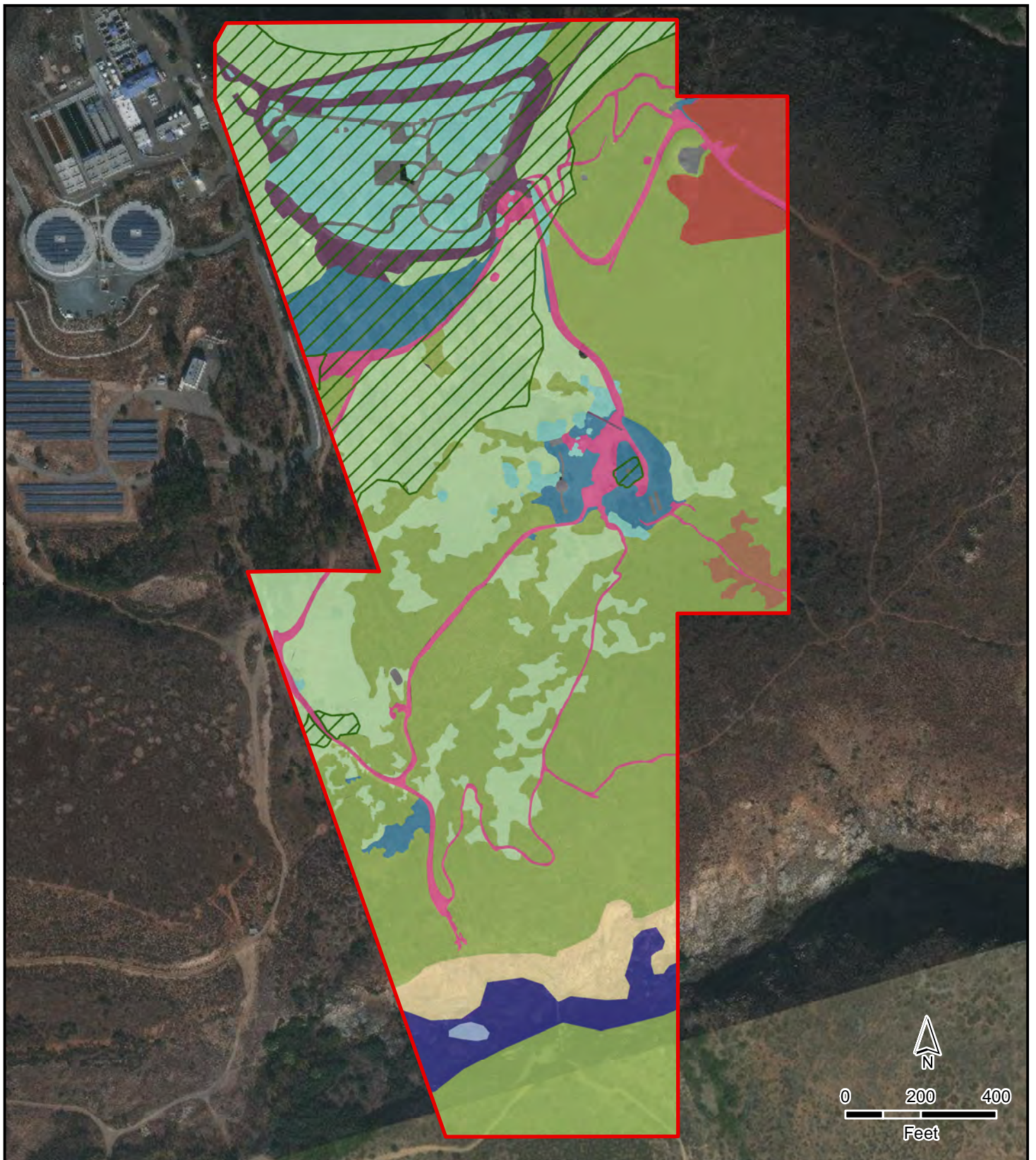
Project Location



ATTACHMENT 1 Project Location and Vicinity Map

ATTACHMENT 2 –VEGETATION COMMUNITIES AND QCB SURVEY AREA MAP





Legend

Survey

Vegetation Community

Bare Ground

Brome Grass-Wild Oat
Grassland

California Sagebrush Scrub

California Sagebrush-
California Brittlebush Scrub

Cattail Marsh

Developed

Disturbed

Eucalyptus Woodland

Landscape/Ornamental

Maritime Succulent Bluff

Pavement

Purple Needlegrass
Grassland

Red Willow Riparian Forest

ATTACHMENT 2

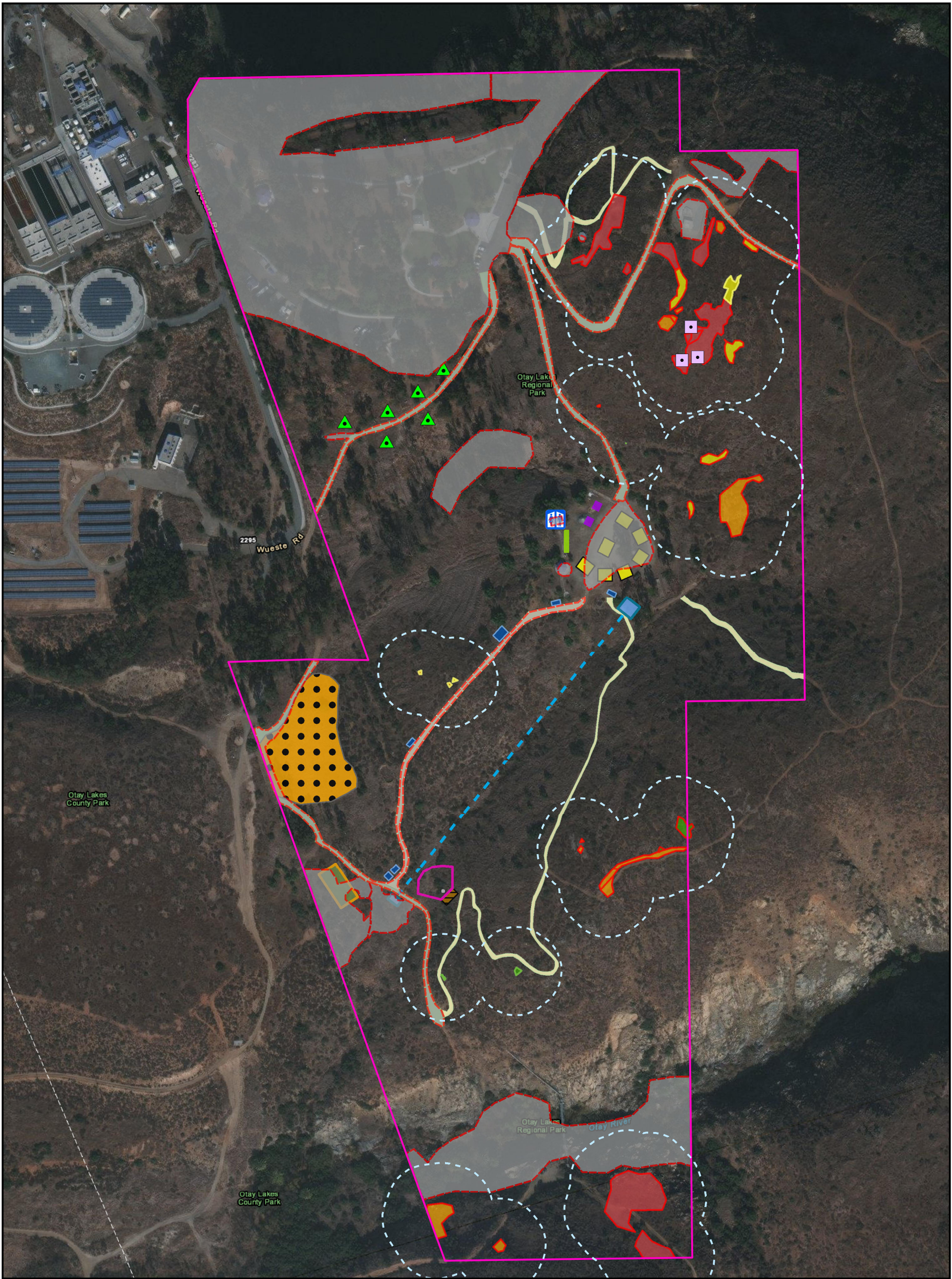
Vegetation Communities

Name: 21134 BIO Fig 2 Veg Communities.Mxd
Print Date: 3/18/2019, Author: esimmons



ATTACHMENT 3 – QCB HOST PLANT LOCATION AND SURVEY RESULTS MAP





Legend

- Site Boundary
- 100-ft QCB Host Plant and Observation Buffer
- QCB Observation
- Excluded Habitat (QCB)
- QCB Habitat Quality**
 - High
 - Moderate
 - Low
- QCB Host Plant Density**
 - Very High
 - High
 - Moderate
 - Low

Site Features

- Existing Trail
- Existing Road
- Storage
- Archery Range
- Seating
- Stage
- Fire Ring
- Camp Site/ Multipurpose Instruction-Activity Site
- COPE Station
- Camporee Field
- Flag Plaza
- Zip Line Platforms

- Zipline
- Potential Rehabilitated Campsite
- Restroom



0 125 250 500
Feet

ATTACHMENT 3
QCB Host Plant Location
and Survey Results Map
Proposed Otay Lakes
Campground Project Site



Name: 21134 BIO QCB.Mxd
Print Date: 7/18/2019, Author: pcarlos

ATTACHMENT 4 – SITE PHOTOGRAPHS



ATTACHMENT 4 – SITE PHOTOGRAPHS



Photo 1:

Overview of the Survey Area for Quino checkerspot butterfly (*Euphydryas editha quino*; QCB), showing mix of grassland, coastal sage scrub, eucalyptus woodland, and disturbed habitats. Photo taken from northeastern corner of the Survey Area, facing southwest, on April 11, 2019.



Photo 2:

Another overview of the Survey Area for QCB showing coastal sage scrub and grassland to the right (east), grassland in the foreground, eucalyptus woodland scattered throughout the middle of the site, and disturbed habitat and bare ground in the center of the photo. Photo taken from southeast of the proposed campsite area, facing northwest, on February 23, 2019.

ATTACHMENT 4 – SITE PHOTOGRAPHS



Photo 3:

Representative photo of high-quality patch of dwarf plantain (*Plantago erecta*), the primary host plant for QCB, where QCB was detected on March 14, 15, and 18, 2019. Nectar sources including blue dicks (*Dichelostemma capitatum*) and ground pink (*Linanthus dianthiflorus*) were abundant throughout the area. Photo taken facing southwest on March 15, 2019.



Photo 4:

Photo of QCB observed in the Survey Area, taken on March 14, 2019.

ATTACHMENT 4 – SITE PHOTOGRAPHS



Photo 5:

Photo of QCB basking on bare ground within the host plant patch shown in Photo 3. Photo taken on March 15, 2019.



Photo 6:

View of QCB resting on bare ground within a mixture of redstem filaree (*Erodium cicutarium*) and dwarf plantain. Photo taken on March 19, 2019.

ATTACHMENT 4 – SITE PHOTOGRAPHS



Photo 7:

High-quality patch of dwarf plantain located just east of the developed portion of the Otay Lakes County Park that contains ornamental landscaping, picnic areas, and a playground. Photo taken facing northeast on March 1, 2019.



Photo 8:

Another high-quality patch of dwarf plantain with abundant nectar sources throughout. This photo shows the northeastern portion of the Survey Area, with Lower Otay Lake visible in the background. Photo taken facing west on March 18, 2019.



Photo 9:

View of high-quality patch of dwarf plantain at the southern end of the Survey Area, south of the Otay River. Photo taken facing north on April 11, 2019.



Photo 10:

Example of QCB host plant variety found onsite. Photo shows a patch of southern Chinese houses (*Collinsia concolor*) found at the southern end of the Survey Area. Photo taken facing southwest on April 1, 2019.



Photo 11:

Another example of QCB host plant variety found onsite: purple owl's clover (*Castilleja exserta*) was found in small patches on the west-facing slope in the eastern half of the Survey Area, and south of the Otay River. Photo taken facing west on March 18, 2019.



Photo 12:

Example of a developed area that was excluded from the QCB Survey Area. Photo taken facing northwest on March 18, 2019.

ATTACHMENT 5 – BUTTERFLY SPECIES DETECTED



ATTACHMENT 5 – BUTTERFLY SPECIES DETECTED

Scientific Name	Common Name
CLASS INSECTA	INSECTS
NYMPHALIDAE	BRUSH-FOOTED BUTTERFLIES
<i>Junonia coenia grisea</i>	common buckeye
<i>Euphydryas editha quino</i>	Quino checkerspot butterfly
<i>Vanessa atalanta rubria</i>	American red admiral
<i>Vanessa annabella</i>	west coast lady
<i>Vanessa cardui</i>	painted lady
PAPILIONIDAE	SWALLOWTAILS
<i>Papilio eurymedon</i>	pale swallowtail
<i>Papilio zelicaon</i>	anise swallowtail
SATYRINAE	SATYRS
<i>Coenonympha tullia californica</i>	California ringlet
HESPERIDAE	SKIPPERS
<i>Erynnis funeralis</i>	funereal duskywing
LYCAENIDAE	HAIRSTREAKS, COPPERS, BLUES
<i>Callophrys rubi</i>	green hairstreak
<i>Glaucopsyche lygdamus australis</i>	southern blue
<i>Brephidium exilie</i>	western pygmy-blue
RIODINIDAE	METALMARKS
<i>Apodemia mormo virgulti</i>	Behr's metalmark
PIERIDAE	WHITES AND SULPHURS
<i>Anthocharis sara sara</i>	Sara's orangetip
<i>Colias eurytheme</i>	orange sulphur
<i>Phoebus sennae marcellina</i>	cloudless sulfur
<i>Pieris protodice</i>	checkered white

ATTACHMENT 6 – FLOWERING PLANT SPECIES OBSERVED

ATTACHMENT 6 – FLOWERING PLANT SPECIES OBSERVED

Scientific Name	Common Name
ANGIOSPERMS (EUDICOTS)	
ANACARDIACEAE	SUMAC OR CASHEW FAMILY
<i>Rhus integrifolia</i>	lemonadeberry
APIACEAE	CARROT FAMILY
<i>Daucus pusillus</i>	rattlesnake weed
<i>Sanicula arguta</i>	sharp-toothed sanicle
ASTERACEAE	SUNFLOWER FAMILY
<i>Amblyopappus pusillus</i>	pineapple weed
<i>Bahiopsis laciniata</i>	San Diego County viguiera
<i>Encelia californica</i>	California bush sunflower
<i>Hedypnois cretica</i> *	crete hedypnois
<i>Helminthotheca echioides</i> *	bristly ox-tongue
<i>Lasthenia gracilis</i>	common goldfields
<i>Leptosyne californica</i>	California coreopsis
<i>Sonchus oleraceus</i> *	common sow thistle
<i>Taraxacum officinale</i> *	common dandelion
BORAGINACEAE	BORAGE FAMILY
<i>Amsinckia intermedia</i>	Rancher's fiddleneck
<i>Cryptantha</i> sp.	cryptantha
<i>Phacelia cicutaria</i>	caterpillar phacelia
<i>Pholistoma membranaceum</i>	white fiesta flower
<i>Plagiobothrys</i> sp.	popcornflower
BRASSICACEAE	MUSTARD FAMILY
<i>Brassica nigra</i> *	black mustard
<i>Brassica rapa</i> *	field mustard
<i>Hirschfeldia incana</i> *	shortpod mustard
<i>Lepidium nitidum</i>	shining peppergrass
<i>Raphanus sativus</i> *	radish
<i>Sisymbrium irio</i> *	London rocket
CACTACEAE	CACTUS FAMILY
<i>Mammillaria dioica</i>	fish-hook cactus
CARYOPHYLLACEAE	PINK FAMILY
<i>Silene gallica</i> *	common catchfly
CHENOPODIACEAE	GOOSEFOOT FAMILY
<i>Salsola australis</i> *	Russian-thistle
CONVOLVULACEAE	MORNING-GLORY FAMILY
<i>Calystegia macrostegia</i>	western bindweed
<i>Calystegia</i> sp.	bindweed

ATTACHMENT 6 – FLOWERING PLANT SPECIES OBSERVED

CUCURBITACEAE	GOURD FAMILY
<i>Marah macrocarpa</i>	wild cucumber
EUPHORBIACEAE	SPURGE FAMILY
<i>Chamaesyce polycarpa</i>	golondrina
<i>Chamaesyce</i> sp.	spurge
FABACEAE	LEGUME FAMILY
<i>Acmispon glaber</i>	deerweed
<i>Acmispon strigosus</i>	strigose lotus
<i>Lathyrus vestitus</i>	wild sweet pea
<i>Lupinus concinnus</i>	Bajada lupine
<i>Medicago polymorpha</i> *	bur clover
<i>Melilotus albus</i> *	white sweetclover
<i>Melilotus officinalis</i> *	yellow sweetclover
GERANIACEAE	GERANIUM FAMILY
<i>Erodium cicutarium</i> *	red-stemmed filaree
MALVACEAE	MALLOW FAMILY
<i>Malva parviflora</i> *	cheeseweed
MONTIACEAE	MINER'S LETTUCE FAMILY
<i>Calandrinia ciliata</i>	red maids
NYCTAGINACEAE	FOUR O'CLOCK FAMILY
<i>Mirabilis laevis</i>	wishbone bush
OROBANCHACEAE	BROOM-RAPE FAMILY
<i>Castilleja exserta</i>	purple owl's-clover
OXALIDACEAE	OXALIS FAMILY
<i>Oxalis californica</i>	California wood-sorrel
<i>Oxalis pes-caprae</i> *	Bermuda buttercup
PAPAVERACEAE	POPPY FAMILY
<i>Eschscholzia californica</i>	California poppy
PLANTAGINACEAE	PLANTAIN FAMILY
<i>Antirrhinum nuttallianum</i>	Nuttall's snapdragon
<i>Plantago erecta</i>	western plantain
POLEMONIACEAE	PHLOX FAMILY
<i>Gilia angelensis</i>	angel gilia
<i>Linanthus dianthiflorus</i>	ground-pink
POLYGONACEAE	BUCKWHEAT FAMILY
<i>Eriogonum fasciculatum</i> var. <i>fasciculatum</i>	coastal California buckwheat
PRIMULACEAE	PRIMROSE FAMILY
<i>Dodecatheon clevelandii</i> subsp. <i>clevelandii</i>	Padre's shooting star
RANUNCULACEAE	BUTTERCUP FAMILY
<i>Clematis ligusticifolia</i>	virgin's bower

ATTACHMENT 6 – FLOWERING PLANT SPECIES OBSERVED

<i>Thalictrum fendleri</i>	meadow-rue
RUBIACEAE	MADDER FAMILY
<i>Galium angustifolium</i>	narrow-leaved bedstraw
SIMMONDSIACEAE	JOJOBA FAMILY
<i>Simmondsia chinensis</i>	jojoba, goatnut
URTICACEAE	NETTLE FAMILY
<i>Urtica urens</i> *	dwarf nettle
VIOLACEAE	VIOLET FAMILY
<i>Viola pedunculata</i>	johnny-jump-up
ANGIOSPERMS (MONOCOTS)	
ALLIACEAE	ONION FAMILY
<i>Allium haematochiton</i>	red-skinned onion
THEMIDACEAE	BRODIAEA FAMILY
<i>Dichelostemma capitatum</i> subsp. <i>capitatum</i>	blue dicks
*Non-Native Species, +Ornamental, Unlikely to be Invasive	

ATTACHMENT 7 – WEATHER CONDITIONS



ATTACHMENT 7 – WEATHER CONDITIONS

Survey #	Date	Surveyor (s)	Time (military)		Temperature (degrees Fahrenheit)		Wind (miles per hour)		Cloud Cover (%)		Precipitation	
			Start	End	Start	End	Start	End	Start	End	Start	End
1	02/23/19	Laurie Gorman Clark Austin*	1010	1630	69	64	0-1	2-7	0	0	0	0
2	03/01/19	Laurie Gorman Clark Austin*	1020	1600	70	74	1-3	0-2	40	80	0	0
3	03/07/18	Laurie Gorman Travis Cooper Clark Austin*	1015	1620	71	70	0-2	1-3	90	55	0	0
4	03/14/18	Travis Cooper	0930	1700	61	66	0-1	1-3	0	0	0	0
	03/15/18	Laurie Gorman Clark Austin*	1005	1615	64	74	0-1	1-3	50	30	0	0
5	03/18/18	Laurie Gorman	1020	1630	72	70	0-1	0-2	0	25	0	0
	03/19/18	Laurie Gorman Clark Austin* Kaelin McAtee*	1015	1520	62	74	0-1	0-2	2	5	0	0

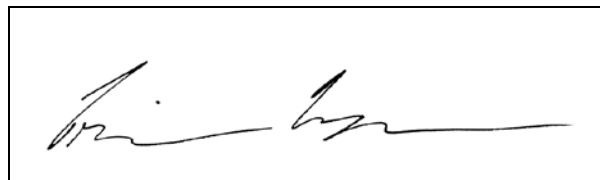
*Non-permitted biologist as an assistant

ATTACHMENT 8 – QCB SURVEY PROJECT BIOLOGIST SIGNATURE PAGE

All biologists performing focused, protocol-level surveys for Quino checkerspot butterfly (*Euphydryas editha quino*) during the flight season of 2019 for proposed Otay lakes Campground Project (Proposed Project) located in San Diego County, California were permitted to survey for this species under Section 10(a)(1)(A) of the Endangered Species Act (ESA). The undersigned project biologists certify this report to be a complete and accurate account of the findings and conclusions of surveys for Quino checkerspot butterfly conducted for the Proposed Project during the 2019 flight season.



Laurie Gorman
USFWS Permit Number TE-233367-3



Travis Cooper
USFWS Permit Number TE-170389-6

ATTACHMENT 9 – FIELD SURVEY FORMS



2019 Quino Checkerspot Butterfly Survey Form

Surveyor:	Laurie Gorman	Date:	02-23-2019
Site Name:	Proposed Otay Lakes Campground Project	Site Visit No:	1
Other Surveyors Present:	Clark Austin	QCB Observed?	No

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	1010	69	0-1	0
End	1630	64	2-7	0
Start	-	-	-	-
End	-	-	-	-

Host Plants	Obs.	Host Plants	Obs.
dwarf plantain (<i>Plantago erecta</i>)	X	birds-beak (<i>Cordylanthus rigidus</i>)	
purple owl's clover (<i>Castilleja exserta</i>)		woolly plantain (<i>Plantago patagonica</i>)	
snapdragon (<i>Antirrhinum coulterianum</i>)		Chinese houses (<i>Collinsia</i> spp.)	
Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Swallowtails	
California patch (<i>Chlosyne californica</i>)		pale swallowtail (<i>Papilio eurymedon</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		western tiger swallowtail (<i>P. rutulus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		anise swallowtail (<i>P. zelicaon</i>)	
chalcedon checkerspot (<i>E. chalcedona chalcedona</i>)		Hairstreaks	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Mylitta crescent (<i>Phyciodes mylitta</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Blues		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
western tailed blue (<i>Everes amyntula</i>)		Ladies/Admirals	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	2	California sister (<i>Adelpha bredowii californica</i>)	
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		Lorquin's admiral (<i>Limenitis lorquini</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		west coast lady (<i>Vanessa annabella</i>)	
marine blue (<i>Leptotes marina</i>)		red admiral (<i>V. atalanta rubria</i>)	
unidentified blue		painter lady (<i>V. cardui</i>)	
Whites		American (Virginia) lady (<i>V. virginensis</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	7	unidentified lady (<i>Vanessa</i> sp.)	1
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)	2	monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	1
checkered (common) white (<i>Pontia protodice</i>)	1	mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)		fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)		Comstock's fritillary (<i>Speyeria callippe comstocki</i>)	
sleepy orange (<i>Eurema nicippe</i>)		skipper sp.	
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur		Total of all Butterflies Observed:	14

Table 1: Flowering Plants/Potential Nectar Sources Observed

Scientific Name	Common Name
ANGIOSPERMS (EUDICOTS)	
APIACEAE	CARROT FAMILY
<i>Sanicula arguta</i>	sharp-toothed sanicle
ASTERACEAE	SUNFLOWER FAMILY
<i>Bahiopsis laciniata</i>	San Diego County viguiera
<i>Encelia californica</i>	California bush sunflower
<i>Lasthenia gracilis</i>	common goldfields
<i>Sonchus oleraceus</i> *	common sow thistle
<i>Taraxacum officinale</i> *	common dandelion
BORAGINACEAE	BORAGE FAMILY
<i>Cryptantha</i> sp.	cryptantha
<i>Pholistoma membranaceum</i>	white fiesta flower
<i>Plagiobothrys</i> sp.	popcornflower
BRASSICACEAE	MUSTARD FAMILY
<i>Brassica nigra</i> *	black mustard
<i>Brassica rapa</i> *	field mustard
<i>Hirschfeldia incana</i> *	shortpod mustard
<i>Lepidium nitidum</i>	shining peppergrass
<i>Raphanus sativus</i> *	radish
CARYOPHYLLACEAE	PINK FAMILY
<i>Silene gallica</i> *	common catchfly
CHENOPODIACEAE	GOOSEFOOT FAMILY
<i>Salsola australis</i> *	Russian-thistle
CUCURBITACEAE	GOURD FAMILY
<i>Marah macrocarpa</i>	wild cucumber
EUPHORBIACEAE	SPURGE FAMILY
<i>Chamaesyce polycarpa</i>	golondrina
FABACEAE	LEGUME FAMILY
<i>Acmispon glaber</i>	deerweed
<i>Melilotus albus</i> *	white sweetclover
<i>Melilotus officinalis</i> *	yellow sweetclover
GERANIACEAE	GERANIUM FAMILY
<i>Erodium cicutarium</i> *	red-stemmed filaree
MALVACEAE	MALLOW FAMILY
<i>Malva parviflora</i> *	cheeseweed
MONTIACEAE	MINER'S LETTUCE FAMILY
<i>Calandrinia ciliata</i>	red maids
OXALIDACEAE	OXALIS FAMILY
<i>Oxalis californica</i>	California wood-sorrel
<i>Oxalis pes-caprae</i> *	Bermuda buttercup
PAPAVERACEAE	POPPY FAMILY
<i>Eschscholzia californica</i>	California poppy
PLANTAGINACEAE	PLANTAIN FAMILY
<i>Plantago erecta</i>	western plantain
POLEMONIACEAE	PHLOX FAMILY

Scientific Name	Common Name
<i>Linanthus dianthiflorus</i>	ground-pink
POLYGONACEAE	BUCKWHEAT FAMILY
<i>Eriogonum fasciculatum</i> var. <i>fasciculatum</i>	coastal California buckwheat
PRIMULACEAE	PRIMROSE FAMILY
<i>Dodecatheon clevelandii</i> subsp. <i>clevelandii</i>	Padre's shooting star
ANGIOSPERMS (MONOCOTS)	
ALLIACEAE	ONION FAMILY
<i>Allium haematochiton</i>	red-skinned onion
THEMIDACEAE	BRODIAEA FAMILY
<i>Dichelostemma capitatum</i> subsp. <i>capitatum</i>	blue dicks
*Non-Native Species, +Ornamental, Unlikely to be Invasive	

Notes (habitat quality, condition of host plants, etc.):

- High-quality habitat on hillsides in the northeastern portion of the project with high densities of host plant (*Plantago erecta*) cryptogammic crust, and a lot of nectar sources starting to come in. Host plants are short (approx. one centimeter tall) but lush. Non-native grassland dominates a large portion of the central area of the project site, making habitat quality for QCB much lower. Low butterfly activity, but it is early in the season.

2019 Quino Checkerspot Butterfly Survey Form

Surveyor: Laurie Gorman **Date:** 03-01-2019
Site Name: Proposed Otay Lakes Campground Project **Site Visit No:** 2
Other Surveyors Present: Clark Austin **QCB Observed?** No

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	1020	70	1-3	40
End	1600	74	0-2	80
Start	-	-	-	-
End	-	-	-	-

Host Plants	Obs.	Host Plants	Obs.
dwarf plantain (<i>Plantago erecta</i>)	X	birds-beak (<i>Cordylanthus rigidus</i>)	
purple owl's clover (<i>Castilleja exserta</i>)		woolly plantain (<i>Plantago patagonica</i>)	
snapdragon (<i>Antirrhinum coulterianum</i>)		Chinese houses (<i>Collinsia</i> spp.)	
Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Swallowtails	
California patch (<i>Chlosyne californica</i>)		pale swallowtail (<i>Papilio eurymedon</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		western tiger swallowtail (<i>P. rutulus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		anise swallowtail (<i>P. zelicaon</i>)	
chalcedon checkerspot (<i>E. chalcedona chalcedona</i>)		Hairstreaks	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Mylitta crescent (<i>Phyciodes mylitta</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Blues		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
western tailed blue (<i>Everes amyntula</i>)		Ladies/Admirals	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	11	California sister (<i>Adelpha bredowii californica</i>)	
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		Lorquin's admiral (<i>Limenitis lorquini</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		west coast lady (<i>Vanessa annabella</i>)	
marine blue (<i>Leptotes marina</i>)		red admiral (<i>V. atalanta rubria</i>)	
unidentified blue		painted lady (<i>V. cardui</i>)	10
Whites		American (Virginia) lady (<i>V. virginensis</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	4	unidentified lady (<i>Vanessa</i> sp.)	5
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)	2	monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	2
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	5	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)	1	Comstock's fritillary (<i>Speyeria callippe comstocki</i>)	
sleepy orange (<i>Eurema nicippe</i>)		skipper sp.	
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur		Total of all Butterflies Observed:	40

Table 1: Flowering Plants/Potential Nectar Sources Observed

Scientific Name	Common Name
ANGIOSPERMS (EUDICOTS)	
ANACARDIACEAE	SUMAC OR CASHEW FAMILY
<i>Rhus integrifolia</i>	lemonadeberry
APIACEAE	CARROT FAMILY
<i>Sanicula arguta</i>	sharp-toothed sanicle
ASTERACEAE	SUNFLOWER FAMILY
<i>Bahiopsis laciniata</i>	San Diego County viguiera
<i>Encelia californica</i>	California bush sunflower
<i>Lasthenia gracilis</i>	common goldfields
<i>Sonchus oleraceus</i> *	common sow thistle
<i>Taraxacum officinale</i> *	common dandelion
BORAGINACEAE	BORAGE FAMILY
<i>Amsinckia intermedia</i>	Rancher's fiddleneck
<i>Cryptantha</i> sp.	cryptantha
<i>Pholistoma membranaceum</i>	white fiesta flower
<i>Plagiobothrys</i> sp.	popcornflower
BRASSICACEAE	MUSTARD FAMILY
<i>Brassica nigra</i> *	black mustard
<i>Brassica rapa</i> *	field mustard
<i>Hirschfeldia incana</i> *	shortpod mustard
<i>Lepidium nitidum</i>	shining peppergrass
<i>Raphanus sativus</i> *	radish
CACTACEAE	CACTUS FAMILY
<i>Mammillaria dioica</i>	fish-hook cactus
CARYOPHYLLACEAE	PINK FAMILY
<i>Silene gallica</i> *	common catchfly
CHENOPODIACEAE	GOOSEFOOT FAMILY
<i>Salsola australis</i> *	Russian-thistle
CUCURBITACEAE	GOURD FAMILY
<i>Marah macrocarpa</i>	wild cucumber
EUPHORBIACEAE	SPURGE FAMILY
<i>Chamaesyce polycarpa</i>	golondrina
FABACEAE	LEGUME FAMILY
<i>Acemisson glaber</i>	deerweed
<i>Acemisson strigosus</i>	strigose lotus
<i>Lathyrus vestitus</i>	wild sweet pea
<i>Melilotus albus</i> *	white sweetclover
<i>Melilotus officinalis</i> *	yellow sweetclover
GERANIACEAE	GERANIUM FAMILY
<i>Erodium cicutarium</i> *	red-stemmed filaree
MALVACEAE	MALLOW FAMILY
<i>Malva parviflora</i> *	cheeseweed
MONTIACEAE	MINER'S LETTUCE FAMILY

<i>Calandrinia ciliata</i>	red maids
NYCTAGINACEAE	FOUR O'CLOCK FAMILY
<i>Mirabilis laevis</i>	wishbone bush
OXALIDACEAE	OXALIS FAMILY
<i>Oxalis californica</i>	California wood-sorrel
<i>Oxalis pes-caprae</i> *	Bermuda buttercup
PAPAVERACEAE	POPPY FAMILY
<i>Eschscholzia californica</i>	California poppy
PLANTAGINACEAE	PLANTAIN FAMILY
<i>Antirrhinum nuttallianum</i>	Nuttall's snapdragon
<i>Plantago erecta</i>	western plantain
POLEMONIACEAE	PHLOX FAMILY
<i>Gilia angelensis</i>	angel gilia
<i>Linanthus dianthiflorus</i>	ground-pink
POLYGONACEAE	BUCKWHEAT FAMILY
<i>Eriogonum fasciculatum</i> var. <i>fasciculatum</i>	coastal California buckwheat
PRIMULACEAE	PRIMROSE FAMILY
<i>Dodecatheon clevelandii</i> subsp. <i>clevelandii</i>	Padre's shooting star
RANUNCULACEAE	BUTTERCUP FAMILY
<i>Clematis ligusticifolia</i>	virgin's bower
URTICACEAE	NETTLE FAMILY
<i>Urtica urens</i> *	dwarf nettle
VIOLACEAE	VIOLET FAMILY
<i>Viola pedunculata</i>	johnny-jump-up
ANGIOSPERMS (MONOCOTS)	
ALLIACEAE	ONION FAMILY
<i>Allium haematochiton</i>	red-skinned onion
THEMIDACEAE	BRODIAEA FAMILY
<i>Dichelostemma capitatum</i> subsp. <i>capitatum</i>	blue dicks
*Non-Native Species, +Ornamental, Unlikely to be Invasive	

Notes (habitat quality, condition of host plants, etc.):

- High-quality habitat on hillsides in the northeastern portion of the project with high densities of host plant (*Plantago erecta*) cryptogammic crust, and a lot of nectar sources starting to come in. Host plants are growing taller. Non-native grassland dominates a large portion of the central area of the project site, making habitat quality for QCB much lower. Increasing numbers of *Vanessa* sp. migrating through. Overall numbers lower than expected given the habitat quality.

2019 Quino Checkerspot Butterfly Survey Form

Surveyor: Laurie Gorman **Date:** 03-07-2019
Site Name: Proposed Otay Lakes Campground Project **Site Visit No:** 3
Other Surveyors Present: Travis Cooper and Clark Austin **QCB Observed?** No

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	1015	71	0-2	90
End	1620	70	1-3	55
Start	-	-	-	-
End	-	-	-	-

Host Plants	Obs.	Host Plants	Obs.
dwarf plantain (<i>Plantago erecta</i>)	X	birds-beak (<i>Cordylanthus rigidus</i>)	
purple owl's clover (<i>Castilleja exserta</i>)	X	woolly plantain (<i>Plantago patagonica</i>)	
snapdragon (<i>Antirrhinum coulterianum</i>)		Chinese houses (<i>Collinsia</i> spp.)	
Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Swallowtails	
California patch (<i>Chlosyne californica</i>)		pale swallowtail (<i>Papilio eurymedon</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		western tiger swallowtail (<i>P. rutulus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		anise swallowtail (<i>P. zelicaon</i>)	
chalcedon checkerspot (<i>E. chalcedona chalcedona</i>)		Hairstreaks	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Mylitta crescent (<i>Phyciodes mylitta</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Blues		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
western tailed blue (<i>Everes amyntula</i>)		Ladies/Admirals	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	12	California sister (<i>Adelpha bredowii californica</i>)	
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		Lorquin's admiral (<i>Limenitis lorquini</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		west coast lady (<i>Vanessa annabella</i>)	2
marine blue (<i>Leptotes marina</i>)		red admiral (<i>V. atalanta rubria</i>)	
unidentified blue		painted lady (<i>V. cardui</i>)	25
Whites		American (Virginia) lady (<i>V. virginensis</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	4	unidentified lady (<i>Vanessa</i> sp.)	6
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)	2	monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	1
checkered (common) white (<i>Pontia protodice</i>)	1	mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	2
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	10	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)		Comstock's fritillary (<i>Speyeria callippe comstocki</i>)	
sleepy orange (<i>Eurema nicippe</i>)		skipper sp.	
cloudless sulfur (<i>Phoebus sennae marcellina</i>)	1		
unidentified sulphur		Total of all Butterflies Observed:	66

Table 1: Flowering Plants/Potential Nectar Sources Observed

Scientific Name	Common Name
ANGIOSPERMS (EUDICOTS)	
ANACARDIACEAE	SUMAC OR CASHEW FAMILY
<i>Rhus integrifolia</i>	lemonadeberry
APIACEAE	CARROT FAMILY
<i>Sanicula arguta</i>	sharp-toothed sanicle
ASTERACEAE	SUNFLOWER FAMILY
<i>Bahiopsis laciniata</i>	San Diego County viguiera
<i>Encelia californica</i>	California bush sunflower
<i>Hedynois cretica</i> *	crete hedynois
<i>Helminthotheca echinoides</i> *	bristly ox-tongue
<i>Lasthenia gracilis</i>	common goldfields
<i>Sonchus oleraceus</i> *	common sow thistle
<i>Taraxacum officinale</i> *	common dandelion
BORAGINACEAE	BORAGE FAMILY
<i>Amsinckia intermedia</i>	Rancher's fiddleneck
<i>Cryptantha</i> sp.	cryptantha
<i>Phacelia cicutaria</i>	caterpillar phacelia
<i>Pholistoma membranaceum</i>	white fiesta flower
<i>Plagiobothrys</i> sp.	popcornflower
BRASSICACEAE	MUSTARD FAMILY
<i>Brassica nigra</i> *	black mustard
<i>Brassica rapa</i> *	field mustard
<i>Hirschfeldia incana</i> *	shortpod mustard
<i>Lepidium nitidum</i>	shining peppergrass
<i>Raphanus sativus</i> *	radish
<i>Sisymbrium irio</i> *	London rocket
CACTACEAE	CACTUS FAMILY
<i>Mammillaria dioica</i>	fish-hook cactus
CARYOPHYLLACEAE	PINK FAMILY
<i>Silene gallica</i> *	common catchfly
CHENOPODIACEAE	GOOSEFOOT FAMILY
<i>Salsola australis</i> *	Russian-thistle
CONVOLVULACEAE	MORNING-GLORY FAMILY
<i>Calystegia macrostegia</i>	western bindweed
CUCURBITACEAE	GOURD FAMILY
<i>Marah macrocarpa</i>	wild cucumber
EUPHORBIACEAE	SPURGE FAMILY
<i>Chamaesyce polycarpa</i>	golondrina
FABACEAE	LEGUME FAMILY
<i>Acemisson glaber</i>	deerweed
<i>Acemisson strigosus</i>	strigose lotus
<i>Lathyrus vestitus</i>	wild sweet pea
<i>Lupinus concinnus</i>	Bajada lupine

<i>Melilotus albus</i> *	white sweetclover
<i>Melilotus officinalis</i> *	yellow sweetclover
GERANIACEAE	GERANIUM FAMILY
<i>Erodium cicutarium</i> *	red-stemmed filaree
MALVACEAE	MALLOW FAMILY
<i>Malva parviflora</i> *	cheeseweed
MONTIACEAE	MINER'S LETTUCE FAMILY
<i>Calandrinia ciliata</i>	red maids
NYCTAGINACEAE	FOUR O'CLOCK FAMILY
<i>Mirabilis laevis</i>	wishbone bush
OROBANCHACEAE	BROOM-RAPE FAMILY
<i>Castilleja densiflora</i>	denseflower Indian paintbrush
<i>Castilleja exserta</i>	purple owl's-clover
OXALIDACEAE	OXALIS FAMILY
<i>Oxalis californica</i>	California wood-sorrel
<i>Oxalis pes-caprae</i> *	Bermuda buttercup
PAPAVERACEAE	POPPY FAMILY
<i>Eschscholzia californica</i>	California poppy
PLANTAGINACEAE	PLANTAIN FAMILY
<i>Antirrhinum nuttallianum</i>	Nuttall's snapdragon
<i>Plantago erecta</i>	western plantain
POLEMONIACEAE	PHLOX FAMILY
<i>Gilia angelensis</i>	angel gilia
<i>Linanthus dianthiflorus</i>	ground-pink
POLYGONACEAE	BUCKWHEAT FAMILY
<i>Eriogonum fasciculatum</i> var. <i>fasciculatum</i>	coastal California buckwheat
PRIMULACEAE	PRIMROSE FAMILY
<i>Dodecatheon clevelandii</i> subsp. <i>clevelandii</i>	Padre's shooting star
RANUNCULACEAE	BUTTERCUP FAMILY
<i>Clematis ligusticifolia</i>	virgin's bower
<i>Thalictrum fendleri</i>	meadow-rue
SIMMONDSIACEAE	JOJOBA FAMILY
<i>Simmondsia chinensis</i>	jojoba, goatnut
URTICACEAE	NETTLE FAMILY
<i>Urtica urens</i> *	dwarf nettle
VIOLACEAE	VIOLET FAMILY
<i>Viola pedunculata</i>	johnny-jump-up
ANGIOSPERMS (MONOCOTS)	
ALLIACEAE	ONION FAMILY
<i>Allium haematochiton</i>	red-skinned onion
THEMIDACEAE	BRODIAEA FAMILY
<i>Dichelostemma capitatum</i> subsp. <i>capitatum</i>	blue dicks
*Non-Native Species, +Ornamental, Unlikely to be Invasive	

Notes (habitat quality, condition of host plants, etc.):

- High-quality habitat on hillsides in the northeastern portion of the project with high densities of host plant (*Plantago erecta*) cryptogammic crust, and a lot of nectar sources starting to come in. Host plants are growing taller. Non-native grassland dominates a large portion of the central area of the project site, making habitat quality for QCB much lower. Higher butterfly numbers than the prior survey, particularly *Vanessa* sp. migrating through.

2019 Quino Checkerspot Butterfly Survey Form

Surveyor:	Travis Cooper	Date:	03-14-2019
Site Name:	Proposed Otay Lakes Campground Project	Site Visit No:	4
Other Surveyors Present:	None	QCB Observed?	Yes

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	09:30	61	0-2	0
End	17:00	66	1-3	0
Start	-	-	-	-
End	-	-	-	-

Host Plants	Obs.	Host Plants	Obs.
dwarf plantain (<i>Plantago erecta</i>)	X	birds-beak (<i>Cordylanthus rigidus</i>)	
purple owl's clover (<i>Castilleja exserta</i>)	X	woolly plantain (<i>Plantago patagonica</i>)	
snapdragon (<i>Antirrhinum coulterianum</i>)		Chinese houses (<i>Collinsia</i> spp.)	
Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Swallowtails	
California patch (<i>Chlosyne californica</i>)		pale swallowtail (<i>Papilio eurymedon</i>)	1
Gabb's checkerspot (<i>C. gabbii</i>)		western tiger swallowtail (<i>P. rutulus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)	1	anise swallowtail (<i>P. zelicaon</i>)	2
chalcedon checkerspot (<i>E. chalcedona chalcedona</i>)		Hairstreaks	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Mylitta crescent (<i>Phyciodes mylitta</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Blues		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	1
western pygmy-blue (<i>Brephidium exila</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
western tailed blue (<i>Everes amyntula</i>)		Ladies/Admirals	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	22	California sister (<i>Adelpha bredowii californica</i>)	
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		Lorquin's admiral (<i>Limenitis lorquini</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		west coast lady (<i>Vanessa annabella</i>)	8
marine blue (<i>Leptotes marina</i>)		red admiral (<i>V. atalanta rubria</i>)	
unidentified blue		painted lady (<i>V. cardui</i>)	70
Whites		American (Virginia) lady (<i>V. virginensis</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	21	unidentified lady (<i>Vanessa</i> sp.)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)		monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	3
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	31	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)		Comstock's fritillary (<i>Speyeria callippe comstocki</i>)	
sleepy orange (<i>Eurema nicippe</i>)		skipper sp.	
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur		Total of all Butterflies Observed:	160

Table 1: Flowering Plants/Potential Nectar Sources Observed

Scientific Name	Common Name
ANGIOSPERMS (EUDICOTS)	
APIACEAE	CARROT FAMILY
<i>Daucus pusillus</i>	rattlesnake weed
<i>Sanicula arguta</i>	sharp-toothed sanicle
ASTERACEAE	SUNFLOWER FAMILY
<i>Amblyopappus pusillus</i>	pineapple weed
<i>Bahiopsis laciniata</i>	San Diego County viguiera
<i>Hedypnois cretica</i> *	crete hedypnois
<i>Leptosyne californica</i>	California coreopsis
<i>Sonchus oleraceus</i> *	common sow thistle
BORAGINACEAE	BORAGE FAMILY
<i>Phacelia cicutaria</i>	caterpillar phacelia
<i>Pholistoma membranaceum</i>	white fiesta flower
<i>Plagiobothrys</i> sp.	popcornflower
BRASSICACEAE	MUSTARD FAMILY
<i>Brassica nigra</i> *	black mustard
<i>Hirschfeldia incana</i> *	shortpod mustard
<i>Lepidium nitidum</i>	shining peppergrass
<i>Raphanus sativus</i> *	radish
<i>Sisymbrium irio</i> *	London rocket
CACTACEAE	CACTUS FAMILY
<i>Mammillaria dioica</i>	fish-hook cactus
CONVOLVULACEAE	MORNING-GLORY FAMILY
<i>Calystegia macrostegia</i>	western bindweed
CUCURBITACEAE	GOURD FAMILY
<i>Marah macrocarpa</i>	wild cucumber
EUPHORBIACEAE	SPURGE FAMILY
<i>Chamaesyce</i> sp.	spurge
FABACEAE	LEGUME FAMILY
<i>Acmispon glaber</i>	deerweed
<i>Acmispon strigosus</i>	strigose lotus
<i>Lathyrus vestitus</i>	wild sweet pea
<i>Lupinus concinnus</i>	Bajada lupine
<i>Medicago polymorpha</i> *	bur clover
<i>Melilotus officinalis</i> *	yellow sweetclover
GERANIACEAE	GERANIUM FAMILY
<i>Erodium cicutarium</i> *	red-stemmed filaree
MONTIACEAE	MINER'S LETTUCE FAMILY
<i>Calandrinia ciliata</i>	red maids
NYCTAGINACEAE	FOUR O'CLOCK FAMILY
<i>Mirabilis laevis</i>	wishbone bush
OROBANCHACEAE	BROOM-RAPE FAMILY
<i>Castilleja densiflora</i>	denseflower Indian paintbrush

<i>Castilleja exserta</i>	purple owl's clover
OXALIDACEAE	OXALIS FAMILY
<i>Oxalis californica</i>	California wood-sorrel
PAPAVERACEAE	POPPY FAMILY
<i>Eschscholzia californica</i>	California poppy
PLANTAGINACEAE	PLANTAIN FAMILY
<i>Antirrhinum nuttallianum</i>	Nuttall's snapdragon
<i>Plantago erecta</i>	dwarf plantain
POLEMONIACEAE	PHLOX FAMILY
<i>Gilia angelensis</i>	angel gilia
<i>Linanthus dianthiflorus</i>	ground-pink
POLYGONACEAE	BUCKWHEAT FAMILY
<i>Eriogonum fasciculatum</i> var. <i>fasciculatum</i>	coastal California buckwheat
RUBIACEAE	MADDER FAMILY
<i>Galium angustifolium</i>	narrow-leaved bedstraw
SIMMONDSIACEAE	JOJOBA FAMILY
<i>Simmondsia chinensis</i>	jojoba, goatnut
VIOLACEAE	VIOLET FAMILY
<i>Viola pedunculata</i>	johnny-jump-up
ANGIOSPERMS (MONOCOTS)	
ALLIACEAE	ONION FAMILY
<i>Allium haematochiton</i>	red-skinned onion
THEMIDACEAE	BRODIAEA FAMILY
<i>Dichelostemma capitatum</i> subsp. <i>capitatum</i>	blue dicks
*Non-Native Species, +Ornamental, Unlikely to be Invasive	

Notes (habitat quality, condition of host plants, etc.):

- High-quality habitat on hillsides in the northeastern portion of the project with high densities of dwarf plantain, cryptogamic crust, and a lot of nectar sources now blooming. Host plants are lush. Purple owl's clover observed intermixed within large patches of dwarf plantain. Non-native grassland dominates a large portion of the central area of the project site, making habitat quality for QCB much lower in that area.
- One Quino checkerspot butterfly observed resting on ground and nearing on blue dicks within a large patch of dwarf plantain:
 - Time: 15:50
 - Weather Conditions: 76°, 5-7 mph wind, clear skies
 - GPS Location of Observation: UTM (WGS84): 11S 3607701, 506786; Decimal degrees (32.60680889, -16.92767416)
 - Observation Details: Single adult female flushed out of a *Plantago erecta* patch. The individual landed on the ground briefly before flying up slope and nectaring on *Dichelostemma capitatum*, and then continuing upslope and out of sight.
 - Host Plant Patch Details: Found in dense *Plantago erecta* patch on west-facing slope, with scattered nectar sources primarily *Linanthus* sp. and *Dichelostemma capitatum*, bordered by non-native grassland and a patch of *Eriogonum fasciculatum*.

2019 Quino Checkerspot Butterfly Survey Form

Surveyor: Laurie Gorman **Date:** 03-15-2019
Site Name: Proposed Otay Lakes Campground Project **Site Visit No:** 4
Other Surveyors Present: Clark Austin **QCB Observed?** Yes

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	1005	64	0-1	50
End	1615	74	1-3	30
Start	-	-	-	-
End	-	-	-	-

Host Plants	Obs.	Host Plants	Obs.
dwarf plantain (<i>Plantago erecta</i>)	X	birds-beak (<i>Cordylanthus rigidus</i>)	
purple owl's clover (<i>Castilleja exserta</i>)	X	woolly plantain (<i>Plantago patagonica</i>)	
snapdragon (<i>Antirrhinum coulterianum</i>)		Chinese houses (<i>Collinsia</i> spp.)	
Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Swallowtails	
California patch (<i>Chlosyne californica</i>)		pale swallowtail (<i>Papilio eurymedon</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		western tiger swallowtail (<i>P. rutulus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)	1	anise swallowtail (<i>P. zelicaon</i>)	
chalcedon checkerspot (<i>E. chalcedona chalcedona</i>)		Hairstreaks	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Mylitta crescent (<i>Phyciodes mylitta</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Blues		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
western pygmy-blue (<i>Brephidium exila</i>)	1	gray hairstreak (<i>Strymon melinus pudica</i>)	
western tailed blue (<i>Everes amyntula</i>)		Ladies/Admirals	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	20	California sister (<i>Adelpha bredowii californica</i>)	
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		Lorquin's admiral (<i>Limenitis lorquini</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		west coast lady (<i>Vanessa annabella</i>)	
marine blue (<i>Leptotes marina</i>)		red admiral (<i>V. atalanta rubria</i>)	2
unidentified blue		painted lady (<i>V. cardui</i>)	95
Whites		American (Virginia) lady (<i>V. virginensis</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	7	unidentified lady (<i>Vanessa</i> sp.)	5
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)	2	monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	1
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	8
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	42	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)		Comstock's fritillary (<i>Speyeria callippe comstocki</i>)	
sleepy orange (<i>Eurema nicippe</i>)		skipper sp.	
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur		Total of all Butterflies Observed:	183

Table 1: Flowering Plants/Potential Nectar Sources Observed

Scientific Name	Common Name
ANGIOSPERMS (EUDICOTS)	
APIACEAE	CARROT FAMILY
<i>Daucus pusillus</i>	rattlesnake weed
<i>Sanicula arguta</i>	sharp-toothed sanicle
ASTERACEAE	SUNFLOWER FAMILY
<i>Amblyopappus pusillus</i>	pineapple weed
<i>Bahiopsis laciniata</i>	San Diego County viguiera
<i>Hedypnois cretica</i> *	crete hedypnois
<i>Leptosyne californica</i>	California coreopsis
<i>Sonchus oleraceus</i> *	common sow thistle
BORAGINACEAE	BORAGE FAMILY
<i>Phacelia cicutaria</i>	caterpillar phacelia
<i>Pholistoma membranaceum</i>	white fiesta flower
<i>Plagiobothrys</i> sp.	popcornflower
BRASSICACEAE	MUSTARD FAMILY
<i>Brassica nigra</i> *	black mustard
<i>Hirschfeldia incana</i> *	shortpod mustard
<i>Lepidium nitidum</i>	shining peppergrass
<i>Raphanus sativus</i> *	radish
<i>Sisymbrium irio</i> *	London rocket
CACTACEAE	CACTUS FAMILY
<i>Mammillaria dioica</i>	fish-hook cactus
CONVOLVULACEAE	MORNING-GLORY FAMILY
<i>Calystegia macrostegia</i>	western bindweed
CUCURBITACEAE	GOURD FAMILY
<i>Marah macrocarpa</i>	wild cucumber
EUPHORBIACEAE	SPURGE FAMILY
<i>Chamaesyce</i> sp.	spurge
FABACEAE	LEGUME FAMILY
<i>Acmispon glaber</i>	deerweed
<i>Acmispon strigosus</i>	strigose lotus
<i>Lathyrus vestitus</i>	wild sweet pea
<i>Lupinus concinnus</i>	Bajada lupine
<i>Medicago polymorpha</i> *	bur clover
<i>Melilotus officinalis</i> *	yellow sweetclover
GERANIACEAE	GERANIUM FAMILY
<i>Erodium cicutarium</i> *	red-stemmed filaree
MONTIACEAE	MINER'S LETTUCE FAMILY
<i>Calandrinia ciliata</i>	red maids
NYCTAGINACEAE	FOUR O'CLOCK FAMILY
<i>Mirabilis laevis</i>	wishbone bush
OROBANCHACEAE	BROOM-RAPE FAMILY
<i>Castilleja densiflora</i>	denseflower Indian paintbrush

<i>Castilleja exserta</i>	purple owl's clover
OXALIDACEAE	OXALIS FAMILY
<i>Oxalis californica</i>	California wood-sorrel
PAPAVERACEAE	POPPY FAMILY
<i>Eschscholzia californica</i>	California poppy
PLANTAGINACEAE	PLANTAIN FAMILY
<i>Antirrhinum nuttallianum</i>	Nuttall's snapdragon
<i>Plantago erecta</i>	dwarf plantain
POLEMONIACEAE	PHLOX FAMILY
<i>Gilia angelensis</i>	angel gilia
<i>Linanthus dianthiflorus</i>	ground-pink
POLYGONACEAE	BUCKWHEAT FAMILY
<i>Eriogonum fasciculatum</i> var. <i>fasciculatum</i>	coastal California buckwheat
RUBIACEAE	MADDER FAMILY
<i>Galium angustifolium</i>	narrow-leaved bedstraw
SIMMONDSIACEAE	JOJOBA FAMILY
<i>Simmondsia chinensis</i>	jojoba, goatnut
VIOLACEAE	VIOLET FAMILY
<i>Viola pedunculata</i>	johnny-jump-up
ANGIOSPERMS (MONOCOTS)	
ALLIACEAE	ONION FAMILY
<i>Allium haematochiton</i>	red-skinned onion
THEMIDACEAE	BRODIAEA FAMILY
<i>Dichelostemma capitatum</i> subsp. <i>capitatum</i>	blue dicks

*Non-Native Species, +Ornamental, Unlikely to be Invasive

Notes (habitat quality, condition of host plants, etc.):

- High-quality habitat on hillsides in the northeastern portion of the project with high densities of dwarf plantain, cryptogamic crust, and a lot of nectar sources now blooming. Host plants are lush. Purple owl's clover observed intermixed within large patches of dwarf plantain. Non-native grassland dominates a large portion of the central area of the project site, making habitat quality for QCB much lower in that area.

Quino Checkerspot Butterfly Observation

- Observer: Laurie Gorman (TE-233367-3)
- Date: 3/15/2019
- Time: 1435
- Weather Conditions: 74°, 1-3 mph wind, clear skies
- GPS Location of Observation (same general host plant location as the individual observed yesterday, March 14, 2019)
 - UTM (NAD83): 11S 3607699 mN, 506774 mE
 - Decimal Degrees: 32.6067889, -116.9277994
- Observation Details: Single adult (sex not determined) observed within large, dense patch of *Plantago erecta*. The individual was observed nectaring on *Linanthus dianthiflorus* and *Dichelostemma capitatum*, flying frequently between patches of nectar sources. The individual was energetic and difficult to track through the habitat for a long period. Same individual as the one observed yesterday, March 14, 2019 (based on comparison of photographs).
- Host Plant Patch Details: Dense *Plantago erecta* patch on west-facing slope, with scattered nectar sources primarily *Linanthus dianthiflorus* and *Dichelostemma capitatum*, bordered by non-native grassland and a patch of *Eriogonum fasciculatum*.

2019 Quino Checkerspot Butterfly Survey Form

Surveyor:	Laurie Gorman	Date:	03-18-2019
Site Name:	Proposed Otay Lakes Campground Project	Site Visit No:	5
Other Surveyors Present:	None	QCB Observed?	No

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	1020	72	0-1	0
End	1630	70	0-2	0
Start	-	-	-	-
End	-	-	-	-

Host Plants	Obs.	Host Plants	Obs.
dwarf plantain (<i>Plantago erecta</i>)	X	birds-beak (<i>Cordylanthus rigidus</i>)	
purple owl's clover (<i>Castilleja exserta</i>)	X	woolly plantain (<i>Plantago patagonica</i>)	
snapdragon (<i>Antirrhinum coulterianum</i>)		Chinese houses (<i>Collinsia</i> spp.)	
Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Swallowtails	
California patch (<i>Chlosyne californica</i>)		pale swallowtail (<i>Papilio eurymedon</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		western tiger swallowtail (<i>P. rutulus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		anise swallowtail (<i>P. zelicaon</i>)	
chalcedon checkerspot (<i>E. chalcedona chalcedona</i>)		Hairstreaks	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Mylitta crescent (<i>Phyciodes mylitta</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Blues		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
western pygmy-blue (<i>Brephidium exila</i>)	2	gray hairstreak (<i>Strymon melinus pudica</i>)	
western tailed blue (<i>Everes amyntula</i>)		Ladies/Admirals	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	16	California sister (<i>Adelpha bredowii californica</i>)	
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		Lorquin's admiral (<i>Limenitis lorquini</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		west coast lady (<i>Vanessa annabella</i>)	5
marine blue (<i>Leptotes marina</i>)		red admiral (<i>V. atalanta rubria</i>)	
unidentified blue		painted lady (<i>V. cardui</i>)	55
Whites		American (Virginia) lady (<i>V. virginensis</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	9	unidentified lady (<i>Vanessa</i> sp.)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)	4	monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	2
checkered (common) white (<i>Pontia protodice</i>)	2	mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	7
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	25	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)		Comstock's fritillary (<i>Speyeria callippe comstocki</i>)	
sleepy orange (<i>Eurema nicippe</i>)		skipper sp.	
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur	1	Total of all Butterflies Observed:	128

Table 1: Flowering Plants/Potential Nectar Sources Observed

Scientific Name	Common Name
ANGIOSPERMS (EUDICOTS)	
APIACEAE	CARROT FAMILY
<i>Daucus pusillus</i>	rattlesnake weed
<i>Sanicula arguta</i>	sharp-toothed sanicle
ASTERACEAE	SUNFLOWER FAMILY
<i>Amblyopappus pusillus</i>	pineapple weed
<i>Bahiopsis laciniata</i>	San Diego County viguiera
<i>Encelia californica</i>	California bush sunflower
<i>Hedypnois cretica</i> *	crete hedypnois
<i>Sonchus oleraceus</i> *	common sow thistle
BORAGINACEAE	BORAGE FAMILY
<i>Amsinckia intermedia</i>	Rancher's fiddleneck
<i>Phacelia cicutaria</i>	caterpillar phacelia
<i>Pholistoma membranaceum</i>	white fiesta flower
<i>Plagiobothrys</i> sp.	popcornflower
BRASSICACEAE	MUSTARD FAMILY
<i>Brassica nigra</i> *	black mustard
<i>Hirschfeldia incana</i> *	shortpod mustard
<i>Lepidium nitidum</i>	shining peppergrass
<i>Raphanus sativus</i> *	radish
<i>Sisymbrium irio</i> *	London rocket
CONVOLVULACEAE	MORNING-GLORY FAMILY
<i>Calystegia macrostegia</i>	western bindweed
<i>Calystegia</i> sp.	bindweed
CUCURBITACEAE	GOURD FAMILY
<i>Marah macrocarpa</i>	wild cucumber
EUPHORBIACEAE	SPURGE FAMILY
<i>Chamaesyce</i> sp.	spurge
FABACEAE	LEGUME FAMILY
<i>Acmispon glaber</i>	deerweed
<i>Acmispon strigosus</i>	strigose lotus
<i>Lathyrus vestitus</i>	wild sweet pea
<i>Lupinus concinnus</i>	Bajada lupine
GERANIACEAE	GERANIUM FAMILY
<i>Erodium cicutarium</i> *	red-stemmed filaree
NYCTAGINACEAE	FOUR O'CLOCK FAMILY
<i>Mirabilis laevis</i>	wishbone bush
OROBANCHACEAE	BROOM-RAPE FAMILY
<i>Castilleja densiflora</i>	denseflower Indian paintbrush
<i>Castilleja exserta</i>	purple owl's-clover
PAPAVERACEAE	POPPY FAMILY
<i>Eschscholzia californica</i>	California poppy
PLANTAGINACEAE	PLANTAIN FAMILY

<i>Antirrhinum nuttallianum</i>	Nuttall's snapdragon
<i>Plantago erecta</i>	western plantain
POLEMONIACEAE	PHLOX FAMILY
<i>Gilia angelensis</i>	angel gilia
<i>Linanthus dianthiflorus</i>	ground-pink
POLYGONACEAE	BUCKWHEAT FAMILY
<i>Eriogonum fasciculatum</i> var. <i>fasciculatum</i>	coastal California buckwheat
RUBIACEAE	MADDER FAMILY
<i>Galium angustifolium</i>	narrow-leaved bedstraw
VIOLACEAE	VIOLET FAMILY
<i>Viola pedunculata</i>	johnny-jump-up
ANGIOSPERMS (MONOCOTS)	
ALLIACEAE	ONION FAMILY
<i>Allium haematochiton</i>	red-skinned onion
THEMIDACEAE	BRODIAEA FAMILY
<i>Dichelostemma capitatum</i> subsp. <i>capitatum</i>	blue dicks
*Non-Native Species, +Ornamental, Unlikely to be Invasive	

Notes (habitat quality, condition of host plants, etc.):

- High-quality habitat on hillsides in the northeastern portion of the project with high densities of host plant (*Plantago erecta*) cryptogammic crust, and a lot of nectar sources in bloom. Host plants healthy/lush. Non-native grassland dominates a large portion of the central area of the project site, making habitat quality for QCB much lower in that portion of the site.

2019 Quino Checkerspot Butterfly Survey Form

Surveyor: Laurie Gorman **Date:** 03-19-2019
Site Name: Proposed Otay Lakes Campground Project **Site Visit No:** 5
Other Surveyors Present: Kaelin McAtee and Clark Austin **QCB Observed?** Yes

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	1015	62	0-1	2
End	1520	74	0-2	5
Start	-	-	-	-
End	-	-	-	-

Host Plants	Obs.	Host Plants	Obs.
dwarf plantain (<i>Plantago erecta</i>)	X	birds-beak (<i>Cordylanthus rigidus</i>)	
purple owl's clover (<i>Castilleja exserta</i>)	X	woolly plantain (<i>Plantago patagonica</i>)	
snapdragon (<i>Antirrhinum coulterianum</i>)		Chinese houses (<i>Collinsia</i> spp.)	
Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Swallowtails	
California patch (<i>Chlosyne californica</i>)		pale swallowtail (<i>Papilio eurymedon</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		western tiger swallowtail (<i>P. rutulus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)	1	anise swallowtail (<i>P. zelicaon</i>)	
chalcedon checkerspot (<i>E. chalcedona chalcedona</i>)		Hairstreaks	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Mylitta crescent (<i>Phyciodes mylitta</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Blues		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
western tailed blue (<i>Everes amyntula</i>)		Ladies/Admirals	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	5	California sister (<i>Adelpha bredowii californica</i>)	
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		Lorquin's admiral (<i>Limenitis lorquini</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		west coast lady (<i>Vanessa annabella</i>)	2
marine blue (<i>Leptotes marina</i>)		red admiral (<i>V. atalanta rubria</i>)	
unidentified blue		painted lady (<i>V. cardui</i>)	12
Whites		American (Virginia) lady (<i>V. virginensis</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	8	unidentified lady (<i>Vanessa</i> sp.)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)	2	monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	10
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	30	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)		Comstock's fritillary (<i>Speyeria callippe comstocki</i>)	
sleepy orange (<i>Eurema nicippe</i>)		skipper sp.	
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur	1	Total of all Butterflies Observed:	71

Table 1: Flowering Plants/Potential Nectar Sources Observed

Scientific Name	Common Name
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RUBIACEAE	MADDER FAMILY
<i>Galium angustifolium</i>	narrow-leaved bedstraw
VIOLACEAE	VIOLET FAMILY
<i>Viola pedunculata</i>	johnny-jump-up
ANGIOSPERMS (MONOCOTS)	
ALLIACEAE	ONION FAMILY
<i>Allium haematochiton</i>	red-skinned onion
THEMIDACEAE	BRODIAEA FAMILY
<i>Dichelostemma capitatum</i> subsp. <i>capitatum</i>	blue dicks
*Non-Native Species, +Ornamental, Unlikely to be Invasive	

Notes (habitat quality, condition of host plants, etc.):

- High-quality habitat on hillsides in the northeastern portion of the project with high densities of host plant (*Plantago erecta*) cryptogammic crust, and a lot of nectar sources in bloom. Host plants healthy/lush. Non-native grassland dominates a large portion of the central area of the project site, making habitat quality for QCB much lower in that area of the site.

Quino Checkerspot Butterfly Observation

- Observer: Laurie Gorman (TE-233367-3), with Clark Austin and Kaelin McAtee as supervised observers
- Date: 3/19/2019
- Time: 1220
- Weather Conditions: 74°, 0-2 mph wind, clear skies
- GPS Location of Observation (same general host plant location as the individual observed on March 14 and 15, 2019)
 - UTM (NAD83): 11S 3607725 mN, 3607724 mE
 - Decimal Degrees: 32.60701820, -116.92772346
- Observation Details: Single adult (sex not determined) observed flushing from large, dense patch of *Plantago erecta*, then flying frequently between patches of nectar sources. The individual was energetic and difficult to track through the habitat for a long period. Different individual from the one observed on March 14 and 15, 2019 (based on comparison of photographs).
- Host Plant Patch Details: Dense *Plantago erecta* patch on west-facing slope, with scattered nectar sources primarily *Linanthus dianthiflorus* and *Dichelostemma capitatum*, bordered by non-native grassland and a patch of *Eriogonum fasciculatum*.

APPENDIX C – PHASE I CULTURAL RESOURCES REPORT



**PHASE 1 CULTURAL RESOURCES REPORT FOR
THE OTAY LAKES CAMPGROUND PROJECT
SAN DIEGO COUNTY, CALIFORNIA**

Project Common Name: BSOA Otay Lakes Campground

Prepared for:

Lead Agency:

County of San Diego Planning and Development Services
Contact: Donna Beddow
55190 Overland Avenue
San Diego, CA 92123
(858) 495-5375

Prepared by:

CHAMBERS GROUP, INC.

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Santa Ana, California 92707
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Project Proponent:

San Diego-Imperial Council of The Boy Scouts of America
1207 Upas St,
San Diego, CA 92103

September 5, 2019

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NATIONAL ARCHAEOLOGICAL DATABASE INFORMATION

Authors: Kyle Knabb and Ted Roberts

Firm: Chambers Group, Inc.

Client/Project Proponent: San Diego-Imperial Council of the Boy Scouts of America

Report Date: March 2019

Report Title: Phase 1 Cultural Resources Report for the Otay Lakes Campground Project, San Diego County, California

Type of Study: Cultural Resources Survey

New Sites: 21134-1, 21134-2, 21134-3, 21134-5

Updated Sites: CA-SDI-10668, CA-SDI-10862, P-37-34105

USGS Quad: Otay Mesa 7.5-minute quadrangle

Acreage: 69.02

Permit Numbers: N/A

Key Words: San Diego County, Otay Mesa, Positive Survey, Southern California, Historical, Prehistoric

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(Confidential Provided Separately)**

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Management Summary

This report documents a California Environmental Quality Act (CEQA) archaeological survey for a 69.02-acre parcel in San Diego County, California. The project proposes to construct a campground and associated recreational facilities in Otay Lakes County Park.

Chambers Group, Inc. provided this Phase I Cultural Resource Assessment (CRA) pursuant to CEQA Guidelines with respect to the identification and preservation of cultural resources.

Chambers Group requested a records searches at the South Coastal Information Center (SCIC), the cultural resource information center for San Diego County. The SCIC is a part of the Statewide California Historic Resource Information System (CHRIS). Information obtained from the records searches indicates that prehistoric or historic period archaeological sites have been recorded within the project boundaries.

Chambers Group requested the Native American Heritage Commission (NAHC) check their *Sacred Lands Files* for any cultural resources on or near the project area. The search was negative for resources; however, the NAHC provided a list of tribes affiliated with the overall project area. As lead agency, County of San Diego will be conducting consultation efforts under Assembly Bill 52 (AB52) with the tribes indicated in the NAHC letter (Appendix B).

Chambers Group archaeologists Kyle Knabb and Ted Roberts surveyed the project area on February 4, 2019. One of the three previously recorded resources (CA-SDI-10862) was encountered during the survey, and four new resources (21134-1, 21134-2, 21134-3, and 21134-5) were recorded. Newly recorded sites include one prehistoric quarry, an historic trash scatter, an historic water tower, and an historic isolate. CA-SDI-10862 consisted of an historic homestead that was excavated in 1987 and identified as anthropologically significant. After review of available documentation and in-field assessment during the current survey, Chambers Group archaeologists concur with this significance recommendation and recommend eligibility for the California Register of Historic Resources (CRHR). Sites (CA-SDI-10862, 21134-1, 21134-2, 21134-3, and 21134-5) identified during the current efforts were recommended not eligible under CEQA/CRHR.

SECTION 1.0 – INTRODUCTON

1.1 PROJECT DESCRIPTION

The County of San Diego (County), as the lead agency under the California Environmental Quality Act (CEQA), has prepared an initial study (IS), which this technical report supports, to evaluate the potential environmental impacts associated with the Otay Lakes Campground Project (Proposed Project). The Proposed Project includes the development of new camping facilities, a flag plaza, archery range, fire ring and amphitheater, zip-line, demolition of existing restroom and construction of a new and larger restroom facility with showers overlapping the existing restroom footprint, development of an activity/program area ('Camporee Field'), construction of a fenced storage facility, development of six Challenging Outdoor Personal Experience (COPE) stations, and minor road improvements on County property adjacent to Otay Lakes County Park (Figure 2).

The cultural resources survey was conducted in accordance with the California Environmental Quality Act (CEQA) County of San Diego Guidelines for Determining Significance (County of San Diego 2007a) and Report Format and Content Guidelines (County of San Diego 2007b), the RPO, Public Resources Code Section 21083.2, and the County of San Diego CEQA Guidelines. The County of San Diego will serve as lead agency for the purposes of CEQA.

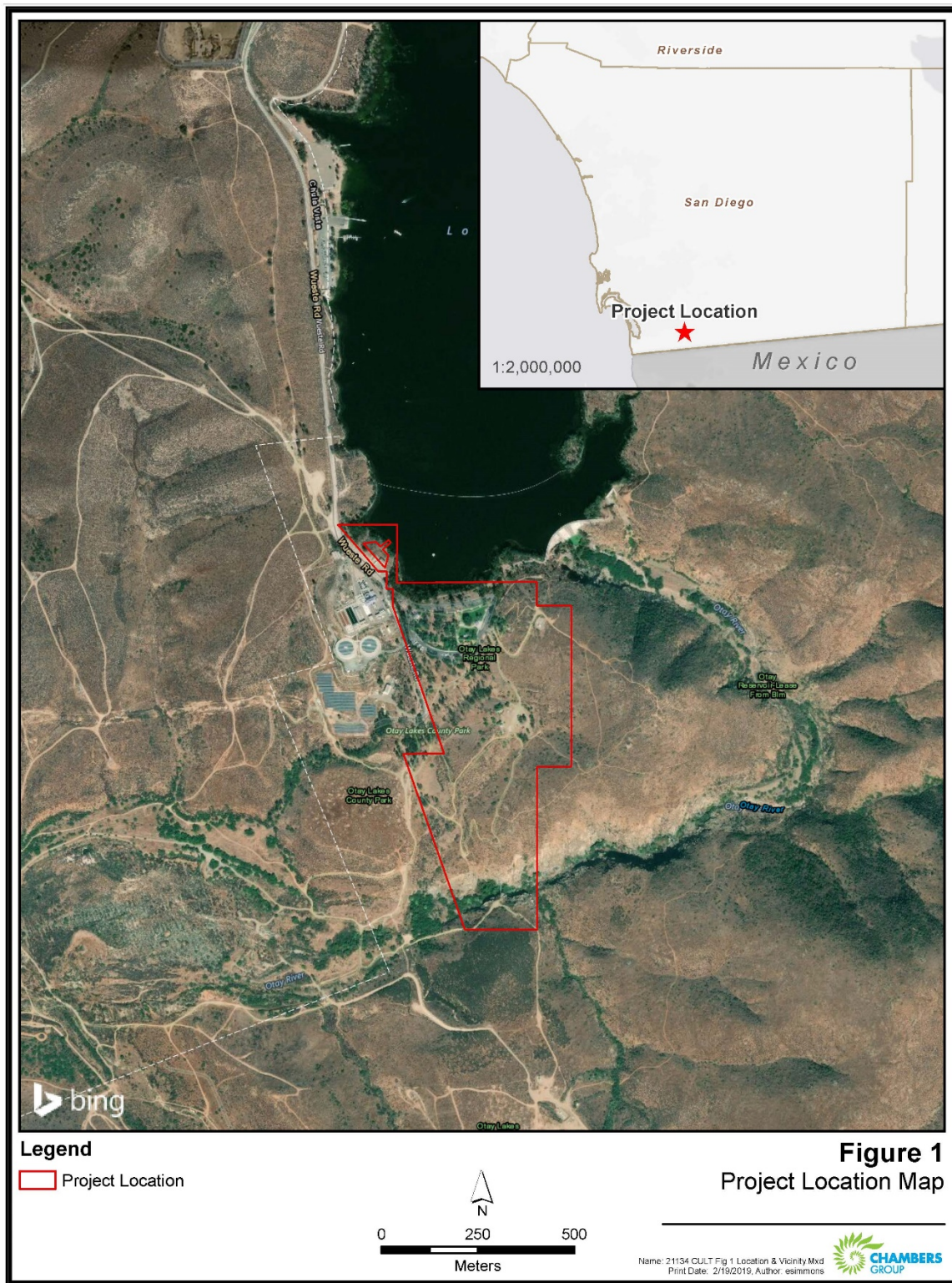


Figure 1: Project Location and Vicinity

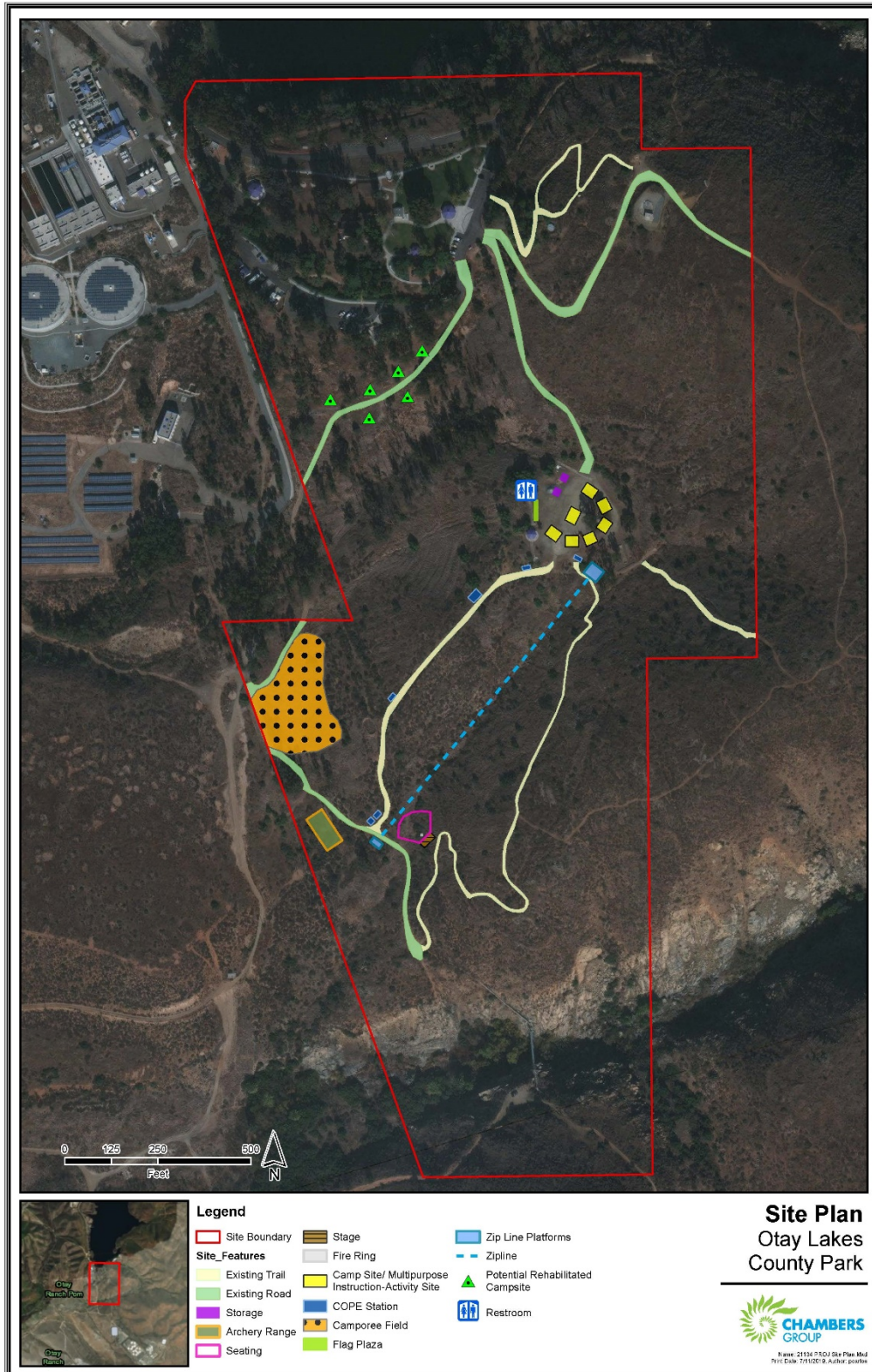


Figure 2: Otay Lakes proposed Site Plan

1.2 EXISTING CONDITIONS

1.2.1 Environmental Setting

The project area is located approximately four miles north of the US-Mexico International Border in southwestern San Diego County on the northwest flanks of the San Ysidro Mountains. The project area lies within the Cismontane chaparral biotic community at an elevation of 500 – 700 ft amsl. The project area lies within the Otay River System which contains several canyons and drainage courses. The project area includes a ridgeline extending along the eastern portion with rolling hills extending westward. Otay Lakes County Park is situated within a small valley west of the hills. The Otay Lakes Reservoir is located north of and adjacent to the project area. The Otay Mesa River flows out of the reservoir approximately 500-meters northeast of the northeast corner of the project boundary, and then turns west-southwest as it passes through the southern portion of the project area. The Otay Open Space Preserve is located east of the project area. The Otay Water Treatment Plant is located adjacent and to the west of the project area. Beyond that and to the west the landscape is largely undeveloped with few disturbances, notably by non-native grasses and access roads. The area is characterized by several small canyons extending from the ridgeline into the park, as well as a large canyon through which the Otay Mesa River flows. The slopes extending down into the canyon are quite steep and not conducive to overland travel.

Vegetation within the project area includes coastal and inland sage scrub, chaparral, and grassland communities. Numerous eucalyptus trees have been planted in the northwest portion of the property, mixing with additional native and non-native trees. Due to the unusually rainy season, the current study was hindered by low ground visibility as a result of heavy vegetation with grasses and shrubs that obscured the ground surface.

Cultural and Historical Setting

The historical setting of southern California provides context for the evaluation and management of historic resources. The regional chronology developed for southern California includes three prehistoric periods and three historic periods.

The prehistoric past of southern California has a long and rich history, with occupations extending from at least 12,000-years ago to the Ethnohistoric period. Numerous chronological sequences have been devised to understand cultural changes for various areas within southern California over the past 75 years or more (Moretto 1984). The following framework is therefore divided into three major periods: Paleoindian, Archaic, and Late Prehistoric.

Paleoindian Period (9500-6500 B.C.)

Archaeological evidence from coastal and inland archaeological sites from this period suggests that the Paleoindian economy was a diverse mixture of hunting and gathering, with a major emphasis on aquatic resources in many coastal areas and on Pleistocene lakeshores in eastern San Diego County (see Moratto 1984:90–92).

Many of the archaeological sites from this period share certain characteristics. As defined by Moratto (1984:93), these characteristics are:

- A tendency to be located on or near the shores of former pluvial lakes and marshes or along old stream channels;
- Dependence on hunting various animals, fowling, collecting, and gathering vegetal products;
- An absence of ground stone artifacts such as milling stones, hence a presumed lack of hard seeds in the diet; and
- A developed flaked stone tool industry marked especially by percussion flaked foliate (leaf-shaped) knives or points, Silver Lake and Lake Mojave points, lanceolate bifaces, and points similar to the long-stemmed variety.

The Paleoindian tool kit commonly included chipped stone crescents, large flake and core scrapers, choppers, scraper planes, and hammerstones, several types of cores, drills, graters, and diverse flakes.

Subsistence patterns shifted around 6000 B.C., coincident with the gradual desiccation associated with the onset of the Altithermal, a warm and dry period that lasted for about 3,000 years. As the climate changed, a greater emphasis was placed on plant foods and animal harvesting.

Archaic Period (6500 B.C.-A.D. 700/1200)

The Archaic period extended from approximately 6500 B.C. to A.D. 700/1200 (Moratto 1984). Archaeological characteristics from this period are:

- The presence of shell midden sites near the coast;
- Seed grinding implements (metates with deep basins and handheld milling stones), Pinto-style projectile points, flaked cobble tools, scrapers, and discoids; and
- Burials which tend to be flexed, with the head northward, and beneath cairns that frequently contained many broken tools.

Occupation along the San Diego coastline during the Archaic period varied depending upon the availability of marine and terrestrial resources. By about 3,000 years ago, many of the coastal sites in central San Diego County were abandoned (Gallegos 1987). This abandonment is usually attributed to the sedimentation of coastal lagoons and the resulting deterioration of fish and mollusk habitats, as documented at Batiquitos Lagoon (Gallegos 1987; Miller 1966). Along the northern and southern San Diego coastline where larger drainages remained open to the ocean, human exploitation of marine resources apparently continued without interruption (Byrd et al. 2004). San Diego Bay also shows continuous occupation until the close of the Archaic period. Compared to the preceding Paleoindian period, subsistence practices during the Archaic were more diversified and focused on gathering activities as evidenced by the myriad groundstone tools recovered from sites dating to this period. As such, archaeologists believe a greater emphasis was placed on the exploitation of plant resources, fish, and shellfish during the Archaic period.

Late Prehistoric Period (A.D. 700/1200-1769)

The Late Prehistoric Period extended from approximately A.D. 700/1200 to A.D. 1769 (Moratto 1984). Archaeological characteristics from this period are:

- An increase in the use of plant food resources in conjunction with land and marine mammal hunting;
- Small, finely flaked projectile points, usually stemless with convex or concave bases;

- An increased utilization of the bow and arrow rather than the atlatl and dart for hunting;
- The introduction of mortar and pestle;
- An increase in population size accompanied by the advent of larger, more permanent villages with numbers of inhabitants; and
- Pottery and the introduction of cremation in the archaeological record, traits diagnostic of the Late Prehistoric Period in the San Diego region.

The Late Prehistoric Period was a time of complex and ongoing change in material culture, burial practices, and subsistence focus. These changes most likely reflect a response to shifts in environmental and social conditions, as well as influences from outside the area. Such influences include the major migration into the greater project region of Takic-speaking people (Uto-Aztecan language group) from inland desert regions to the east, previously referred to as the “Shoshonean wedge” (Warren 1968). This migration apparently extended over at least several centuries.

Historic Overview

The historical context below provides a brief overview of the regional history of San Diego county and the Project area. It has been divided into time periods based on significant historical periods. These include the Spanish Period (1769–1822), the Mexican Period (1822–1848), and the American Period (1848–present). The section concludes with an examination of the history of the project area.

Spanish Period (1769-1822)

The first significant European settlement of California began during the Mission Period (1769 to 1822) with the founding of the first mission in San Diego and lasted until 1833-1834 when the Mexican secularization laws effectively opened the area to social and economic growth. The establishment of San Gabriel and San Juan Capistrano missions in 1771 and 1776, respectively, had several impacts on the region, resulting in the abandonment of some areas and the agricultural and ranching development of other portions. The mission system was dismantled after Mexican governors introduced new secularization acts between 1822 and 1833, thus freeing the Indians from mission control.

Mexican Period (1822-1848)

After secularization, the dominance of the large land grant ranchos became established. In 1810, the Spanish government granted the first rancho to Jose Antonio Yorba and his nephew Juan Pablo Peralta. The Mexican government granted ranchos throughout California to Spanish and Hispanic soldiers and settlers (Castillo 1978). During this period, the entire area was almost constantly involved in political and military revolts. The tense situation ended in 1847 when California gained independence from Mexico during the “Bear Flag” revolt. One year later, the United States gained control of the area as a result of the Mexican-American War.

American Period (1848-Present)

Although California had been under the control of the United States since 1847, the American Period did not really begin in the study area until 1851, when the Land Act required rancho dons to confirm the ownership of their lands. Many rancho dons lacked funds and legal documents to confirm land ownership. Along with legal problems related to the Land Act and new taxes imposed by the United States, many second-generation dons experienced a disastrous two-year drought (McWilliams 1973:62). The

combination of these hardships resulted in many rancho families losing their lands. A steady influx of Euro-Americans was brought in by the railroads. Euro-Americans expanded commercial and land development primarily in farming and dairy endeavors. In the twentieth century, independent businesses began to dominate the economic strategy, much as they do today.

Historical Overview of Otay Mesa

Significant historic themes in Otay Mesa's history include agriculture and aviation uses (City of San Diego 2008). The area was settled in the late 19th Century and was originally a rural farming community of San Diego County. Though the availability of water was limited, residents practiced dry farming for most of the early 20th Century. The landscape of Otay Mesa was dotted with farms and barns as the primary land use was agricultural. The small community was typical of other rural farming communities in the county. The center of the community became the Alta School and St. John's Lutheran Church. After the Great Depression of the 1930s, Otay Mesa experienced a period of decline. While several families continued to farm on Otay Mesa, the Army and Navy began to use a large part of the mesa as training grounds for pilots. Originally known as East Field, this base was renamed Brown Field and ultimately transferred to the Navy. The Navy used Brown Field for training throughout World War II and again during the Korean War. In 1956 Otay Mesa was annexed to the City of San Diego and shortly thereafter, in 1961, Brown Field was acquired by the City. The conversion of Brown Field to a general aviation airport brought various small businesses, flying schools, and aircraft maintenance shops to the facility. In addition, after the Otay Mesa border crossing opened, the City rezoned much of Otay Mesa to commercial-industrial uses. With this rezoning, manufacturers moved to the area causing an increase in the number of warehouses and business parks located on Otay Mesa, resulting in the built environment visible today.

Previously identified historical resources on Otay Mesa include the Auxiliary Naval Air Station Brown Field Historic District. This historic district was designated by the City's Historical Resource Board (HRB) as Site #405-408. Other previously identified historical sites on Otay Mesa include Site #409 (Building Facility 2004 at Brown Field), HRB Site #410 (Building Facility 2044), and HRB Site #411 (Auxiliary Naval Air Station Brown Field Historic District).

1.2.2 Record Search Results

A records search dated November 13, 2018, was obtained from the South Coastal Information Center (SCIC) at San Diego State University (Appendix A), providing information on all documented cultural resources and previous archaeological investigations within 0.5-miles of the project area. Resources consulted during the records search conducted by the SCIC included the National Register of Historic Places (NRHP), California Historical Landmarks, California Points of Historical Interest, and the California State Historic Resources Inventory. Results of the records search and additional research are detailed below.

Previous Studies

Based upon the records search conducted by the SCIC, 73 cultural resource projects have previously been completed within the 0.5-mile records search radius. Thirteen of these studies partially overlapped with the current project area (Table 1).

Table 1: Previous Cultural Resource Studies within the Study Area

Report Number	Year	Author	Title	Relation to APE
SD-00122	1980	Banks, Thomas J.	An Archaeological Survey of the Otay Ranch Proposed Barrow Pit Locations San Diego County.	Intersects
SD-00132	1980	Archaeological Planning Collaborative	An Archaeological Records Search and Field Survey of the Janal Ranch Property, San Diego County.	Outside
SD-00399	1985	Bull, Charles S.	Archaeological Survey of the California Structures Property on Otay Mesa (RECON Number R-1525)	Outside
SD-00588	1988	Cheever, Dayle M. and Dennis Gallegos	Cultural Resource Inventory for Hidden Trails; Otay Mesa, San Diego, CA	Outside
SD-00673	1988	Gallegos, Dennis, Carolyn Kyle, Richard Carrico, and Roxana Phillips	Cultural Resource Survey and Testing Program for the East Mesa Detention Facility San Diego, California.	Outside
SD-00847	1990	Kyle, Carolyn and Dennis Gallegos	Cultural Resource Survey for the Lower Otay Lake Boat Launching Facility, San Diego, California (DEP. No. 90-0269)	Outside
SD-00850	1988	Kyle, Carolyn, Dennis Gallegos, and Roxana Phillips	Cultural Resource Survey and Testing Program for the East Mesa Detention Facility, San Diego, California	Outside
SD-01178	1986	Hector, Susan	Archaeological Study on the Otay Valley Property.	Outside
SD-01179	1987	Hector, Susan	Archaeological Survey for the Gateway Fan EIR Project.	Outside
SD-01619	1979	WESTEC Services, Inc.	Proponents Environmental Assessment Miguel to Tijuana Interconnection Project 230 KV Transmission Line	Intersects
SD-01758	1981	McCorkle Apple, Rebecca	Archaeological Survey Reports for a Proposed Realignment Project at 11-SD-94 P.M. 29.9-30.3 11359-193361	Outside
SD-01793	1989	Schaefer, Jerry	The Lower Otay Filtration Plant (CA-SDi-11,355H)- An Historical Survey and Assessment	Outside
SD-01858	1987	Hector, Susan	Archaeological Survey of Siempe Viva Industrial Park	Outside
SD-01861	1982	Hector, Susan and Stephen Van Wormer	Results of an Archaeological Test Program Conducted at SDi-10862 Lower Otay County Park County of San Diego	Intersects

Report Number	Year	Author	Title	Relation to APE
SD-02690	1993	Carrico, Richard	Final Cultural Resources Evaluation of the 23,088 Acre Otay Ranch, San Diego County	Outside
SD-02945	1994	Kyle, Carolyn, E. And Dennis R. Gallegos	Cultural Resource Survey and Test of Five Sites for the Otay Water District Central Area And Otay Mesa Interconnection Pipeline Alignments	Intersects
SD-03156	1996	Smith, Brian F.	Results of an Archaeological Survey at the Otay Valley Parcel of the Otay Ranch	Intersects
SD-03266	1996	Gross, Timothy, Ruth Alter, And Mary Robbins-Wade	Archaeological Survey For The Joint Task Force-Six Border Road Repair Project, Otay Mountain, California	Outside
SD-03823	2000	Kyle, Carolyn	Cultural Resource Constraint Study For The Otay Water Treatment Plant Improvements City Of San Diego, California	Intersects
SD-04134	2000	Kyle, Carolyn E.	Cultural Resource Survey For The Otay Water Treatment Plant Upgrade, City Of San Diego, Ca.	Intersects
SD-04163	1999	Gallegos, Dennis R. And Nina Harris	Cultural Resource Literature Review For The Rural Highway 94 Corridor Border Road San Diego, County, Ca.	Outside
SD-04260	1991	Brian F. Mooney Associates	Cultural Resource Survey For San Diego County Water Authority Pipeline 4eii	Intersects
SD-04557	1998	U.S. Army Corps Of Engineers	Draft Environmental Assessment For Construction Of Barrier Systems Along A 1.6 Mile Corridor Of The United States/ Mexico International Boundary (Spring Canyon) In San Diego, Ca	Outside
SD-04651	1987	Westec	East Mesa County Detention Facility Draft Environmental Impact Report	Outside
SD-04653	1988	Westec	East Mesa Detention Facility Supplemental Environmental Impact Report Draft	Outside
SD-04657	1992	Ogden Environmental And Energy Services Co., Inc.	Draft Program Environmental Impact Report. Otay Ranch	Outside
SD-04770	2000	City Of San Diego	Final Environmental Impact Report For The San Diego Air Commerce Center At Brown Field Airport Mater Plan	Outside
SD-04815	1995	Caltrans	Preliminary Finding Of Effect - State Route 125 - South	Outside

Report Number	Year	Author	Title	Relation to APE
SD-04853	1983	Cultural Systems Research, Inc.	Volume I Cultural Resource Data Recovery Program Of The Proposed Miguel-Tijuana 230 KV International Interconnection Project San Diego, Co.	Outside
SD-04924	1999	City of San Diego	San Diego Air Commerce Center at Brown Field Airport Master Plan Environmental Impact Report/ Environmental Assessment	Outside
SD-04929	1994	Herbert, Rano	Historic Architectural Survey Report - State route 125	Outside
SD-05032	1983	County of San Diego	Archaeological Assessment of Bureau of Land Management Jamul Site Number 3	Outside
SD-05144	2000	Kyle, Carolyn	Cultural Resource Survey for the Otay Water Treatment Plant Upgrade city of San Diego, California	Intersects
SD-05379	1988	Gallegos, Dennis And Andrew Pignolo	Cultural Resource Inventory Number 2 For Twenty-Seven Drill Sites Within The Amir Indian Rose Area Lease	Outside
SD-05408	2001	Raap, Allison	Draft Mitigated Negative Declaration Otay Water Treatment Plant Upgrade	Intersects
SD-05523	2001	Ponseggi, Marilyn	Draft Supplemental EIR-General Plan Amendment & Otay Ranch General Development Amendment 2001	Outside
SD-05540	2001	Ponseggi, Marilyn	Draft EIR-Otay Ranch Village Six Sectional Planning Area Plan & Conceptual	Outside
SD-05692	1993	CITY OF SAN DIEGO	DEIR Pinery Practice Golf Range	Outside
SD-05749	1996	CITY OF SAN DIEGO	DEIR for Otay Mesa Road Widening	Outside
SD-05875	1982	Day, Sandra And Richard Carrico	Archaeological Survey Of The U.S. Border Patrol Station Alternative Brown Field Site, San Diego	Outside
SD-05877	1981	Clark, Niki R.	Phase I Archaeological Field Survey Results For 230 KV International Interconnection Transmission Line From Miguel Substation To Tijuana, Mexico By San Diego Gas And Electric	Outside
SD-06001	1998	City Of San Diego	Deir For South San Diego Water Pipeline No.2	Outside
SD-06155	1997	Us Army Corps Of Engineers	Revised Environmental Assessment For The Immigration & Naturalization Service Multi-Tiered Pilot Fence Project (Phases IA & II) San Diego County, California	Outside

Report Number	Year	Author	Title	Relation to APE
SD-06244	1998	Doolittle, Christopher J., David Ferraro, And Ayse Taskiran	Archaeological Test Excavations And National Register Evaluation For Ca-Sdi-12259 (Ibwc-4), San Diego County, California	Outside
SD-06281	1999	Abeyta, Daniel	Proposed State Route 905 (File# 11-Sd-905, P.M. 5.2/12.0) San Diego County, California	Outside
SD-06323	1997	Gallegos, Dennis	Cultural Resource Letter Report for the Watson Residence	Outside
SD-06616	1996	City Of San Diego	Deir For Land Development Code	Outside
SD-06805	1987	Berry, Stanley	Archaeological Overview and Planning Document for the Proposed Rancho Otay Project	Outside
SD-06891	1997	Huey, Danielle M.	Ins Border Patrol Facility Construction, San Diego County	Outside
SD-06980	1998	Dept. Of Parks And Recreation And Daniel Abeyta	Brown Field Airport Master Plan, Otay Mesa, San Diego County	Outside
SD-07093	1999	Abeyta, Daniel	Brown Field Airport Master Plan, Otay Mesa, San Diego County	Outside
SD-07390	1998	Gallegos, Dennis R., Carolyn Kyle, Adella Schroth, And Patricia Mitchell	Management Plan For Otay Mesa Prehistoric Resources San Diego, California	Outside
SD-07435	1978	Fink, Gary And Janet Hightower	Archaeological Resources, Jamul-Dulzura Sub regional Area	Outside
SD-07772	2000	Brian F. Smith	Results of An Archaeological Evaluation Of Cultural Resources Within He Proposed Corridor For The Salt Creek Sewer Project	Outside
SD-08006	1982	Vane, Sylvia Brakke	Cultural Resource Identification and National Register Assessment Program of the Proposed Miguel-Tijuana 230KV International Interconnection Project Volumes I and II, Cultural Resource Report	Outside
SD-08068	2000	Gallegos, Dennis R. And Jeffery Flenniken	Cultural Resources Test Results For The Otay Mesa Generating Project	Outside
SD-08167	2003	City Of San Diego	Notice Of Preparation Of A Draft Environmental Impact Report Otay Second Pipeline Improvement Program	Outside

Report Number	Year	Author	Title	Relation to APE
SD-08688	2002	Vargas, Victoria	Cultural Resource Survey Tecate Truck Trail Nad Puebla Tree Road San Diego County, California	Outside
SD-09398	2002	Cook, John R., Ni Ghabhlain, Sinead, And Alice Brewster	Cultural Resource Analysis Of The Metropolitan Canyon Sewer Programs, San Diego, California	Outside
SD-09658	2005	Kyle, Carolyn	Cultural Resource Monitoring for the Otay Water Treatment Plant Upgrade Project City of San Diego, California	Outside
SD-10251	2006	Bonner, Wayne H. And Sarah A. Williams	Cultural Resource Records Search And Site Visit Results Search And Site Visit Results For Spirit Nextel Telecommunications Facility Candidate Ca7456a (Johnson Canyon), 2270 Wueste Road, Chula Vista, San Diego County, California	Intersects
SD-11227	2007	Keppinger, Ravenjoy O.	Food, Medicine, Or Both? Native American Ethnobotany In San Diego County	Outside
SD-12320	2002	Russell, Glenn And Donna Beddow	Supplement To The East Otay Mesa Cultural Resources Technical Report Update	Outside
SD-12630	1954	Meighan, Clement	A Late Complex In Southern California Prehistory	Outside
SD-12631		Various	Miscellaneous Papers On The Southern California Milling Stone Horizon	Outside
SD-12632		Various	Miscellaneous Papers On The San Dieguito Complex	Outside
SD-12633	1968	Irwin-Williams, C., Ed.	Early Man In Western North America	Outside
SD-12648	1966	Moriarty, James	Culture Phase Divisions Suggested By Typological Change Coordinated With Stratigraphically Controlled Radiocarbon Dating At San Diego	Outside
SD-13626	2011	Morgan, Nichole B.	TCM Access Road Grading Project, Cultural Resources Inventory Report	Outside
SD-13650	2010	Clowery, Sara C. And Nicole Blotner	eTS #8360; TI 6910 Wood To Steel, Miguel To Border Substations, Cultural Resources Inventory Report	Outside
SD-14503	2013	Glenny, Wayne	Revised Letter Report: eTS 22168- Cultural Resources Monitoring For Miguel To Salt Creek Transmission Line 6965 Geotechnical Boring And Gas And Water Potholing, Chula Vista Eastlake Area, San Diego County, California	Outside

Report Number	Year	Author	Title	Relation to APE
SD-15229	2013	Tennesen, Kristin	eTS #24738.03, Cultural Resources Monitoring For The Intrusive Pole Inspections, Metro District, Sub-Areas Bord, Snys, Impe, Otay, Sbay, Hilt, Mont, Ssde, Linc Project, San Diego County, California (Hdr #207357)	Intersects
SD-17413	2018	Tennesen, Kristin	Ets #35718, Cultural Resources Monitoring For The Rfs Valves, Install Caps, Hp Removal, Otay Project, San Diego County, California	Intersects

1.2.3 Previously Recorded Sites Adjacent to the Study Area

Based upon the records search conducted by the SCIC, 62 previously recorded cultural resources were recorded within the 0.5-mile records search radius (Table 2). Three are located within the project area: CA-SDI-010668, CA-SDI-010862, and P-37-034105. Sites located within or intersecting the project boundary are discussed below, as well as in Section 4.2.

Table 2: Cultural Resources with the Study Area

Primary Number	Trinomial	Relation to APE	Site Description	Report Reference
P-37-004734	CA-SDI-004734	Outside	Prehistoric lithic scatter	SD-01493, SD-01619
P-37-004735	CA-SDI-004735	Outside	Prehistoric lithic scatter	SD-01493, SD-01619
P-37-004736	CA-SDI-004736	Outside	Prehistoric site – Open air	SD-01493, SD-01619
P-37-004737	CA-SDI-004737	Outside	Prehistoric lithic scatter, historic trash scatter	SD-01493, SD-01619, SD-02945
P-37-004989	CA-SDI-004989	Outside	Prehistoric lithic scatter	SD-01493, SD-13650
P-37-007212	CA-SDI-007212	Outside	Prehistoric habitation debris	SD-01493, SD-05379, SD-05877, SD-08068, SD-13650
P-37-008649	CA-SDI-008649	Outside	Prehistoric lithic scatter	SD-01493, SD-05877, SD-13650
P-37-010666	CA-SDI-010666	Outside	Prehistoric quarry and lithic scatter	SD-00673, SD-00850, SD-04653, SD-07379
P-37-010667	CA-SDI-010667	Outside	Prehistoric lithic scatter	SD-00673, SD-00850, SD-04653
P-37-010668	CA-SDI-010668	Intersects	Prehistoric lithic scatter, historic trash scatter	SD-00673, SD-00850, SD-04653, SD-13650, SD-14642, SD-16988
P-37-010862	CA-SDI-010862	Inside	Historic trash scatter, structural pads, reservoir	SD-01861, SD-02945, SD-04653
P-37-010874	CA-SDI-010874	Outside	Prehistoric lithic scatter	SD-00673, SD-00850

Primary Number	Trinomial	Relation to APE	Site Description	Report Reference
P-37-010875	CA-SDI-010875	Outside	Prehistoric lithic scatter	SD-00673, SD-00850, SD-01493, SD-13626, SD-13636, SD-14334, SD-14505
P-37-011335	CA-SDI-011335	Outside	Historic building – Lower Otay Lakes Filtration Plant	SD-01793, SD-05144, SD-09657, SD-09658
P-37-011360	CA-SDI-011360	Outside	Historic building remains, prehistoric lithic scatter	None
P-37-011370	CA-SDI-011370	Outside	Historic trash scatter	None
P-37-011371	CA-SDI-011371	Outside	Historic metal scatter	SD-05144, SD-09658
P-37-011380	CA-SDI-011380	Outside	Prehistoric lithic scatter	SD-02945, SD-04134, SD-05144, SD-09658
P-37-011381	CA-SDI-011381	Outside	Prehistoric lithic scatter	None
P-37-011382	CA-SDI-011382	Outside	Historic trash scatter	SD-05144, SD-09658
P-37-012876	CA-SDI-012876	Outside	Prehistoric lithic scatter, shell scatter	SD-02945, SD-13650
P-37-012936	CA-SDI-012936	Outside	Prehistoric lithic scatter	None
P-37-013453	CA-SDI-013453	Outside	Prehistoric lithic scatter	SD-02945
P-37-013455	CA-SDI-013455	Outside	Prehistoric lithic scatter, historic isolate	SD-02945
P-37-013456	CA-SDI-013456	Outside	Prehistoric lithic scatter	SD-02945
P-37-013457	CA-SDI-013457	Outside	Prehistoric lithic scatter	SD-02945
P-37-013458	CA-SDI-013458	Outside	Prehistoric lithic scatter	SD-02945
P-37-013459	CA-SDI-013459	Outside	Historic trash scatter	SD-02945
P-37-013460	CA-SDI-013460	Outside	Historic trash scatter	SD-02945
P-37-013461	CA-SDI-013461	Outside	Prehistoric lithic scatter	SD-02945
P-37-014535		Outside	Prehistoric isolate	None
P-37-014538		Outside	Prehistoric isolate	None
P-37-014579	CA-SDI-014212	Outside	Prehistoric lithic scatter	SD-03156
P-37-014580	CA-SDI-014213	Outside	Prehistoric lithic scatter	SD-03156
P-37-014581	CA-SDI-014214	Outside	Prehistoric lithic scatter	SD-03156

Primary Number	Trinomial	Relation to APE	Site Description	Report Reference
P-37-014595	CA-SDI-014228	Outside	Prehistoric lithic scatter	SD-03156
P-37-015200		Outside	Prehistoric isolate	None
P-37-015376		Outside	Prehistoric isolate	None
P-37-015378		Outside	Prehistoric isolate	None
P-37-015380		Outside	Prehistoric isolate	None
P-37-015381		Outside	Prehistoric isolate	None
P-37-015382		Outside	Prehistoric isolate	None
P-37-015383		Outside	Prehistoric isolate	None
P-37-015384		Outside	Prehistoric isolate	None
P-37-015385		Outside	Prehistoric isolate	None
P-37-015386		Outside	Prehistoric isolate	None
P-37-015387		Outside	Prehistoric isolate	None
P-37-015388		Outside	Prehistoric isolate	None
P-37-015391		Outside	Prehistoric isolate	None
P-37-019182		Outside	Prehistoric isolate	2001 (Kyle Consulting)
P-37-031366	CA-SDI-020163	Outside	Prehistoric isolate	2010 (HDR e2M)
P-37-031367		Outside	Prehistoric isolate	2010 (HDR e2M)
P-37-031741		Outside	Prehistoric lithic scatter	2010 (Brian F. Smith & Associates)
P-37-031742		Outside	Prehistoric lithic scatter	2010 (Brian F. Smith & Associates)
P-37-033130		Outside	Prehistoric isolate	2013 (Affinis)
P-37-034105	CA-SDI-021853	Inside	Prehistoric isolate	None
P-37-034106		Outside	Prehistoric isolate	None
P-37-035765		Outside	Prehistoric lithic scatter	None
P-37-035766		Outside	Prehistoric isolate	None

Primary Number	Trinomial	Relation to APE	Site Description	Report Reference
P-37-035767		Outside	Prehistoric isolate	None
P-37-035768		Outside	Prehistoric isolate	None
P-37-035769		Outside	Prehistoric isolate	None

CA-SDI-10668

This site was originally recorded in 1979 by Thesken. Only a small portion was previously recorded within the project area. The resource was originally defined as isolated flakes along a flat ridgetop within the O’Neal Canyon system overlooking the Otay River (south of the current project area). The site record was updated in 1986 by Westec to encompass a larger area, including six loci consisting of three quarries, a lithic scatter, a c. 1930s era historic site with a cistern, glass and shell fragments, and a concrete trough with a metal spigot. All additional features were recorded outside of the proposed project area. The site has been updated many times since then, as recently as 2016 by AECOM. The site boundaries and features identified were expanded to include a small portion of the current project area. Much of the site was impacted and destroyed by the construction of the detention facility.

CA-SDI-10862

This site was originally recorded in 1987 by Hector and Van Wormer (1987a) and is located entirely within the project area. The site as originally recorded consisted of four structural pads, one reservoir, and two historic trash dumps spaced approximately 150 meters apart. Artifacts included Chinese Brownware, square and round nails, bottle glass, metal can fragments, and shoe fragments, with dates ranging from the late 19th century to the 1930s. Archaeological testing at the site resulted in the collection of approximately 8.9-kg of artifacts which are curated at the County of San Diego Storage Facility, Mission Valley. In their report, Hector and Van Wormer (1987b) concluded that the site is anthropologically significant, but did not make specific management recommendations under CEQA.

P-37-34105

This resource is a prehistoric isolate located near an unnamed access road leading to SDG&E pole P188089. The isolate, a volcanic core, was not collected and left where it was found.

1.3 APPLICABLE REGULATIONS

Resource significance is assigned to districts, sites, buildings, structures, and objects that possess exceptional value or quality or those illustrating or interpreting the heritage of San Diego County in history, architecture, archaeology, engineering, and culture. Several criteria are used in demonstrating resource significance. Specifically, criteria outlined in CEQA, the San Diego Resource Protection Ordinance (RPO) and the San Diego County Local Register provide the guidance for making such determinations. The following section details the criteria that a resource must meet to be determined significant.

1.3.1 California Environmental Quality Act

According to CEQA (§15064.5a), 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 or 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 (§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:

- (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) & (e) contain additional provisions regarding human remains. Regarding Native American human remains, paragraph (d) provides:

- (d) 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:

- (1) 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).
- (2) The requirement of CEQA and the Coastal Act

1.3.2 San Diego County Local Register of Historical Resources

The County requires that resource significance 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 a significant 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.

1.3.3 San Diego County Resource Protection Ordinance

The purpose of the County of San Diego's RPO is to protect significant cultural resources. The RPO defines "Significant Prehistoric or Historic Sites" as follows:

1. Any prehistoric or historic district, site, interrelated collection of features or artifacts, building, structure, or object either:
 - (a) Formally determined eligible or listed in the National Register of Historic Places by the Keeper of the National Register; or
 - (b) To which the Historic Resource ("H" Designator) Special Area Regulations have been applied; or
2. One-of-a-kind, locally unique, or regionally unique cultural resources which contain a significant volume and range of data and materials; and
3. Any location of past or current sacred religious or ceremonial observances which is either:
 - (a) Protected under Public Law 95-341, the American Indian Religious Freedom Act or Public Resources Code Section 5097.9, such as burial(s), pictographs, petroglyphs, solstice observatory sites, sacred shrines, religious ground figures or,

- (b) Other formally designated and recognized sites which are of ritual, ceremonial, or sacred value to any prehistoric or historic ethnic group.

The RPO does not allow non-exempt activities or uses damaging to significant prehistoric or historic lands on properties under County jurisdiction. The only exempt activity is scientific investigation authorized by the County. All discretionary projects are required to be in conformance with applicable County standards related to cultural resources, including the noted RPO criteria on prehistoric and historic sites. Noncompliance would result in a project that is inconsistent with County standards.

1.3.4 Traditional Cultural Properties / Tribal Cultural Resources

Federal and state laws mandate that consideration be given to the concerns of contemporary Native Americans with regard to potentially ancestral human remains, associated funerary objects, and items of cultural patrimony. Consequently, an important element in assessing the significance of the resource has been to evaluate the likelihood that these classes of items are present in areas that would be affected by the proposed project.

Potentially relevant to prehistoric archaeological sites is the category of Traditional Cultural Properties (TCP) in discussions of cultural resource management (CRM) performed under federal auspices. According to Parker and King (1998), “Traditional” in this context refers to those beliefs, customs, and practices of a living community of people that have been passed down through the generations, usually orally or through practice. The traditional cultural significance of a historic property, then, is significance derived from the role the property plays in a community's historically rooted beliefs, customs, and practices.

The County of San Diego Guidelines (2007a) identify that cultural resources can also include TCPs, such as gathering areas, landmarks, and ethnographic locations in addition to archaeological districts. These guidelines incorporate both State and Federal definitions of TCPs. Generally, a TCP may consist of a single site, or group of associated archaeological sites (district; traditional cultural landscape), or an area of cultural/ethnographic importance.

The Traditional Tribal Cultural Places Bill of 2004 (Senate Bill No. 18) requires local governments to consult with Native American representatives during the project planning process. The intent of this legislation is to encourage consultation and assist in the preservation of “Native American places of prehistoric, archaeological, cultural, spiritual, and ceremonial importance” (County of San Diego 2007a). It further allows for tribal cultural places to be included in open space planning. State Assembly Bill (AB) 52, in effect as of July 1, 2015, introduces the Tribal Cultural Resource (TCR) as a class of cultural resource and additional considerations relating to Native American consultation into CEQA. As a general concept, a TCR is similar to the federally-defined TCP; however, it incorporates consideration of local and state significance and required mitigation under CEQA. A TCR may be considered significant if included in a local or state register of historical resources; or determined by the lead agency to be significant pursuant to criteria set forth in PRC §5024.1; or is a geographically defined cultural landscape that meets one or more of these criteria; or is a historical resource described in PRC §21084.1, a unique archaeological resources described in PRC §21083.2, or is a non-unique archaeological resource if it conforms with the above criteria.

In 1990, the NPS and Advisory Council for Historic Preservation introduced the term ‘TCP’ through National Register Bulletin 38 (Parker and King 1998). A TCP may be considered eligible based on “its association with cultural practices or beliefs of a living community that (a) are rooted in that community’s

history, and (b) are important in maintaining the continuing cultural identity of the community” (Parker and King 1998:1). Strictly speaking, TCPs are both tangible and intangible; they are anchored in space by cultural values related to community-based physically defined “property referents” (Parker and King 1998:3). On the other hand, TCPs are largely ideological, a characteristic that may present substantial problems in the process of delineating specific boundaries. Such a property’s extent is based on community conceptions of how the surrounding physical landscape interacts with existing cultural values. By its nature, a TCP need only be important to community members, and not the general population as a whole. In this way, a TCP boundary, as described by Bulletin 38, may be defined based on viewscape, encompassing topographic features, extent of archaeological district or use area, or a community’s sense of its own geographic limits. Regardless of why a TCP is of importance to a group of people, outsider acceptance or rejection of this understanding is made inherently irrelevant by the relativistic nature of this concept.

1.3.5 County of San Diego Grading Ordinance

The Grading Ordinance requires that projects involving grading, clearing, and/or removal of natural vegetation obtain a grading permit, unless the project meets one or more of the exemptions listed in Section 87.202 of the Grading Ordinance. The grading permit is discretionary and requires compliance with CEQA. In the event that human remains or Native American artifacts are encountered, Section 87.429 requires that grading operations be suspended in the affected area and the operator is required to inform the County Official. The County’s Grading Ordinance requires the project to comply with the requirements of Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.99.

SECTION 2.0 – GUIDELINES FOR DETERMINING SIGNIFICANCE

Section 15064.5(b) of the State CEQA Guidelines identifies adverse environmental impacts to historical resources. The County has prepared guidelines for determining the significance of environmental impacts to cultural resources, based on CEQA and the County RPO. Pursuant to the County of San Diego Guidelines for Determining Significance – Cultural Resources: Archaeological and Historical Resources (2007b), any of the following will be considered a significant impact to cultural resources:

1. The project, as designed, causes a substantial 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 alterations of characteristics or elements of a resource that cause it to be significant in the 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 formal cemeteries.
4. The project proposes non-exempt activities or uses damaging to, and fails to preserve, significant cultural resources as defined by the Resource Protection Ordinance and fails to preserve those resources.
5. The project causes a substantial adverse change in the significance of a tribal cultural resource as defined under Public Resources Code §21074.

SECTION 3.0 – ANALYSIS OF PROJECT EFFECTS

3.1 METHODS

3.1.1 Survey Methods

A pedestrian survey of the approximately 69.02-acre Project area was conducted by Chambers Group archaeologists Kyle Knabb and Ted Roberts on February 4, 2019. Vegetation included non-native grasses and shrubs. Ground visibility ranged between 10 to 50 percent on non-paved areas. Transects were spaced at no greater than 15-meter intervals across the project area. Site locations were recorded with a handheld GPS with sub-meter accuracy and documented with high-resolution digital photographs. Artifacts were examined on site and left in place. When diagnostic artifacts were present these were recorded to obtain a date with as much precision as possible. Paved portions, mostly in the northwest part of the project area where the San Diego County Parks office is located, were not surveyed (Figure 3). The southern extent of the survey area was not surveyed due to steep topography (canyon walls) as well as inaccessibility due to access roads being washed out.

3.1.2 Native American Participation/Consultation

The County of San Diego will be conducting Tribal consultation efforts under Assembly Bill 52 (AB52). In anticipation of these efforts, Chambers Group requested that the Native American Heritage Commission (NAHC) conduct a search of its *Sacred Lands File* (SLF) to determine if cultural resources important to Native Americans have been recorded in the project footprint and buffer area. On November 5, 2018, Chambers Group received a response from NAHC stating that the search of its SLF did not indicate the presence of Native American cultural resources within 1-mile of the project area or surrounding vicinity (Appendix B). The NAHC provided a list of seven Native American tribal governments that may have knowledge of cultural resources near the project area. This list is included in Appendix B. Because San Diego County is leading the AB52 consultation process, Chambers Group did not send consultation letters to the affiliated tribes.

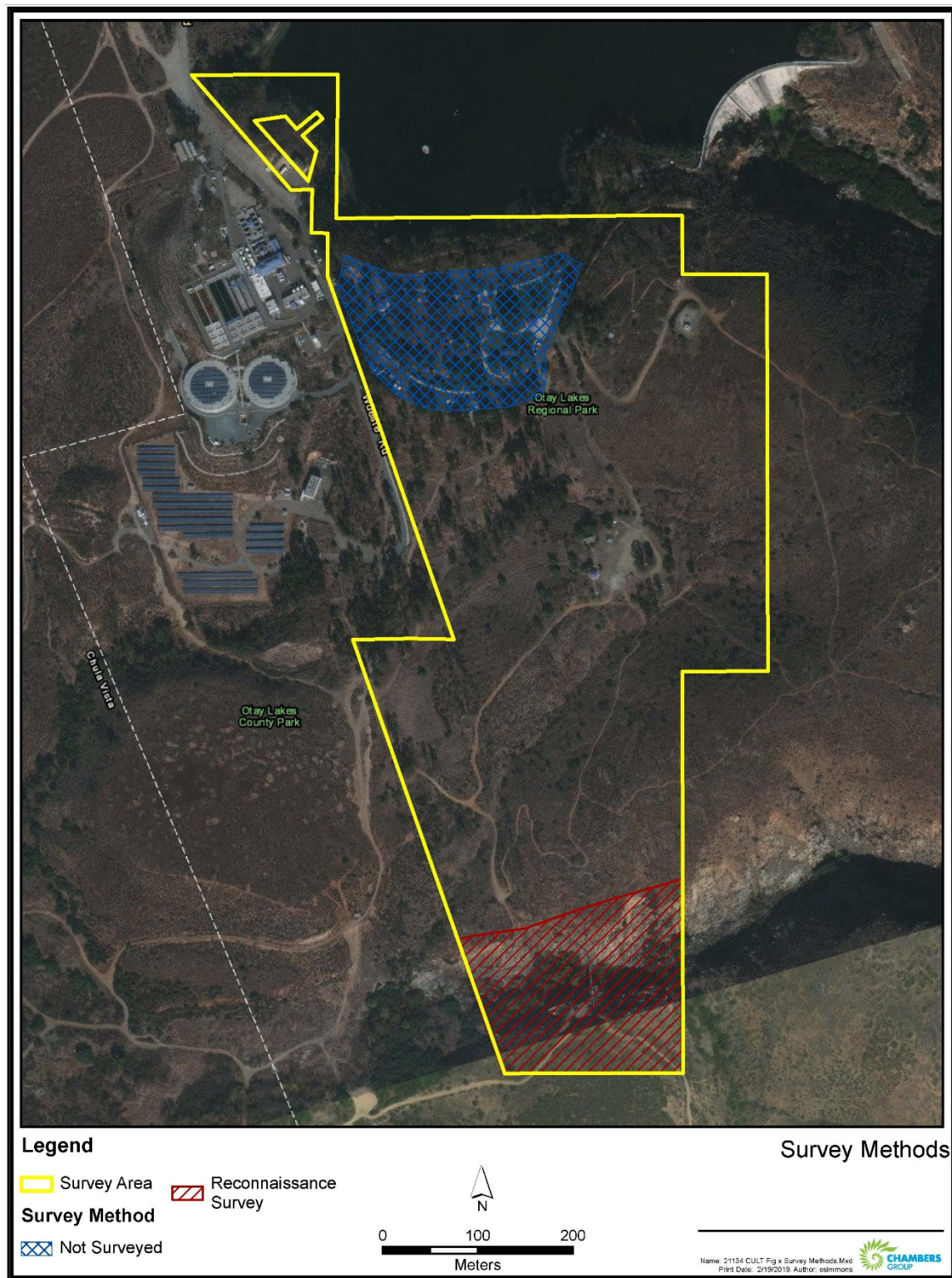


Figure 3: Survey Methods

3.2 RESULTS

CA-SDI-10668

Site Type: Quarry/Lithic Reduction Locus

Cultural and Temporal Affiliation: Unknown prehistoric, mid-20th century historic

CRHR Eligibility Recommendation: Not Eligible

Site Description:

The portion of the site was previously recorded in the proposed project area on the south side of the Otay River and consisted of a lithic quarry/flake scatter. The area was observed from the north bank of the Otay River Canyon. Due to the steep topography which made accessing the canyon and south bank dangerous, as well as local access roads being washed out due to recent and ongoing rains, the site was not revisited during the current survey.

21134-1

Site Type: Quarry

Cultural and Temporal Affiliation: Unknown prehistoric

CRHR Eligibility Recommendation: Not Eligible

Site Description:

This newly recorded site includes a prehistoric quarry area and lithic material procurement site in the northeast corner of the project area. Most of the site is located outside of the project area along an eroding hillslope. Artifacts observed include angular debris (shatter), assayed cores, primary flakes (debitage exhibiting more than 50% dorsal cortex), and secondary flakes (debitage exhibiting less than 50% dorsal cortex). Isolated shards of amber historic bottle glass were also observed.



Figure 4: Overview of 21134-1 facing northeast

CA-SDI-10862

Site Type: Homestead, trash scatter, reservoir

Cultural and Temporal Affiliation: late 19th century to mid-20th century

CRHR Eligibility Recommendation: Eligible

Site Description:

The entirety of CA-SDI-10862 is located within the project area. The historic site dates to the late 19th/early 20th century. Previous work at the site uncovered deposits postdating initial occupation suggesting the site was inhabited into the 1920s-1930s. Hector and Van Wormer recorded a plaster-lined reservoir, four structural pads, and trash dumps and surface scatters. The reservoir and two historic trash dumps were relocated during the survey. The structural pads were not relocated due to dense and tall grasses. Additional historic features were recorded during the survey, and the site boundaries were expanded to include these additional features and the reservoir, which was not previously within the recorded boundary polygon obtained from the SCIC. The additional historic features consisted of trash scatters with artifacts dating to the mid-20th century, including amber, clear, and green bottle glass, sanitary cans, forged nails, ceramic dishware, and clay sewer pipe. See the associated DPR Form (Appendix C) for the updated site boundaries. Overall, the condition of the relocated portions of SDI-10862 remains unchanged since original recordation reported in the Hector and Van Wormer report (1987b).



Figure 5: CA-SDI-10862 overview facing south



Figure 6: Overview of reservoir at CA-SDI-10862 facing south.

21134-2

Site Type: Trash scatter

Cultural and Temporal Affiliation: early-20th century

CRHR Eligibility Recommendation: Not Eligible

Site Description:

This newly recorded site consists of an historic trash scatter of forged nails, bottle glass (amethyst, green, aqua, clear, and amber), barbed wire, cans (pull-tab and hole-in-top), and clay sewer pipe. The assemblage suggests a date in the early 20th century. The scatter is at the base of hills east of an area developed by the Otay County Park for storage and outdoor games. The site is approximately 15-m in diameter. Much of the glass is melted suggesting a trash dump that had been incinerated or perhaps a post-deposition brushfire.



Figure 7: Overview of site 21134-2, facing south

21134-3

Site Type: Water storage container

Cultural and Temporal Affiliation: Mid-20th century

CRHR Eligibility Recommendation: Not eligible

Site Description:

This newly recorded resource consists of a metal water storage tank, approximately 3-meters in diameter and built of welded steel. The tank appears on USGS historical maps beginning in 1955 (USGS 1955). A ventilation fan on the roof of the tank was once connected to an electrical source but is now disconnected. No county records were identified, and County Park staff were not aware of additional documentation.



Figure 8: Overview of 21134-3, facing northwest

21134-5

Site Type: Historic isolate

Cultural and Temporal Affiliation: Unknown historic period

CRHR Eligibility Recommendation: Not Eligible

Site Description:

This resource, classified as an historic isolate, includes an earthen depression with ring berm feature, circular in shape and approximately 3-meters in diameter, that appears to be a prospect. It may also be an impact crater from military training exercises. However, due to low visibility resulting from tall grasses much of the feature was obscured and the nature of the depression remains unknown. No artifacts were observed in the site vicinity.



Figure 9: Overview of 21134-5 facing east.

P-37-34105

Site Type: Isolate

Cultural and Temporal Affiliation: Unknown prehistoric

CRHR Eligibility Recommendation: Not eligible

Site Description:

This previously recorded resource consists of a prehistoric isolate located near an unnamed access road leading to SDG&E pole P188089. The isolate, a core manufactured from an unidentified volcanic material, was not relocated during the survey.

SECTION 4.0 – INTERPRETATION OF RESOURCE IMPORTANCE AND IMPACT IDENTIFICATION

4.1 RESOURCE IMPORTANCE

The County of San Diego is the lead review agency for the Project. Accordingly, the resources have been evaluated for eligibility for the CRHR under CEQA Guidelines as well as evaluated for importance under the County Guidelines. While resources may be recommended as eligible or not eligible for listing on the CRHR based on Criterion 4, data potential, under the County Guidelines all resources except isolates are considered “important.” Under the County Guidelines, the “importance” of resources recommended as not eligible for listing on the CRHR can be exhausted through a combination of recordation, testing, curation, and construction monitoring. The significance of sites encountered during survey was evaluated by applying the procedure and criteria for the CRHR, the Local Register, and the RPO.

4.1.1 CA-SDI-10668

The northern extent of this site is located on undeveloped land and therefore remains as previously described. The portion of the site within the current project area was originally recorded by Thesken (1979), but not resurveyed by any of the subsequent site visits. Much of the site to the south of the Project area has been destroyed by the construction of the East Mesa Detention Complex and related facilities.

During the current survey, Chambers Group did not relocate CA-SDI-10668 within the project area due to dangerous conditions, including washed out roads due to recent heavy rains and steep canyon topography. The site boundary, as originally recorded was largely outside the current project area. Based on current and prior research at the site, Chambers Group recommends the site not eligible for listing in the CRHR or the Local Register, and therefore should not be considered a historic resource under CEQA guidelines Section 15054.5. These recommendations are based on a number of factors. The site (1) is not associated with events that have made a significant contribution to the broad patterns of California’s or San Diego County’s history and cultural heritage, (2) is not associated with the lives of persons important in local, state, or national history or the history of San Diego County or its communities, (3) does not embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction, and (4) is unlikely to yield information important to prehistory or history.

Chambers Group recommends that CA-SDI-10668 is not significant under the RPO. It is not formally determined eligible or listed in the National Register of Historic Places (NRHP), it has not been given an H designator, and does not appear to be a one-of-a-kind, locally unique, or regionally unique cultural resources that contains a significant volume and range of data or materials.

County guidelines identify artifact isolates as the only archaeological resource type that is considered “not important.” Therefore, Chambers Group recommends that CA-SDI-10668 is an important resource because the resource is not an isolate.

4.1.2 21134-1

Site 21134-1 was first recorded during the Chambers Group survey on a portion of the project area that had not been previously surveyed. During the current survey the site boundaries were mapped and

artifacts were identified in the field. Visibility was low due to the presence of seasonal grasses and shrubs. The site is mostly found on an eroding hillside and extends beyond the boundaries of the current project.

Based on the results of the field survey, Chambers group recommends the site is not eligible for the CRHP or the local register, thus the site should not be considered a significant “historical resource” under CEQA guidelines Section 15054.5. These recommendations are based on a number of factors. The site (1) is not associated with events that have made a significant contribution to the broad patterns of California’s or San Diego County’s history and cultural heritage, (2) is not associated with the lives of persons important in local, state, or national history or the history of San Diego County or its communities, (3) does not embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction, and (4) is unlikely to yield information important to prehistory or history. The site is not likely to contain significant buried deposits that could substantively add to our understanding of the past use of the Otay Lakes region based on the low artifact density and diversity that would otherwise provide a strong research context for refining and contributing to local and regional culture histories. The homogeneity and redundancy of flaked lithic debris constituting the majority of artifacts at the site represent a common site type and lack the diagnostic characteristics necessary to place the site in cultural or temporal context.

Chambers Group recommends that 21134-1 is not significant under the RPO. It is not formally determined eligible or listed in the National Register of Historic Places (NRHP), it has not been given an H designator, and does not appear to be a one-of-a-kind, locally unique, or regionally unique cultural resources that contains a significant volume and range of data or materials.

County guidelines identify artifact isolates as the only archaeological resource type that is considered “not important.” Therefore, Chambers Group recommends that 21134-1 is an important resource because the resource is not an isolate.

4.1.3 CA-SDI-10862

This site, an historic homestead originally recorded by Hector and Van Wormer (1982), is located at the south end of Otay Lakes County Park. The homestead dates to the late 19th century and contains a reservoir, four structural pads, and a trash deposit. Testing at the site indicated that the deposit extended across an area that measured approximately 12 by 6 meters. Approximately 134 meters southwest of the reservoir was located a small trash deposit consisting of a square pit measuring approximately 90 by 90 cm filled with trash dating between c. 1930-1950. Based in part on the presence of Chinese artifacts dating to the early years of rural agriculture in Otay Mesa, Hector and Van Wormer recommended the site be considered significant. They noted that most archaeological studies of 19th century Chinese have focused on urban or small-town communities rather than rural households, and that analysis of artifacts from a rural Chinese site could answer questions concerning Chinese acculturation, economic and social status, and interaction and dependency on Anglo society. Hector and Van Wormer indicated that the site still had the potential to yield additional information about the influence of Chinese culture in San Diego and throughout the West.

During the current survey, the site was relocated, and additional features were recorded. Other than some minor disturbance the site remains in the same condition. Based on the previous work conducted at the site, the potential for the site to yield important information about San Diego and California history, and the site’s locally and regionally rare cultural resources containing a significant volume and range of data

and materials, Chambers Group recommends the site is eligible for inclusion in the CRHR and Local Register, may be significant under the County of San Diego's RPO, and is important under County guidelines.

4.1.4 21134-2

Site 21134-2 was first recorded during the current survey on a portion of the project area that had not been previously surveyed. During the current survey the site boundaries were mapped and artifacts were identified in the field. Visibility was average due to the presence of seasonal grasses and shrubs. The site is located at the base of a hillside near a developed activity area. The site is composed of a scatter of historic trash, including bottle glass, tin cans, and barbed wire.

Based on the results of the field survey, Chambers Group recommends the site is not eligible for the CRHP or the local register, thus the site should not be considered a significant "historical resource" under CEQA guidelines Section 15054.5. These recommendations are based on a number of factors. The site (1) is not associated with events that have made a significant contribution to the broad patterns of California's or San Diego County's history and cultural heritage, (2) is not associated with the lives of persons important in local, state, or national history or the history of San Diego County or its communities, (3) does not embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction, and (4) is unlikely to yield information important to prehistory or history. The site is not likely to contain significant buried deposits that could substantively add to our understanding of the past use of the Otay Lakes region based on the low artifact density and diversity that would otherwise provide a strong research context for refining and contributing to local and regional culture histories.

Chambers Group recommends that 21134-2 is not significant under the RPO. It is not formally determined eligible or listed in the National Register of Historic Places (NRHP), it has not been given an H designator, and does not appear to be a one-of-a-kind, locally unique, or regionally unique cultural resources that contains a significant volume and range of data or materials.

County guidelines identify artifact isolates as the only archaeological resource type that is considered "not important." Therefore, Chambers Group recommends that 21134-2 is an important resource because the resource is not an isolate.

4.1.5 21134-3

Site 21134-3 was first recorded during the current survey on a portion of the project area that had not been previously surveyed. During the current survey the site boundaries were mapped. No artifacts were identified in the field. Visibility was average due to the presence of seasonal grasses and shrubs. The site consists of an historic water tank dating to the 1950s.

Based on the results of the field survey, Chambers Group recommends the site is not eligible for the CRHP or the local register, thus the site should not be considered a significant "historical resource" under CEQA guidelines Section 15054.5. These recommendations are based on a number of factors. The site (1) is not associated with events that have made a significant contribution to the broad patterns of California's or San Diego County's history and cultural heritage, (2) is not associated with the lives of persons important in local, state, or national history or the history of San Diego County or its communities, (3) does not

embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction, and (4) is unlikely to yield information important to prehistory or history. The site is not likely to contain significant buried deposits that could substantively add to our understanding of the past use of the Otay Lakes region based on the low artifact density and diversity that would otherwise provide a strong research context for refining and contributing to local and regional culture histories.

Chambers Group recommends that 21134-3 is not significant under the RPO. It is not formally determined eligible or listed in the National Register of Historic Places (NRHP), it has not been given an H designator, and does not appear to be a one-of-a-kind, locally unique, or regionally unique cultural resources that contains a significant volume and range of data or materials.

County guidelines identify artifact isolates as the only archaeological resource type that is considered “not important.” Therefore, Chambers Group recommends that 21134-3 is an important resource because the resource is not an isolate.

4.1.6 21134-5

Site 21134-5 was first recorded during the current survey on a portion of the project area that had not been previously surveyed. The resource is classified as an historic isolated feature and consists of a miner’s prospect or perhaps impact crater from historic military exercises. No artifacts were identified in the field. Visibility was low due to the presence of seasonal grasses and shrubs.

Based on the results of the field survey, Chambers Group recommends the resource is not eligible for the CRHP or the local register, thus the resource should not be considered a significant “historical resource” under CEQA guidelines Section 15054.5. These recommendations are based on a number of factors. The resource (1) is not associated with events that have made a significant contribution to the broad patterns of California’s or San Diego County’s history and cultural heritage, (2) is not associated with the lives of persons important in local, state, or national history or the history of San Diego County or its communities, (3) does not embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction, and (4) is unlikely to yield information important to prehistory or history. The resource is not likely to contain significant buried deposits that could substantively add to our understanding of the past use of the Otay Lakes region based on the low artifact density and diversity that would otherwise provide a strong research context for refining and contributing to local and regional culture histories.

Chambers Group recommends that 21134-5 is not significant under the RPO. It is not formally determined eligible or listed in the National Register of Historic Places (NRHP), it has not been given an H designator, and does not appear to be a one-of-a-kind, locally unique, or regionally unique cultural resources that contains a significant volume and range of data or materials.

County guidelines identify artifact isolates as the only archaeological resource type that is considered “not important.” Therefore, Chambers Group recommends that 21134-5 is not an important resource because the resource is an isolate.

4.1.7 P-37-34105

Site P-37-34105 was first recorded in 2013 by ASM during a pole survey for SDG&E. The prehistoric isolate consisted of a volcanic core found off the access road. During the current survey the isolate was not relocated.

Based on current and prior research, Chambers Group recommends the resource is not eligible for the CRHP or the local register, thus the resource should not be considered a significant “historical resource” under CEQA guidelines Section 15054.5. These recommendations are based on a number of factors. The resource (1) is not associated with events that have made a significant contribution to the broad patterns of California’s or San Diego County’s history and cultural heritage, (2) is not associated with the lives of persons important in local, state, or national history or the history of San Diego County or its communities, (3) does not embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction, and (4) is unlikely to yield information important to prehistory or history. The resource is not likely to contain significant buried deposits that could substantively add to our understanding of the past use of the Otay Lakes region based on the low artifact density and diversity that would otherwise provide a strong research context for refining and contributing to local and regional culture histories.

Chambers Group recommends that P-37-34105 is not significant under the RPO. It is not formally determined eligible or listed in the National Register of Historic Places (NRHP), it has not been given an H designator, and does not appear to be a one-of-a-kind, locally unique, or regionally unique cultural resources that contains a significant volume and range of data or materials.

County guidelines identify artifact isolates as the only archaeological resource type that is considered “not important.” Therefore, Chambers Group recommends that P-37-34105 is not an important resource because the resource is an isolate.

4.2 IMPACT IDENTIFICATION

4.2.1 CA-SDI-10668

Within the project boundaries, CA-SDI-10668 is recommended not eligible for listing in the CRHR or the Local Register. It is recommended not significant under the County RPO. The site is recommended “important” under the county guidelines. The current conceptual plans for the proposed project do not include changes to this portion of the project area. The proposed project is not likely to have an adverse impact on this resource.

4.2.2 21134-1

21134-1 is recommended not eligible for listing in the CRHR or the Local Register. It recommended not significant under the County RPO. The site is recommended “important” under the county guidelines. The current conceptual plans for the proposed project include the construction of a zipline and/or activity stations near the resource. The proposed project has the potential to directly impact this resource because of project development (e.g. grading, clearing, etc.).

4.2.3 CA-SDI-10862

CA-SDI-10862 is recommended eligible for the CRHR and the Local Register and may be significant under the County RPO. The proposed project has the potential to cause a significant environmental impact as defined in Section 15064.5(b) of the State CEQA Guidelines. In addition, the project proposes activities or uses damaging to significant cultural resources as defined by the Resource Protection Ordinance.

4.2.4 21134-2

21134-2 is recommended not eligible for listing in the CRHR or the Local Register. It is recommended not significant under the County RPO. The site is recommended “important” under the county guidelines. Therefore, the proposed project has the potential to cause a significant environmental impact to the resource according to Guideline 2 of the County’s Guidelines for Determining Impact Significance.

4.2.5 21134-3

21134-3 is recommended not eligible for listing in the CRHR or the Local Register. It is recommended not significant under the County RPO. The site is recommended “important” under the county guidelines. Therefore, the proposed project has the potential to cause a significant environmental impact to the resource according to Guideline 2 of the County’s Guidelines for Determining Impact Significance.

4.2.6 21134-5

21134-5 is recommended not eligible for listing in the CRHR or the Local Register. It is recommended not significant under the County RPO. The site is recommended “not important” under the county guidelines. Therefore, the proposed project is unlikely cause a significant environmental impact to the resource according to Guideline 2 of the County’s Guidelines for Determining Impact Significance.

4.2.7 P-37-34105

P-37-34105 is recommended not eligible for listing in the CRHR or the Local Register. It is recommended not significant under the County RPO. The site is recommended “not important” under the county guidelines. Therefore, the proposed project is unlikely to cause a significant environmental impact to the resource according to Guideline 2 of the County’s Guidelines for Determining Impact Significance.

SECTION 5.0 – MANAGEMENT CONSIDERATIONS – MITIGATION MEASURES AND DESIGN CONSIDERATIONS

5.1 UNMITIGATED IMPACTS

The proposed project is currently in a conceptual design phase and specific construction plans are not yet available. As currently conceived (see Figure 2) it is anticipated that all impacts can be mitigated.

5.2 MITIGATED IMPACTS

CA-SDI-10668, 21134-1, 21134-2, and 21134-3 are all recommended as not eligible for the CRHR and Local Register, and as not significant under the County RPO. Under county guidelines the sites are considered “important” and therefore require mitigation to reduce impacts to less than significant, which can be achieved through avoidance, hiring qualified archaeological monitors and Native American Monitors, and monitoring in the vicinity if ground disturbance is required within 50 feet of the resources. Any resources collected during monitoring should be curated at the San Diego Archaeological Center or repatriated if requested by the Native American Monitor.

Site CA-SDI-10862 is recommended as eligible for the CRHR, Local Register, and may be significant under the County RPO. If the county accepts the recommendation of significant under the RPO, the site must be placed in open space pursuant to the County’s guidelines. If RPO significance is not assigned, avoidance, hiring qualified archaeologists, and monitoring of all construction within 100 feet by qualified archaeologists is recommended. If avoidance is not possible, testing is recommended to evaluate eligibility for CRHR and local register.

Due to the poor ground surface visibility within portions of the Project area, monitoring of all initial ground disturbance by a qualified archaeologist is recommended to mitigate for potential impacts to cultural resources. If potentially significant archaeological materials are encountered during Project-related construction activities, all work must be halted near the archaeological discovery until a qualified archaeologist can visit the site of discovery and assess the significance of the archaeological resource. As well, Health and Safety Code 7050.5, CEQA 15064.5(e), and Public Resources Code 5097.98 mandate the process to be followed in the unlikely event of an accidental discovery of any human remains in a location other than a dedicated cemetery. Finally, if the Project area is expanded to include areas not covered by this survey additional cultural resources studies may be required.

5.3 EFFECTS FOUND NOT TO BE SIGNIFICANT

P-37-34105 and 21134-5 are recommended not eligible for the CRHR or Local Register, not significant under the County RPO, and “not important” under county guidelines. No mitigation is recommended for these resources as no significant effects were identified.

SECTION 6.0 – REFERENCES

AECOM

- 2016 *Archeological Site Update for CA-SDI-10668*, On file, South Coastal Information Center, San Diego State University, San Diego, California.

Byrd, Brian F., Kevin O. Pope, and Seetha N. Reedy

- 2004 *Results of NSF-Funded Archaeological and Paleontological Investigations at San Elijo Lagoon, San Diego County, California*. On file, South Coastal Information Center, San Diego State University, San Diego, California.

City of San Diego

- 2008 *Otay Mesa Community Plan Update: Historic context Statement and Historic Resource Survey*. City of San Diego, City Planning and Community Investment

County of San Diego

- 2007a *Guidelines for Determining Significance, Cultural Resources: Archaeological and Historic Resources*. Land Use and Environment Group, Department of Planning and Land Use, Department of Public Works, San Diego County, California.
- 2007b *Report Format and Content Guidelines: Archaeological and Historic Resources*. Land Use and Environment Group, Department of Planning and Land Use, Department of Public Works, San Diego County, California.

Gallegos, Dennis R.

- 1987 *A Review and Synthesis of Environmental and Cultural Material for the Batiquitos Lagoon Region*. In: San Dieguito-La Jolla Chronology and Controversy, edited by D. Gallegos, 23-24. San Diego County Archaeological Society Research Paper, No. 1.

Hector, Susan and Steve Van Wormer,

- 1987a *Archaeological Site Record for CA-SDI-10862*, On file, South Coastal Information Center, San Diego State University, San Diego, California.
- 1987b *Results of an Archaeological Test Program conducted at SDI-10,862 Lower Otay*, On file, South Coastal Information Center, San Diego State University, San Diego, California.

Kyle, Carolyn

- 1986 *Archaeological Site Record for CA-SDI-10,668*, On file, South Coastal Information Center, San Diego State University, San Diego, California.

Miller, Jacqueline Neva

- 1966 The Present and Past Molluscan Faunas and Environments of Four Southern California Coastal Lagoons. Master's Thesis, Department of Biology, University of California, San Diego

Moratto, Michael J.

- 1984 *California Archaeology*. Academic Press, Orlando, Florida.

Parker, Patricia L. and Thomas F. King

- 1998 *Guidelines for Evaluating and Documenting Traditional Cultural Properties*. National Register Bulletin 38. U.S. Department of the Interior, National Parks Service.

Thesken, J.

- 1979 *Archeological Site Survey Record for CA-SDI-10668*. On file, South Coastal Information Center, San Diego State University, San Diego, California.

Warren, Claude N.

- 1968 Cultural Tradition and Ecological Adaptation on the Southern California Coast. In *Archaic Prehistory in the Western United States*, edited by C. Irwin-Williams. *Eastern New Mexico Contributions in Anthropology* 1(3):1-14.

SECTION 7.0 – LIST OF PREPARERS AND PERSONS AND ORGANIZATIONS CONTACTED

7.1 LIST OF PREPARERS

Kyle Knabb, PhD, Staff Cultural Resources Specialist/Project Manager

Dr. Knabb is a Secretary of the Interior Professional Qualified Archaeologist. He has a PhD in Archaeology and more than 15 years of professional experience in archaeology and cultural resources management.

Ted Roberts, MA, Cultural Resources Department Head

Mr. Roberts is a Secretary of the Interior Professional Qualified Archaeologist. He has nearly 20 years of archaeological and cultural resource management experience in the private sector, the government, and academic institutions.

SECTION 8.0 – LIST OF MITIGATION MEASURES AND DESIGN CONSIDERATIONS

Avoidance through Project design is the recommended mitigation measure. The recommended mitigation measures for the project are described in Table 4. Monitoring by a qualified archaeologist and Native American Monitor is recommended for all ground disturbance within the Project area.

Table 3: Recommended Mitigation Measures

Site Number	Direct Impacts	Evaluation Recommendations	Mitigation Measure
CA-SDI-10668, 21134-1, 21134-2, 21134-3	Impacted by project design	CRHR/Local Register: not eligible RPO: not significant SD County: Important	Impacts will be reduced to less than significant through avoidance, hiring qualified archaeologist, monitoring ground disturbing activities, and curation of artifacts.
CA-SDI-10862	Impacted by project design	CRHR/Local Register: Eligible RPO: significant SD County: Important	If RPO significant – create open space easement Impacts will be reduced to less than significant through avoidance, hiring qualified archaeologist, monitoring ground disturbing activities, and curation of artifacts. Testing recommended to evaluate eligibility if avoidance is impossible.
P-37-34105, 21134-5	Not impacted	CRHR/Local Register: not eligible RPO: not significant SD County: not important	None

APPENDIX A – CHRIS Records Search Results



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

CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM RECORDS SEARCH

Company: Chambers Group, Inc.

Company Representative: Kyle Knabb

Date Processed:

Project Identification: 211XX Otay Lakes Boy Scout Camp

Search Radius: 1/2 mile

Historical Resources:

YES

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:

YES

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:

YES

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

Historic Maps:

YES

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

Summary of SHRC Approved CHRIS IC Records Search Elements	
RSID:	2536
RUSH:	no
Hours:	1
Spatial Features:	135
Address-Mapped Shapes:	no
Digital Database Records:	0
Quads:	1
Aerial Photos:	0
PDFs:	Yes
PDF Pages:	294

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

APPENDIX B – NAHC SLF RESULTS



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



November 5, 2018

Kyle Knabb
Chambers Group, Inc.

VIA Email to: kknabb@chambersgroupinc.com

RE: 211XX Boy Scouts of America Otay Lakes Campground Project, San Diego County

Dear Mr. Knabb:

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 negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. 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 me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at my email address: Katy.Sanchez@nahc.ca.gov.

Sincerely,


for Katy Sanchez
Associate Environmental Planner

**Native American Heritage Commission
Native American Contacts List
11/5/2018**

Barona Band of Mission Indians Edwin Romero Chairperson 1095 Barona Road Lakeside CA 92040 clloyd@barona-nsn.gov (619) 443-6612 (619) 443-0681	Diegueno	Ilipay Nation of Santa Ysabel Virgil Perez, Chairperson P.O. Box 130 Santa Ysabel CA 92070 (760) 765-0845 (760) 765-0320 Fax	Diegueno/Kumeyaay
Campo Band of Diegueño Mission Indians Ralph Goff, Chairperson 36190 Church Road, Suite 1 Campo CA 91906 rgoff@campo-nsn.gov (619) 478-9046 (619) 478-5818 Fax	Diegueno/Kumeyaay	Inaja-Cosmit Band of Indians Rebecca Osuna, Chairman 2005 S. Escondido Blvd. Escondido CA 92025 (760) 737-7628 (760) 747-8568 Fax	Diegueno
Ewiiapaayp Band of Kumeyaay Indians Robert Pinto Sr., Chairperson 4054 Willows Road Alpine CA 91901 (619) 445-6315 (619) 445-9126 Fax	Diegueno/Kumeyaay	Jamul Indian Village Erica Pinto, Chairperson P.O. Box 612 Jamul CA 91935 (619) 669-4785 (619) 669-4817	Diegueno/Kumeyaay
Ewiiapaayp Band of Kumeyaay Indians Michael Garcia, Vice Chairperson 4054 Willows Road Alpine CA 91901 michaelg@leaningrock.net (619) 445-6315 (619) 445-9126 Fax	Diegueno/Kumeyaay	Jamul Indian Village Lisa Cumper, THPO P.O. Box 612 Jamul CA 91935 lcumper@jiv-nsn.gov (619) 669-4855 Office (619) 669-4817 Cell	Diegueno/Kumeyaay
Ewiiapaayp Band of Kumeyaay Indians Robert Pinto Sr., Chairperson 4054 Willows Road Alpine CA 91901 (619) 445-6315 (619) 445-9126 Fax	Diegueno/Kumeyaay	Kumeyaay Cultural Repatriation Committee Clint Linton, Director of Cultural Resources P.O. Box 507 Santa Ysabel CA 92070 cjlinton73@aol.com (760) 803-5694	Diegueno/Kumeyaay

This list is current as of the date of this document and is based on the information available to the Commission on the date it was produced.

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 Resources Code, or Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native American Tribes for the proposed: 211XX Boy Scouts of America Otay Lakes Campground Project, San Diego County.

**Native American Heritage Commission
Native American Contacts List
11/5/2018**

<p>Kwaaymii Laguna Band of Mission Indians Carmen Lucas P.O. Box 775 Pine Valley CA 91962 (619) 709-4207</p>	<p>Diegueno-Kwaaymii Kumeyaay</p>	<p>San Pasqual Band of Diegueño Mission Indians Allen E. Lawson, Chairperson P.O. Box 365 Valley Center CA 92082 allenl@sanpasqualtribe.org (760) 749-3200 (760) 749-3876 Fax</p>	<p>Diegueno</p>
<p>La Posta Band of Diegueño Mission Indians Gwendolyn Parada, Chairperson 8 Crestwood Road Boulevard CA 91905 LP13boots@aol.com (619) 478-2113 (619) 478-2125 Fax</p>	<p>Diegueno/Kumeyaay</p>	<p>Sycuan Band of the Kumeyaay Nation Cody J. Martinez, Chairperson 1 Kwaaypaay Court El Cajon CA 92019 ssilva@sycuan-nsn.gov (619) 445-2613 (619) 445-1927 Fax</p>	<p>Diegueno/Kumeyaay</p>
<p>Manzanita Band of Kumeyaay Nation Angela Elliott-Santos, Chairperson P.O. Box 1302 Boulevard CA 91905 (619) 766-4930 (619) 766-4957 Fax</p>	<p>Diegueno/Kumeyaay</p>	<p>Viejas Band of Kumeyaay Indians Robert J. Welch, Jr., Chairperson 1 Viejas Grade Road Alpine CA 91901 jhagen@viejas-nsn.gov (619) 445-3810 (619) 445-5337 Fax</p>	<p>Diegueno/Kumeyaay</p>
<p>Mesa Grande Band of Diegueño Mission Indians Virgil Oyo, Chairperson P.O. Box 270 Santa Ysabel CA 92070 mesagrandeband@msn.com (760) 782-3818 (760) 782-9092 Fax</p>	<p>Diegueno</p>		
<p>San Pasqual Band of Diegueño Mission Indians Allen E. Lawson, Chairperson P.O. Box 365 Valley Center CA 92082 allenl@sanpasqualtribe.org (760) 749-3200 (760) 749-3876 Fax</p>	<p>Diegueno</p>		

This list is current as of the date of this document and is based on the information available to the Commission on the date it was produced.

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 Resources Code, or Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native American Tribes for the proposed: 211XX Boy Scouts of America Otay Lakes Campground Project, San Diego County.

**APPENDIX C – CALIFORNIA DEPARTMENT OF PARKS AND RECREATION (DPR) 523
SERIES FORMS (Confidential Provided Separately)**

APPENDIX D – CONFIDENTIAL SURVEY RESULTS MAP



APPENDIX D – GREENHOUSE GAS EMISSIONS CALEMOD MODEL PRINTOUTS



Otay Lakes Campground Project - San Diego County, Annual

Otay Lakes Campground Project
San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	4.52	Acre	4.52	196,891.20	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW/hr)	720.49	CH4 Intensity (lb/MW/hr)	0.029	N2O Intensity (lb/MW/hr)	0.006

1.3 User Entered Comments & Non-Default Data

Otay Lakes Campground Project - San Diego County, Annual

Project Characteristics -

Land Use - 4.52 acres disturbed. Building Area: 300 sq ft Flag Plaza, 1,800 sq ft Restroom, 800 sq ft Storage, 150 sq ft Stage = 3,050 sq ft

Construction Phase - Construction Start 1-31-20 finished 6-30-20

Off-road Equipment - Demolition: 1 Concrete Saw; 1 Tractor/Loader/Backhoe

Off-road Equipment - Site Preparation: 4 Tractor/Loader/Backhoes

Off-road Equipment - Building Construction" 1 Crane, 3 Forklifts, 1 Generator, 3 Tractor/Loader/Backhoe, 1 Welder

Demolition - Existing 450 sq ft Restroom to be demolished

Trips and VMT - 6 vendor truck trips added to Demo and Site Prep to account for water truck emissions

Vehicle Trips - Trip Rates from Traffic Memo of 176 Weekday trips (38.93 trips/acre); 528 Saturday trips (116.8 trips/acre); 198 Sunday trips (43.80 trips/acre)

Construction Off-road Equipment Mitigation - Water Exposed Area 2x per day selected to account for SDAPCD Rules 50 and 55

Otay Lakes Campground Project - San Diego County, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	18.00	84.00
tblConstructionPhase	NumDays	230.00	84.00
tblConstructionPhase	NumDays	20.00	2.00
tblConstructionPhase	NumDays	5.00	22.00
tblConstructionPhase	PhaseEndDate	3/24/2021	6/30/2020
tblConstructionPhase	PhaseEndDate	2/2/2021	6/30/2020
tblConstructionPhase	PhaseEndDate	2/27/2020	2/3/2020
tblConstructionPhase	PhaseEndDate	3/5/2020	3/4/2020
tblConstructionPhase	PhaseStartDate	2/27/2021	3/5/2020
tblConstructionPhase	PhaseStartDate	3/18/2020	3/5/2020
tblConstructionPhase	PhaseStartDate	2/28/2020	2/4/2020
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Demolition
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	WorkerTripNumber	18.00	5.00
tblTripsAndVMT	WorkerTripNumber	18.00	10.00
tblVehicleTrips	ST_TR	22.75	116.80
tblVehicleTrips	SU_TR	16.74	43.80
tblVehicleTrips	WD_TR	1.89	38.93

2.0 Emissions Summary

Otay Lakes Campground Project - San Diego County, Annual

2.1 Overall Construction**Unmitigated Construction**

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
tons/yr										MT/yr						
2020	0.1657	1.1480	1.0492	2.1300e-003	0.2430	0.0588	0.3018	0.1212	0.0555	0.1767	0.0000	189.5342	189.5342	0.0324	0.0000	190.3436
Maximum	0.1657	1.1480	1.0492	2.1300e-003	0.2430	0.0588	0.3018	0.1212	0.0555	0.1767	0.0000	189.5342	189.5342	0.0324	0.0000	190.3436

Mitigated Construction

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
tons/yr										MT/yr						
2020	0.1657	1.1480	1.0492	2.1300e-003	0.1336	0.0588	0.1924	0.0611	0.0555	0.1166	0.0000	189.5340	189.5340	0.0324	0.0000	190.3435
Maximum	0.1657	1.1480	1.0492	2.1300e-003	0.1336	0.0588	0.1924	0.0611	0.0555	0.1166	0.0000	189.5340	189.5340	0.0324	0.0000	190.3435

Percent Reduction	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	0.00	0.00	0.00	0.00	45.03	0.00	36.26	49.59	0.00	34.02	0.00	0.00	0.00	0.00	0.00	0.00

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-31-2020	4-29-2020	0.6866	0.6866
2	4-30-2020	7-30-2020	0.6292	0.6292
		Highest	0.6866	0.6866

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0173	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.0000e-005	8.0000e-005	0.0000	0.0000	9.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0675	0.2860	0.7343	2.2600e-003	0.1846	2.3000e-003	0.1869	0.0494	2.1600e-003	0.0516	0.0000	208.0345	208.0345	0.0119	0.0000	208.3308
Waste						0.0000	0.0000		0.0000	0.0000	0.0792	0.0000	0.0792	4.6800e-003	0.0000	0.1961
Water						0.0000	0.0000		0.0000	0.0000	0.0000	19.5539	19.5539	7.9000e-004	1.6000e-004	19.6221
Total	0.0847	0.2860	0.7344	2.2600e-003	0.1846	2.3000e-003	0.1869	0.0494	2.1600e-003	0.0516	0.0792	227.5885	227.6676	0.0173	1.6000e-004	228.1491

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2.2 Overall Operational**Mitigated Operational**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Area	0.0173	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.0000e-005	8.0000e-005	0.0000	0.0000	9.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0675	0.2860	0.7343	2.2600e-003	0.1846	2.3000e-003	0.1869	0.0494	2.1600e-003	0.0516	0.0000	208.0345	208.0345	0.0119	0.0000	208.3308
Waste						0.0000	0.0000		0.0000	0.0000	0.0792	0.0000	0.0792	4.6800e-003	0.0000	0.1961
Water						0.0000	0.0000		0.0000	0.0000	0.0000	19.5539	19.5539	7.9000e-004	1.6000e-004	19.6221
Total	0.0847	0.2860	0.7344	2.2600e-003	0.1846	2.3000e-003	0.1869	0.0494	2.1600e-003	0.0516	0.0792	227.5885	227.6676	0.0173	1.6000e-004	228.1491

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail**Construction Phase**

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/31/2020	2/3/2020	5	2	
2	Site Preparation	Site Preparation	2/4/2020	3/4/2020	5	22	
3	Building Construction	Building Construction	3/5/2020	6/30/2020	5	84	
4	Architectural Coating	Architectural Coating	3/5/2020	6/30/2020	5	84	

Acres of Grading (Site Preparation Phase): 0**Acres of Grading (Grading Phase): 0****Acres of Paving: 0**

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 4,575; Non-Residential Outdoor: 1,525; Striped Parking Area: 0
(Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

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Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	7	5.00	6.00	2.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	10.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	83.00	32.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	17.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.2000e-004	0.0000	2.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.3000e-004	5.4000e-003	5.9700e-003	1.0000e-005		3.3000e-004	3.3000e-004	3.2000e-004	3.2000e-004	3.2000e-004	0.0000	0.8105	0.8105	1.2000e-004	0.0000	0.8136
Total	6.3000e-004	5.4000e-003	5.9700e-003	1.0000e-005	2.2000e-004	3.3000e-004	5.5000e-004	3.0000e-005	3.2000e-004	3.5000e-004	0.0000	0.8105	0.8105	1.2000e-004	0.0000	0.8136

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3.2 Demolition - 2020**Unmitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Hauling	1.0000e-005	2.8000e-004	7.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0771	0.0771	1.0000e-005	0.0000	0.0773
Vendor	2.0000e-005	6.8000e-004	1.8000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1583	0.1583	1.0000e-005	0.0000	0.1586
Worker	2.0000e-005	1.0000e-005	1.3000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0362	0.0362	0.0000	0.0000	0.0363
Total	5.0000e-005	9.7000e-004	3.8000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	2.0000e-005	0.0000	3.0000e-005	0.0000	0.2717	0.2717	2.0000e-005	0.0000	0.2722

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Fugitive Dust					1.0000e-004	0.0000	1.0000e-004	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.3000e-004	5.4000e-003	5.9700e-003	1.0000e-005		3.3000e-004	3.3000e-004	3.2000e-004	3.2000e-004	3.2000e-004	0.0000	0.8105	0.8105	1.2000e-004	0.0000	0.8136
Total	6.3000e-004	5.4000e-003	5.9700e-003	1.0000e-005	1.0000e-004	3.3000e-004	4.3000e-004	2.0000e-005	3.2000e-004	3.4000e-004	0.0000	0.8105	0.8105	1.2000e-004	0.0000	0.8136

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3.2 Demolition - 2020**Mitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Hauling	1.0000e-005	2.8000e-004	7.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0771	0.0771	1.0000e-005	0.0000	0.0773
Vendor	2.0000e-005	6.8000e-004	1.8000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1583	0.1583	1.0000e-005	0.0000	0.1586
Worker	2.0000e-005	1.0000e-005	1.3000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0362	0.0362	0.0000	0.0000	0.0363
Total	5.0000e-005	9.7000e-004	3.8000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	2.0000e-005	0.0000	3.0000e-005	0.0000	0.2717	0.2717	2.0000e-005	0.0000	0.2722

3.3 Site Preparation - 2020**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Fugitive Dust					0.1987	0.0000	0.1987	0.1092	0.0000	0.1092	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.2200e-003	0.0926	0.1003	1.4000e-004		5.8600e-003	5.8600e-003	5.3900e-003	5.3900e-003	5.3900e-003	0.0000	12.0055	12.0055	3.8800e-003	0.0000	12.1026
Total	9.2200e-003	0.0926	0.1003	1.4000e-004	0.1987	5.8600e-003	0.2046	0.1092	5.3900e-003	0.1146	0.0000	12.0055	12.0055	3.8800e-003	0.0000	12.1026

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3.3 Site Preparation - 2020**Unmitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.5000e-004	7.5200e-003	2.0000e-003	2.0000e-005	4.4000e-004	4.0000e-005	4.7000e-004	1.3000e-004	4.0000e-005	1.6000e-004	0.0000	1.7415	1.7415	1.3000e-004	0.0000	1.7448
Worker	4.1000e-004	3.0000e-004	2.9400e-003	1.0000e-005	8.8000e-004	1.0000e-005	8.9000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.7974	0.7974	2.0000e-005	0.0000	0.7980
Total	6.6000e-004	7.8200e-003	4.9400e-003	3.0000e-005	1.3200e-003	5.0000e-005	1.3600e-003	3.6000e-004	5.0000e-005	4.0000e-004	0.0000	2.5389	2.5389	1.5000e-004	0.0000	2.5428

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Fugitive Dust					0.0894	0.0000	0.0894	0.0492	0.0000	0.0492	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.2200e-003	0.0926	0.1003	1.4000e-004		5.8600e-003	5.8600e-003		5.3900e-003	5.3900e-003	0.0000	12.0055	12.0055	3.8800e-003	0.0000	12.1026
Total	9.2200e-003	0.0926	0.1003	1.4000e-004	0.0894	5.8600e-003	0.0953	0.0492	5.3900e-003	0.0546	0.0000	12.0055	12.0055	3.8800e-003	0.0000	12.1026

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3.3 Site Preparation - 2020**Mitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.5000e-004	7.5200e-003	2.0000e-003	2.0000e-005	4.4000e-004	4.0000e-005	4.7000e-004	1.3000e-004	4.0000e-005	1.6000e-004	0.0000	1.7415	1.7415	1.3000e-004	0.0000	1.7448
Worker	4.1000e-004	3.0000e-004	2.9400e-003	1.0000e-005	8.8000e-004	1.0000e-005	8.9000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.7974	0.7974	2.0000e-005	0.0000	0.7980
Total	6.6000e-004	7.8200e-003	4.9400e-003	3.0000e-005	1.3200e-003	5.0000e-005	1.3600e-003	3.6000e-004	5.0000e-005	4.0000e-004	0.0000	2.5389	2.5389	1.5000e-004	0.0000	2.5428

3.4 Building Construction - 2020**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Off-Road	0.0890	0.8058	0.7076	1.1300e-003		0.0469	0.0469		0.0441	0.0441	0.0000	97.2762	97.2762	0.0237	0.0000	97.8695
Total	0.0890	0.8058	0.7076	1.1300e-003		0.0469	0.0469		0.0441	0.0441	0.0000	97.2762	97.2762	0.0237	0.0000	97.8695

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3.4 Building Construction - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.1200e-003	0.1532	0.0407	3.6000e-004	8.9200e-003	7.5000e-004	9.6700e-003	2.5800e-003	7.1000e-004	3.2900e-003	0.0000	35.4630	35.4630	2.7200e-003	0.0000	35.5309
Worker	0.0129	9.5100e-003	0.0933	2.8000e-004	0.0280	2.0000e-004	0.0282	7.4300e-003	1.9000e-004	7.6100e-003	0.0000	25.2692	25.2692	7.6000e-004	0.0000	25.2881
Total	0.0180	0.1627	0.1340	6.4000e-004	0.0369	9.5000e-004	0.0378	0.0100	9.0000e-004	0.0109	0.0000	60.7321	60.7321	3.4800e-003	0.0000	60.8191

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0890	0.8058	0.7076	1.1300e-003		0.0469	0.0469		0.0441	0.0441	0.0000	97.2761	97.2761	0.0237	0.0000	97.8694
Total	0.0890	0.8058	0.7076	1.1300e-003		0.0469	0.0469		0.0441	0.0441	0.0000	97.2761	97.2761	0.0237	0.0000	97.8694

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3.4 Building Construction - 2020**Mitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.1200e-003	0.1532	0.0407	3.6000e-004	8.9200e-003	7.5000e-004	9.6700e-003	2.5800e-003	7.1000e-004	3.2900e-003	0.0000	35.4630	35.4630	2.7200e-003	0.0000	35.5309
Worker	0.0129	9.5100e-003	0.0933	2.8000e-004	0.0280	2.0000e-004	0.0282	7.4300e-003	1.9000e-004	7.6100e-003	0.0000	25.2692	25.2692	7.6000e-004	0.0000	25.2881
Total	0.0180	0.1627	0.1340	6.4000e-004	0.0369	9.5000e-004	0.0378	0.0100	9.0000e-004	0.0109	0.0000	60.7321	60.7321	3.4800e-003	0.0000	60.8191

3.5 Architectural Coating - 2020**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Archit. Coating	0.0353					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0102	0.0707	0.0769	1.2000e-004		4.6600e-003	4.6600e-003		4.6600e-003	4.6600e-003	0.0000	10.7237	10.7237	8.3000e-004	0.0000	10.7444
Total	0.0455	0.0707	0.0769	1.2000e-004		4.6600e-003	4.6600e-003		4.6600e-003	4.6600e-003	0.0000	10.7237	10.7237	8.3000e-004	0.0000	10.7444

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3.5 Architectural Coating - 2020**Unmitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6300e-003	1.9500e-003	0.0191	6.0000e-005	5.7300e-003	4.0000e-005	5.7700e-003	1.5200e-003	4.0000e-005	1.5600e-003	0.0000	5.1756	5.1756	1.6000e-004	0.0000	5.1795
Total	2.6300e-003	1.9500e-003	0.0191	6.0000e-005	5.7300e-003	4.0000e-005	5.7700e-003	1.5200e-003	4.0000e-005	1.5600e-003	0.0000	5.1756	5.1756	1.6000e-004	0.0000	5.1795

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Archit. Coating	0.0353					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0102	0.0707	0.0769	1.2000e-004		4.6600e-003	4.6600e-003		4.6600e-003	4.6600e-003	0.0000	10.7237	10.7237	8.3000e-004	0.0000	10.7444
Total	0.0455	0.0707	0.0769	1.2000e-004		4.6600e-003	4.6600e-003		4.6600e-003	4.6600e-003	0.0000	10.7237	10.7237	8.3000e-004	0.0000	10.7444

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3.5 Architectural Coating - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6300e-003	1.9500e-003	0.0191	6.0000e-005	5.7300e-003	4.0000e-005	5.7700e-003	1.5200e-003	4.0000e-005	1.5600e-003	0.0000	5.1756	5.1756	1.6000e-004	0.0000	5.1795
Total	2.6300e-003	1.9500e-003	0.0191	6.0000e-005	5.7300e-003	4.0000e-005	5.7700e-003	1.5200e-003	4.0000e-005	1.5600e-003	0.0000	5.1756	5.1756	1.6000e-004	0.0000	5.1795

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0675	0.2860	0.7343	2.2600e-003	0.1846	2.3000e-003	0.1869	0.0494	2.1600e-003	0.0516	0.0000	208.0345	208.0345	0.0119	0.0000	208.3308
Unmitigated	0.0675	0.2860	0.7343	2.2600e-003	0.1846	2.3000e-003	0.1869	0.0494	2.1600e-003	0.0516	0.0000	208.0345	208.0345	0.0119	0.0000	208.3308

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated		
	Weekday	Saturday	Sunday	Annual VMT		Annual VMT		
City Park	175.96	527.94	197.98	489,714		489,714		
Total	175.96	527.94	197.98	489,714		489,714		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271

5.0 Energy Detail

Historical Energy Use: N

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5.2 Energy by Land Use - Natural Gas**Mitigated**

Land Use	Natural Gas Use kBtu/yr	ROG	NOx	CO	SO ₂	Fugitive PM ₁₀	Exhaust PM ₁₀	PM ₁₀ Total	Fugitive PM _{2.5}	Exhaust PM _{2.5}	PM _{2.5} Total	Bio- CO ₂	NBio- CO ₂	Total CO ₂	CH ₄	N ₂ O	CO ₂ e
tons/yr												MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.3 Energy by Land Use - Electricity**Unmitigated**

Land Use	Electricity Use kWh/yr	Total CO ₂	CH ₄	N ₂ O	CO ₂ e
MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

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5.3 Energy by Land Use - Electricity**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail**6.1 Mitigation Measures Area**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0173	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.0000e-005	8.0000e-005	0.0000	0.0000	9.0000e-005
Unmitigated	0.0173	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.0000e-005	8.0000e-005	0.0000	0.0000	9.0000e-005

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6.2 Area by SubCategory**Unmitigated**

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Architectural Coating	3.5300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0137					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.0000e-005	8.0000e-005	0.0000	0.0000	9.0000e-005
Total	0.0173	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.0000e-005	8.0000e-005	0.0000	0.0000	9.0000e-005

Mitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Architectural Coating	3.5300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0137					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.0000e-005	8.0000e-005	0.0000	0.0000	9.0000e-005
Total	0.0173	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.0000e-005	8.0000e-005	0.0000	0.0000	9.0000e-005

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	19.5539	7.9000e-004	1.6000e-004	19.6221
Unmitigated	19.5539	7.9000e-004	1.6000e-004	19.6221

7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 5.3855	19.5539	7.9000e-004	1.6000e-004	19.6221
Total		19.5539	7.9000e-004	1.6000e-004	19.6221

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7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 5.3855	19.5539	7.9000e-004	1.6000e-004	19.6221
Total		19.5539	7.9000e-004	1.6000e-004	19.6221

8.0 Waste Detail**8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0792	4.6800e-003	0.0000	0.1961
Unmitigated	0.0792	4.6800e-003	0.0000	0.1961

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8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.39	0.0792	4.6800e-003	0.0000	0.1961
Total		0.0792	4.6800e-003	0.0000	0.1961

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.39	0.0792	4.6800e-003	0.0000	0.1961
Total		0.0792	4.6800e-003	0.0000	0.1961

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

APPENDIX E – OTAY LAKES CAP CONSISTENCY CHECKLIST





Permit Number: _____

COUNTY OF SAN DIEGO
LAND USE AND ENVIRONMENT GROUP
Department of Planning & Development Services

Appendix A: Draft Climate Action Plan

Consistency Review Checklist

Introduction

The County of San Diego (County) Climate Action Plan (CAP), adopted by the Board of Supervisors on [DATE], outlines actions that the County will undertake to meet its greenhouse gas (GHG) emissions reduction targets. Implementation of the CAP will require that new development projects incorporate more sustainable design standards and implement applicable reduction measures consistent with the CAP. To help plan and design projects consistent with the CAP, and to assist County staff in implementing the CAP and determining the consistency of proposed projects with the CAP during development review, the County has prepared a CAP Consistency Review Checklist (Checklist). This Checklist, in conjunction with the CAP, provides a streamlined review process for proposed discretionary projects that require environmental review pursuant to the California Environmental Quality Act (CEQA). Please refer to the County's Guidelines for Determining Significance for Climate Change (Guidelines) for more information on GHG emissions, climate change impact requirements, thresholds of significance, and compliance with CEQA Guidelines Section 15183.5.

The purpose of this Checklist is to implement GHG reduction measures from the CAP that apply to new development projects. The CAP presents the County's comprehensive strategy to reduce GHG emissions to meet its reduction targets. These reductions will be achieved through a combination of County initiatives and reduction actions for both existing and new development. Reduction actions that apply to existing and new development will be implemented through a combination of mandatory requirements and incentives. This Checklist specifically applies to proposed discretionary projects that require environmental review pursuant to CEQA. Therefore, the Checklist represents one implementation tool in the County's overall strategy to implement the CAP. Implementation of measures that do not apply to new development projects will occur through the implementation mechanisms identified in Chapter 5 of the CAP. Implementation of applicable reduction measures in new development projects will help the County achieve incremental reductions towards its targets, with additional reductions occurring through County initiatives and measures related to existing development that are implemented outside of the Checklist process.

The Checklist follows a two-step process to determine if projects are consistent with the CAP and whether they may have a significant cumulative impact under the County's adopted GHG thresholds of significance. The Checklist first assesses a project's consistency with the growth projections and land use assumptions that formed the basis of CAP emissions projections. If a project is consistent with the projections and land use assumptions in the CAP, its associated growth in terms of GHG emissions would have been accounted for in the CAP's projections and project implementation of the CAP reduction measures will contribute

towards reducing the County's emissions and meeting the County's reduction targets. Projects that include a land use plan and/or zoning designation amendment that would result in an equivalent or less GHG-intensive project when compared to existing designation, would also be within the projections assumed in the CAP. Projects responding in the affirmative to Step 1 questions can move forward to Step 2 of the Checklist. If a land use and/or zoning designation amendment results in a more GHG-intensive project, the project is required to demonstrate consistency with applicable CAP measures and offset the increase in emissions as described in the Guidelines. Step 2 of the Checklist contains the CAP GHG reduction measures that projects are required to implement to ensure compliance with the CAP. Implementation of these measures would ensure that new development is consistent with relevant CAP strategies and measures and will contribute towards achieving the identified GHG reduction targets. Projects that are consistent with the CAP, as determined using this Checklist, may rely on the CAP for the cumulative impacts analysis of GHG emissions under CEQA.

A project's incremental contribution to cumulative GHG emissions may be determined to not be cumulatively considerable if it is determined to be consistent with the CAP. As specified in the CEQA Guidelines, the mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the project's incremental effects are "cumulatively considerable" (CCR, Title 14, Division 6, Chapter 3, Section 15064[h][4]). Projects requiring discretionary review that cannot demonstrate consistency with the CAP using this Checklist may have a cumulatively considerable contribution to a significant cumulative impact and would be required to prepare a separate, more detailed project-level GHG analysis as part of the CEQA document prepared for the project.

Checklist Applicability

This Checklist only applies to development projects that require discretionary review and are subject to environmental review (i.e., not statutorily or categorically exempt projects) pursuant to CEQA. Projects that are limited to ministerial review and approval (e.g., only building permits) would not be subject to the Checklist. The CAP contains other measures that, when implemented, would apply broadly to all ministerial and discretionary projects. These measures are included for discretionary projects in this Checklist, but could also apply more broadly once the County takes action to codify specific requirements or standards.

Checklist Procedures

General procedures for Checklist compliance and review are described below. Specific guidance is also provided under each of the questions under Steps 1 and 2 of the Checklist in subsequent pages.

1. The County's Department of Planning & Development Services (PDS) reviews development applications and makes determinations regarding environmental review requirements under CEQA. Procedures for CEQA can be found on the County's [Process Guidance & Regulations/Statutes Homepage](#). The Director of PDS will determine whether environmental review is required, and if so, whether completion of the CAP Checklist is required for a proposed project or whether a separate project-level GHG analysis is required.
2. The specific applicable requirements outlined in the Checklist shall be required as a condition of project approval.
3. The project must provide substantial evidence that demonstrates how the proposed project will implement each applicable Checklist requirement described herein to the satisfaction of the Director of PDS.

4. If a question in the Checklist is deemed not applicable (N/A) to a project, substantial evidence shall be provided to the satisfaction of the Director of PDS demonstrating why the Checklist item is not applicable. Feasibility of reduction measures for new projects was assessed in development of the CAP and measures determined to be feasible were incorporated into the Checklist. Therefore, it is expected that projects would have the ability to comply with all applicable Checklist measures.
5. Development projects requiring discretionary review that cannot demonstrate consistency with the CAP using this Checklist shall prepare a separate, project-level GHG analysis as part of the CEQA document prepared for the project and may be required to prepare an Environmental Impact Report (EIR). Guidance for project-specific GHG Technical Reports is outlined in the Report Format and Content Requirements for Climate Change document, provided under separate cover. The Report Format and Content Requirements document provides guidance on the outline and content of GHG analyses for discretionary projects processed by PDS that cannot show compliance with the CAP Checklist.

Checklist Updates

The Guidelines and Checklist may be administratively updated by the County from time to time to comply with amendments to State laws or court directives, or to remove measures that may become mandatory through future updates to State or local codes. Administrative revisions to the Guidelines and Checklist will be limited to changes that do not trigger a subsequent EIR or a supplement to the SEIR for the CAP pursuant to CEQA Guidelines Section 15162. Administrative revisions, as described above, will not require approval by the Board of Supervisors (Board). All other changes to the Guidelines and Checklist require Board approval.

Comprehensive updates to the Guidelines and Checklist will be coordinated with each CAP update (i.e., every five years beginning in 2025) and would require Board approval. Future updates of the CAP, Guidelines, and Checklist shall comply with CEQA.

Application Information

Contact Information

Project No. and Name: _____

Property Address and APN: _____

Applicant Name and Co.: _____

Contact Phone: _____ Contact Email: _____

Was a consultant retained to complete this checklist? ☐ Yes ☐ No

If Yes, complete the following:

Consultant Name: _____ Contact Phone: _____

Company Name: _____ Contact Email: _____

Project Information

1. What is the size of the project site (acres [gross and net])? _____

2. Identify all applicable proposed land uses (indicate square footage [gross and net]):

☐ Residential (indicate # of single-family dwelling units): _____

☐ Residential (indicate # of multi-family dwelling units): _____

☐ Commercial (indicate total square footage [gross and net]): _____

☐ Industrial (indicate total square footage [gross and net]): _____

☐ Agricultural (indicate total acreage [gross and net]): _____

☐ Other (describe): _____

3. Provide a description of the project proposed. This description should match the project description used for the CEQA document. The description may be attached to the Checklist if there are space constraints.

CAP Consistency Checklist Questions

Step 1: Land Use Consistency

For projects that are subject to CAP consistency review, the first step in determining consistency is to assess the project's consistency with the growth projections used in the development of the CAP. This section allows the County to determine a project's consistency with the land use assumptions used in the CAP.

Step 1: Land Use Consistency		
Checklist Item (Check the appropriate box and provide explanation and supporting documentation for your answer)	Yes	No
1. Is the proposed project consistent with the existing General Plan regional category, land use designations, and zoning designations?	<input type="checkbox"/>	<input type="checkbox"/>
<p>Project Detail: Please substantiate how the project satisfies question 1.</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>		
<p>If "Yes," proceed to Step 2 (CAP Measures Consistency) of the Checklist.</p> <p>If "No," proceed to question 2 below.</p>		
2. Does the project include a land use element and/or zoning designation amendment that would result in an equivalent or less GHG-intensive project when compared to the existing designations?	<input type="checkbox"/>	<input type="checkbox"/>
<p>Project Detail: Please substantiate how the project satisfies question 2.</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>		
<p>If "Yes," the project must provide estimated project GHG emissions under both existing and proposed designation(s) for comparison to substantiate the response and proceed to Step 2 (CAP Measures Consistency) of the Checklist.</p> <p>If "No," the project must prepare a separate, more detailed project-level GHG analysis, as outlined in the County's Guidelines for Determining Significance for Climate Change and Report Format and Content Requirements for Climate Change, to demonstrate how the project would offset the increase in GHG emissions over the existing designations or baseline conditions. The project must also incorporate each of the CAP measures identified in Step 2 to mitigate cumulative GHG emissions impacts. Proceed and complete a separate project-specific GHG analysis and Step 2 of the Checklist. Refer to Section 4 of the County's Guidelines for procedures on analyzing General Plan Amendments.</p>		

Step 2: CAP Measures Consistency

The second step of the CAP consistency review is to review and evaluate a project's consistency with the applicable measures of the CAP. Each checklist item is associated with a specific GHG reduction measure(s) in the County CAP.

Step 2: CAP Measures Consistency				
Checklist Item (Check the appropriate box and provide an explanation for your answer)	CAP Measure	Yes	No	N/A
Step 2A: Construction Activities (All projects with a construction component must fill out this portion of the Checklist)				
Construction Equipment				
1a. Construction Equipment <u>Residential and Non-Residential Projects that propose use of more than ten pieces of construction equipment:</u> Will 10% of construction equipment in-use during construction activities use alternative fuels such as renewable diesel, renewable natural gas, compressed natural gas or electricity?	T-3.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check "N/A" only if the project does not propose any construction activities or would use fewer than 10 pieces of equipment.				
1b. Project Detail: Please substantiate how the project satisfies question 1a.				
<hr/> <hr/> <hr/> <hr/> <hr/> <hr/>				
Step 2B: Project Operations (All projects with an operational component must fill out this portion of the Checklist)				
Transportation Demand Management				
2a. Transportation Demand Management (TDM) <u>Non-Residential:</u> For non-residential projects with anticipated employment of 25 or more, will the project implement a TDM program to achieve a 15% reduction in commute vehicle miles traveled (VMT), and commit to monitoring and reporting results to demonstrate on-going compliance?	T-2.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TDM components may include, but are not limited to: <input type="checkbox"/> Telecommuting <input type="checkbox"/> Car Sharing <input type="checkbox"/> Shuttle Service <input type="checkbox"/> Carpools <input type="checkbox"/> Vanpools <input type="checkbox"/> Bicycle Parking Facilities <input type="checkbox"/> Transit Subsidies				
The project may incorporate the TDM components listed above, and propose additional trip reduction measures, as long as a 15% reduction in commute VMT can be demonstrated				

Step 2: CAP Measures Consistency

Checklist Item (Check the appropriate box and provide an explanation for your answer)	CAP Measure	Yes	No	N/A
through substantial evidence.				
Check "N/A" if the project is a residential project or if the project would not accommodate more than 25 employees.				
2b. Project Detail: Please substantiate how the project satisfies question 2a.				

Shared and Reduced Parking

3a. Shared and Reduced Parking				
<p><u>Non-Residential:</u> For non-residential projects, will the project implement shared and reduced parking strategies that achieves a 10% reduction in commute VMT?</p> <p>Shared and reduced parking strategies may include, but are not limited to:</p> <p><input type="checkbox"/> Shared parking facilities</p> <p><input type="checkbox"/> Carpool/vanpool-only parking spaces</p> <p><input type="checkbox"/> Shuttle facilities</p> <p><input type="checkbox"/> Electric Vehicle-only parking spaces</p>	T-2.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check "N/A" if the project is a residential project.				
3b. Project Detail: Please substantiate how the project satisfies question 3a.				

Building Energy Efficiency

4a. Energy Efficiency Standards for New Non-Residential Development and Zero Net Energy (ZNE) Requirements for New Residential Development:				
<p><u>Non-Residential:</u> For projects that include new non-residential construction, will the non-residential component of the project achieve a 10% greater building energy efficiency than required by the 2016 State energy efficiency standards in Title 24, Part 6 of the California Code of Regulations? For projects for which building permits would be issued after January 1, 2030, will the non-residential portion of the project achieve zero net energy (ZNE) performance, in accordance with standards, specifications or guidance issued by the California Energy Commission under Title 24 of the California Code of Regulations?</p>	E-1.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>Residential:</u> For projects that include new residential construction for which building				

Step 2: CAP Measures Consistency

Checklist Item (Check the appropriate box and provide an explanation for your answer)	CAP Measure	Yes	No	N/A
permits would be issued after January 1, 2020, will the residential portion of the project achieve ZNE performance, in accordance with standards, specifications or guidance issued by the California Energy Commission under Title 24 of the California Code of Regulations?				
Check "N/A" if the project is a residential project for which building permits will be issued prior to January 1, 2020.				

4b. Project Detail:

Please substantiate how the project satisfies question 4a.

Water Heating Systems

5a. Electric or Alternately-Fueled Water Heating Systems

Residential: For projects that include residential construction, will the project, as a condition of approval, install the following types of electric or alternately-fueled water heating system(s)? Please check which types of system(s) will be installed:

- ☐ Solar thermal water heater
- ☐ Tankless electric water heater
- ☐ Storage electric water heaters
- ☐ Electric heat pump water heater
- ☐ Tankless natural gas water heater
- ☐ Other

E-1.2

☐
☐
☐

Check "N/A" if the project does not contain any residential buildings.

5b. Project Detail:

Please substantiate how the project satisfies question 5a.

Renewable Electricity

6a. Renewable Electricity

Non-Residential: For new non-residential projects, will the project provide 100% of the project's expected annual electricity use through rooftop photovoltaic panels or other onsite renewable sources, or procure 100% renewable electricity from a utility purveyor?

E-2.2

☐
☐
☐

Check "N/A" only if the project does not contain any non-residential buildings.

6b. Project Detail:

Step 2: CAP Measures Consistency

Checklist Item (Check the appropriate box and provide an explanation for your answer)	CAP Measure	Yes	No	N/A
Please substantiate how the project satisfies question 6a.				

Water-Efficient Appliances and Plumbing Fixtures

7a. Water Efficient Appliances and Plumbing Fixtures

Residential: For new residential projects, will the project comply with all of the following water efficiency and conservation BMPs¹?

- ☐ Kitchen Faucets: The maximum flow rate of kitchen faucets shall not exceed 1.5 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.5 gallons per minute at 60 psi².
- ☐ Energy Efficient Appliances: Install at least one qualified ENERGY STAR dishwasher or clothes washer per unit.

W-1.1

☐
☐
☐

Check "N/A" if the project is a non-residential project.

7b. Project Detail:

Please substantiate how the project satisfies question 7a.

Rain Barrel Installations

8a. Rain Barrel Installations

Residential: For new residential projects, will the project make use of incentives to install one rain barrel per every 500 square feet of available roof area?

Check "N/A" if the project is a non-residential project; if State, regional or local incentives/rebates to purchase rain barrels are not available; or if funding for programs/rebates has been exhausted.

W-2.1

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8b. Project Detail:

Please substantiate how the project satisfies question 8a.

¹ CALGreen Tier 1 residential voluntary measure A4.303 of the [California Green Building Standards Code](#).

² Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.

Step 2: CAP Measures Consistency

Checklist Item (Check the appropriate box and provide an explanation for your answer)	CAP Measure	Yes	No	N/A
--	-------------	-----	----	-----

Reduce Outdoor Water Use

9a. Reduce Outdoor Water Use

Residential: Will the project submit a Landscape Document Package that is compliant with the County's Water Conservation in Landscaping Ordinance³ and demonstrates a 40% reduction in current Maximum Applied Water Allowance (MAWA) for outdoor use, as outlined below?

Maximum Applied Water Allowance for Residential Compliance (gallons/year) ⁴				
Regional Area	Size of Landscaped Area			
	500-999 Square Feet	1,000-1,499 Square Feet	1,500-1,999 Square Feet	2,000-2,499 Square Feet
Coastal	9,484	14,231	18,977	23,724
Coastal Corridor	9,484	14,231	18,977	23,724
Inland	10,445	13,872	20,903	26,127
Desert	15,412	23,125	30,838	38,552

Non-Residential: Will the project submit a Landscape Document Package that is compliant with the County's Water Conservation in Landscaping Ordinance and demonstrates a 40% reduction in current MAWA for outdoor use, as outlined below?

Maximum Applied Water Allowance for Non-Residential Compliance (gallons/year) ⁵				
Regional Area	Size of Landscaped Area			
	500-999 Square Feet	1,000-1,499 Square Feet	1,500-1,999 Square Feet	2,000-2,499 Square Feet
Coastal	7,760	11,643	15,527	19,411
Coastal Corridor	7,760	11,643	15,527	19,411
Inland	8,546	12,823	17,069	21,377
Desert	12,610	18,920	25,231	31,542

Check "N/A" if the project does not propose any landscaping.

W-1.2

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9b. Project Detail:

Please substantiate how the project satisfies question 9a.

³ [San Diego County Water Efficient Landscape Design Manual, Appendix B.](#)

⁴ Values in the table reflect a 40% reduction in the County's current MAWA. See [Appendix A of the San Diego County Water Efficient Landscape Design Manual](#) for definitions of Regional Areas.

⁵ Values in the table reflect a 40% reduction in the County's current MAWA. See [Appendix A of the San Diego County Water Efficient Landscape Design Manual](#) for definitions of Regional Areas.

Step 2: CAP Measures Consistency

Checklist Item (Check the appropriate box and provide an explanation for your answer)	CAP Measure	Yes	No	N/A

Agricultural and Farming Operations⁶

10a. Agricultural and Farming Equipment

Will the project use the San Diego County Air Pollution Control District's (SDAPCD's) farm equipment incentive program to convert gas- and diesel-powered farm equipment to electric equipment?

Check "N/A" if the project does not contain any agricultural or farming operations; if the SDAPCD incentive program is no longer available; or if funding for the incentive program has been exhausted.

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10b. Project Detail:

Please substantiate how the project satisfies question 10a.

11a. Electric Irrigation Pumps

Will the project use SDAPCD's farm equipment incentive program to convert diesel- or gas-powered irrigation pumps to electric irrigation pumps?

Check "N/A" if the project does not contain any agricultural or farming operations; if the SDAPCD incentive program is no longer available; or if funding for the incentive program has been exhausted.

A-1.2

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11b. Project Detail:

Please substantiate how the project satisfies question 11a.

Tree Planting

12a. Tree Planting

Residential: For residential projects, will the project plant, at a minimum, two trees per

A-2.1

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⁶ Existing agricultural operations would not be subject to questions 10 and 11 of the Checklist, unless a proposed expansion is subject to discretionary review and requires environmental review pursuant to CEQA.

Step 2: CAP Measures Consistency

Checklist Item (Check the appropriate box and provide an explanation for your answer)	CAP Measure	Yes	No	N/A
every new residential dwelling unit proposed?				
Check "N/A" if the project is a non-residential project.				
12b. Project Detail: Please substantiate how the project satisfies question 12a.				

APPENDIX F – PHASE I PALEONTOLOGICAL RESOURCES REPORT



**PHASE 1 PALEONTOLOGICAL RESOURCES
REPORT FOR THE OTAY LAKES CAMPGROUND
PROJECT
SAN DIEGO COUNTY, CALIFORNIA**

Project Common Name: BSOA Otay Lakes Campground

Prepared for:

Lead Agency:

County of San Diego Planning and Development Services
Contact: Donna Beddow
55190 Overland Avenue
San Diego, CA 92123
(858) 495-5375

Prepared by:

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Project Proponent:

San Diego-Imperial Council of The Boy Scouts of America
1207 Upas St,
San Diego, CA 92103

September 6, 2019

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SECTION 1.0 – INTRODUCTON

1.1 PROJECT DESCRIPTION

The County of San Diego (County), as the lead agency under the California Environmental Quality Act (CEQA), has prepared this initial study (IS), which this technical report supports, to evaluate the potential environmental impacts associated with the Otay Lakes Campground Project (Proposed Project). The Proposed Project includes the development of new camping facilities, a flag plaza, archery range, fire ring and amphitheater, zip-line, demolition of existing restroom and construction of a new and larger restroom facility with showers overlapping the existing restroom footprint, development of an activity/program area ('Camporee Field'), construction of a fenced storage facility, development of six Challenging Outdoor Personal Experience (COPE) stations, and minor road improvements on County property adjacent to Otay Lakes County Park (Figure 1).

The paleontological resources assessment was conducted in accordance with the California Environmental Quality Act (CEQA) and the County of San Diego Guidelines for Determining Significance (County of San Diego 2009). The County of San Diego will serve as lead agency for the purposes of CEQA.

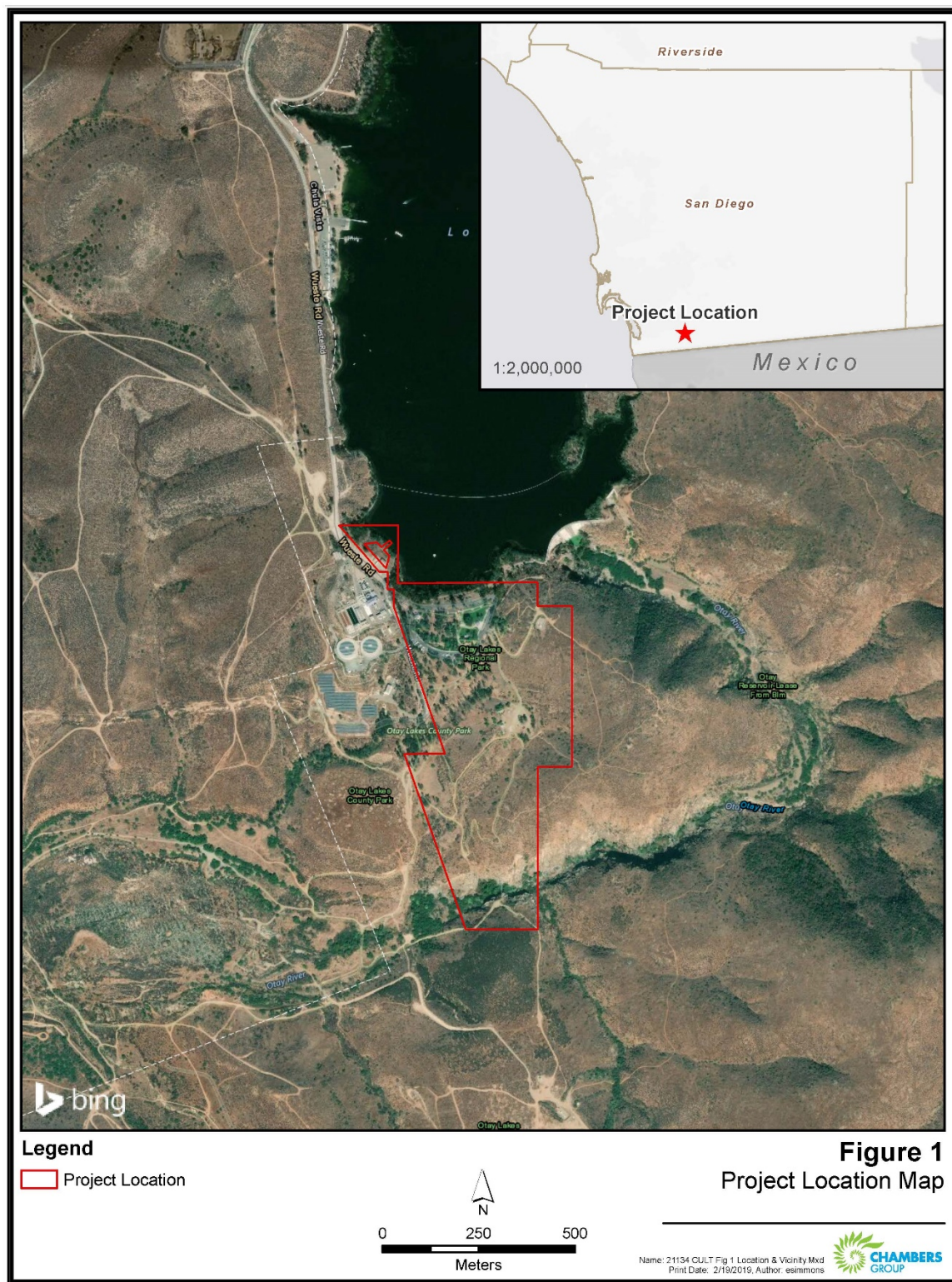


Figure 1: Project Location and Vicinity

1.2 GEOLOGIC SETTING

The project area is broadly defined as the Coastal Plain Region according to the County of San Diego (2009). The area is characterized by interbedded marine and nonmarine sedimentary rock units deposited over the last 75 million years. The sedimentary rocks overlie a buried topography of plutonic crystalline rocks composed of granite, granodiorite, etc. Many of the level surfaces in the coastal areas, including most of the mesa tops and coastal benches, are elevated marine terraces, and these, as well as the broad, level floodplains of river valleys, are characteristic features of the Coastal Plain Region (Bergen et al. 1996).

SECTION 2.0 – EXISTING REGULATIONS AND STANDARDS

In the County of San Diego, adverse impacts to paleontological resources are primarily addressed through the California Environmental Quality Act (CEQA). The County's Grading Ordinance also addresses paleontological resources. Additional federal and state regulations that govern the assessment and protection of paleontological resources can be found in Attachment B, as well as professional guidelines.

2.1 STATE REGULATIONS AND STANDARDS

Under CEQA, lead agencies are required to consider impacts to unique paleontological resources. CEQA is concerned with assessing impacts associated with the direct or indirect destruction of unique paleontological resources or sites that are of value to the region or state.

2.2 LOCAL REGULATIONS AND STANDARDS

Section 87.430 of the Grading Ordinance provides for the requirement of a paleontological monitor at the discretion of the County. In addition, the suspension of grading operation is required upon the discovery of fossils greater than twelve inches in any dimension. The ordinance also requires notification of the County Official (e.g. Permit Compliance Coordinator). The ordinance gives the County Official the authority to determine the appropriate resource recovery operations, which the permittee shall carry out prior to the County Official's authorization to resume normal grading operations.

The Conservation Element of the San Diego County General Plan provides policies for the protection of natural resources. In addition, Appendix G of the Conservation Element lists Unique Geologic Features for conservation, many of which are fossiliferous formations.

The County of San Diego Department of Planning and Land Use *Guidelines for Determining Significance for Paleontological Resources* (2009) is used by County staff during review of environmental documents pursuant to CEQA for the evaluation of significant effects.

2.3 DEFINITION OF SIGNIFICANCE

Sensitivity levels are rated for individual geologic formations, as it is the formation that contains the fossil remains. The sensitivity levels are the same as the resource potential ratings.

Based on the geologic formations in San Diego County, levels of paleontological resource potential and sensitivity have been developed (Deméré and Walsh 1993) and are shown on the "San Diego County Paleontological Sensitivity" map (Figure 2). Paleontological Resource Potential Ratings and Sensitivity of Geologic Formations in San Diego County (Table 1) lists the formations in the County that are known to contain or have the potential to contain unique paleontological resources. The resource potential ratings and geologic formation sensitivity levels are described below.

2.3.1 High

High resource potential and high sensitivity are assigned to geologic formations known to contain paleontological localities with rare, well preserved, critical fossil materials for stratigraphic or paleoenvironmental interpretation, and fossils providing important information about the paleoclimatic, paleobiological and/or evolutionary history (phylogeny) of animal and plant groups. In general, formations

with high resource potential are considered to have the highest potential to produce unique invertebrate fossil assemblages or unique vertebrate fossil remains and are, therefore, highly sensitive.

2.3.2 Moderate

Moderate resource potential and moderate sensitivity are assigned to geologic formations known to contain paleontological localities. These geologic formations are judged to have a strong, but often unproven, potential for producing unique fossil remains (Deméré and Walsh 1993).

2.3.3 Low

Low resource potential and low sensitivity are assigned to geologic formations that, based on their relatively young age and/or high-energy depositional history, are judged unlikely to produce unique fossil remains. Low resource potential formations rarely produce fossil remains of scientific significance and are considered to have low sensitivity. However, when fossils are found in these formations, they are often very significant additions to our geologic understanding of the area.

2.3.4 Marginal

Marginal resource potential and marginal sensitivity are assigned to geologic formations that are composed either of volcanoclastic (derived from volcanic sources) or metasedimentary rocks, but that nevertheless have a limited probability for producing fossils from certain formations at localized outcrops. Volcanoclastic rock can contain organisms that were fossilized by being covered by ash, dust, mud, or other debris from volcanoes. Sedimentary rocks that have been metamorphosed by heat and/or pressure caused by volcanoes or plutons are called metasedimentary. If the sedimentary rocks had paleontological resources within them, those resources may have survived the metamorphism and still be identifiable within the metasedimentary rock, but since the probability of this occurring is so limited, these formations are considered marginally sensitive.

2.3.5 No Potential

No resource potential is assigned to geologic formations that are composed entirely of volcanic or plutonic igneous rock, such as basalt or granite, and therefore do not have any potential for producing fossil remains. These formations have no paleontological resource potential, i.e. they are not sensitive.

SECTION 3.0 – ANALYSIS OF PROJECT EFFECTS

3.1 GEOLOGIC ROCK UNITS UNDERLYING THE PROJECT AREA

Young alluvium – A small area in the southwestern corner of the Project site is underlain at the surface by Holocene-age young alluvium, which typically lines modern drainages. Young alluvial deposits are generally considered to be less than 10,000 years old, and range in composition from unconsolidated to moderately consolidated silt, sand, pebbly and cobbly sand, and boulders. No fossils are currently known from these deposits in the vicinity of the Project site. These deposits are assigned a low paleontological sensitivity based on their relatively young geologic age and lack of recorded fossil collection localities. However, within the Project site, these deposits appear to overlie the Friars Formation (high paleontological sensitivity, see below), which could be impacted where the contact between these two geologic units is relatively shallow, though the actual depth is currently unknown.

Friars Formation – The fluvial deposits of the middle Eocene-age (approximately 47 to 46 million years old) Friars Formation underlie the southeastern corner of the Project site, and likely underlie the Lindavista Formation at unknown depths throughout the rest of the Project site. The SDNHM does not have any fossil collection localities from the Friars Formation within a half-mile radius of the Project site. The Friars Formation is assigned a high paleontological sensitivity on the basis of the recovery of diverse and well-preserved assemblages of both marine invertebrates and terrestrial vertebrates from these deposits.

Santiago Peak Volcanics – Crystalline basement rocks of early Cretaceous age (approximately 125 to 145 million years old), mapped as the Santiago Peak Volcanics by Todd (2004) underlie the majority of the Project site. The SDNHM does not have any fossil localities from these rocks within a half-mile radius of the project sites. The metavolcanic portions of this unit rarely preserve fossils due to the high temperatures associated with their formation; some of the volcanic breccias, however, have produced petrified wood, and are assigned a marginal sensitivity (Deméré and Walsh, 1993). The metasedimentary portions have the potential to yield fossils, including siliceous microfossils (e.g., radiolarians) and marine macroinvertebrates (e.g., clams and belemnites), and are assigned a moderate paleontological sensitivity. The lack of nearby localities from these deposits indicates that fossil recovery is unlikely, so the geologic unit as a whole is assigned a low paleontological sensitivity.

SECTION 4.0 – SUMMARY AND RECOMMENDATIONS

The high paleontological sensitivity of the Friars Formation in San Diego County (Deméré and Walsh, 1993; Stephenson et al., 2009) suggest the potential for construction of the Project to result in impacts to paleontological resources. Any proposed excavation activities that extend deep enough to encounter previously undisturbed deposits of this geologic unit have the potential to impact the paleontological resources preserved therein. Since an impact to paleontological resources does not typically occur until the substratum is excavated, monitoring during excavation is the essential measure to mitigate significant impacts to paleontological resources to a level below significance. According to County guidelines, the type of monitoring required is based on the amount of excavation and the site's paleontological resource potential and sensitivity. The guidelines state that when the volume of excavation exceeds 2,500 cubic yards, the potential loss of paleontological resources is much higher than for lesser amounts of excavation. Therefore, the County requires the following monitoring, and subsequent salvage of significant paleontological resources if they are found, to adequately mitigate potentially significant impacts:

- For projects within areas of High or Moderate Paleontological Resources Potential that propose excavation equal to or greater than 2,500 cubic yards, the services of a Project Paleontologist and a Paleontological Resources Monitor are required.
- For projects within areas of High or Moderate Paleontological Potential that propose excavation of less than 2,500 cubic yards, monitoring by a Standard Monitor is required.
- For projects within areas of Low or Marginal Potential, monitoring by a Standard Monitor is required.

A Project Paleontologist is a person with a Ph.D. or Master's Degree in Paleontology or related field, and who has knowledge of San Diego County paleontology and documented experience in professional paleontological procedures and techniques. A Paleontological Resources Monitor is defined as an individual with at least one year of experience in field identification and collection of fossil materials under the supervision of a Project Paleontologist. A Standard Monitor is any one person who is on the project site during all the original cutting of undisturbed substratum. The Standard Monitor must be designated by the Applicant and given the responsibility of watching for fossils so that the project is in conformance with Section 87.430 of the Grading Ordinance.

Mitigation conditions are to be placed on grading plans, and projects must conform to the requirements of the Grading Ordinance. Section 87.430 of the Grading Ordinance provides for the requirement of a paleontological monitor at the discretion of the County. In addition, the suspension of grading operation is required upon the discovery of fossils greater than twelve inches in any dimension.

SECTION 5.0 – REFERENCES

Bergen, F.W., H.J. Clifford, and S.G. Spear.

- 1996 Geology of San Diego County, Legacy of the Land. Sunbelt Publications, San Diego. Pp. 1-175, illustrated.

County of San Diego

- 2009 *Guidelines for Determining Significance, Paleontological Resources*. Land Use and Environment Group, Department of Planning and Land Use, Department of Public Works, San Diego County, California.

Deméré, T.A., and Walsh, S.L.

- 1993 Paleontological Resources, County of San Diego. Prepared for the San Diego Planning Commission: 1–68.

Stephenson, B., *et al.*

- 2009 County of San Diego Guidelines for determining significance, paleontological resources. Land Use and Environment Group, Department of Planning and Land Use, Department of Public Work

APPENDIX G – TRAFFIC SCOPING MEMORANDUM



Engineers & Planners

Traffic
Transportation
Parking

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May 14, 2019

Mr. Matthew Bohan
County of San Diego
Department of Parks and Recreation
5500 Overland Avenue #410
San Diego, CA 92123

LLG Reference: 3-19-3071

**Subject: Otay Lakes Campground Project – Transportation Impact
Analysis Scoping Memo San Diego, CA**

Dear Matthew:

This memo has been prepared to provide information to initiate the Transportation Impact Analysis Scoping process with the County of San Diego for the Otay Lakes Campground Project (Project). The San Diego – Imperial Council (Council) of Boy Scouts of America (BSOA) would lease County land adjacent to Otay Lakes County Park. The intent of this memo is to provide the County with the necessary information and verify critical assumptions to be utilized in the Transportation Impact Study (TIS) and obtain approval of these assumptions commensurate with the initial submittal of the study.

The Project proposes the development of new camping facilities, a flag plaza, archery range, fire ring and amphitheater, zip line, removal of restroom, construction of a new and larger restroom facility overlapping the existing footprint, development of an activity/program area ("Camporee Field"), construction of a fenced storage facility, and minor road improvements (decomposed granite) on County property adjacent to Otay Lakes County Park. The site is currently developed with a vacated campground.

Otay Lakes County Park is located at 2270 Wueste Road in Chula Vista, California, San Diego County. The proposed Project would occur within 69 acres of County property south of Otay Lakes County Park (proposed Project site). The County of San Diego General Plan identifies the land use and zoning of the Project site as Open Space (Conservation) and Open Space, respectively. A Project area map is included at the end of this letter on **Figure 1**.

Philip M. Linscott, PE (1924-2000)
Jack M. Greenspan, PE (Ret.)
William A. Law, PE (Ret.)
Paul W. Wilkinson, PE
John P. Keating, PE
David S. Shender, PE
John A. Boorman, PE
Clare M. Look-Jaeger, PE
Richard E. Barretto, PE
Keil D. Maberry, PE

PROJECT DESCRIPTION

As mentioned above, the Project includes the development of camping facilities and rehabilitation of existing campsites, construction of a flag plaza, rehabilitation of existing restroom facility, construction of fire ring and amphitheater, development of an activity/program area (“Camporee Field”), construction of a fenced storage facility, and minor road improvements on County property adjacent to Otay Lakes County Park.

Camping Facilities

The camping facilities component of the Project would include the establishment of new multipurpose campsites and rehabilitation of existing campsites that are conducive to family style camping. Each campsite would have a small hard covered area with two picnic tables, and would be designed to accommodate six (6) to eight (8) people. In total, the Project site would include a minimum of six (6) campsites and a maximum of 12 campsites.

Flag Plaza

The flag plaza would include minimal grading and construction of a concrete slab that would accommodate three flag poles. The flag plaza would be erected as a place of ceremony, commemoration, and communication. An adjacent parade ground located on the existing dirt ground would provide a place for youth to stand during ceremonies.

Camporee Field

The activity/program area would be developed to host large groups of up to 400 people. Activities that would occur within this area include archery and BB gun ranges, a Challenging Outdoor Personal Experience (COPE) course, Zip line(s), and an amphitheater with campfire bowl. Additionally, a large activity field would be established for games, trainings, and overflow camping.

Fire Ring and Amphitheater

The Project would include the construction of an amphitheater which includes an approximately 150-square foot stage and seating for approximately 100 people. Additionally, a fire ring will be installed.

Site Access

Access to the site is provided via Wueste Road. Wueste Road connects to Olympic Parkway in the north and is the primary access road to the Olympic Training Facility, Otay Lake City of San Diego Reservoir, and the Otay Water Treatment Plant.

Parking

It is expected that patrons of the site will be able to pay for parking in the adjacent County parking lot. There will also be a limited amount of spaces up by the restroom and group campsites. The majority of trips to/from the site will be drop-off/pick-up trips, not requiring long-term parking.

Figure 2 shows the conceptual site plan.

TRIP GENERATION

The Project trip generation is specific to the activities planned for the site. Based on information provided by the applicant, a site-specific activity-based trip generation was prepared. Three (3) activities are planned that would generate vehicle trips: 1) Day Camps; 2) Overnight Camping; and 3) Special Events.

Day Camps

Day Camps are programmed to occur over a five-day week, approximately four (4) times annually. Approximately 50-100 campers would attend each weekly camp (including chaperones and employees). Campers are anticipated to be driven to the site in private vehicles as drop-off/pick-up trips. It should be noted day camps are only programmed to occur four (4) times per year and do not represent typical weekday operations of the site contributing to off-site commuter peak street traffic. The site primarily operates on the weekend in use by the campground. For purposes of being conservative, the maximum 100 attendees of day camp were assumed in the trip generation calculations. Day camps are expected to take place Monday through Friday, with a start time of 8:30AM and end time of 3:30PM. After care is available until 5:30PM. It was assumed that 25% of day camp attendees would stay on-site for the after care.

Campsite (Programmed Overnight Camping)

Campsites were assumed to have programmed activities occurring every weekend. Programmed activities means the BSOA would use the sites for scheduled camping events, and non-profits and children-oriented groups could rent them for the weekend. It is expected that almost every weekend there will be between 20-50 people camping on-site (including chaperones and employees). For purposes of being conservative, the maximum of 50 attendees were assumed in the trip generation calculations. Weekend campers would be expected to be dropped off on Friday evenings between 4:00-6:00PM and picked up on Sundays midday between 12:00-2:00PM.

Special Events

Special Events are planned to utilize Camporee Field and the amphitheater, among other activities that would be planned for campers (COPE, zip line, etc.)

approximately four (4) to six (6) times per year on the weekends. At most, 400 attendees would be on-site at one time (including chaperones and employees). There would be 400 attendees using Camporee Field, 200 would stay and camp, and 100 of those 200 campers would attend a program at the amphitheater. Thus, vehicle trips were calculated for the initial maximum amount of 400 attendees. It was assumed events would start on Saturday mornings between 8:00-10:00AM with all 400 attendees arriving via a private vehicle drop-off trip. With the 200 that stay to camp, 200 would leave the site that same evening between 6:00-8:00PM as pick-up trips. Lastly, those that stay to camp are picked up on Sunday evening between 4:00-6:00PM.

Vehicle Occupancy Rate (VOR)

Based on information provided by the applicant, all attendees will arrive in private vehicles. The majority of trips (with the exception of chaperone and employee trips) will be drop-off/pick-up trips. Carpooling is expected to be at a ratio of four to one (4:1). However, without statistical data supporting this assumption, the trip generation utilizes a VOR or 2.28 persons per vehicle developed from statistical data collected by LLG on April 17, 2013 at Humphrey's Concerts by the Bay.

Based on the information described above, the trip generation for the Project is presented in ***Table 1***.

As shown in *Table 1*, the weekday trip generation is calculated to be 88 AM peak hour trips (44 in/44 out), 22 PM peak hour trips (11 in/11 out), and 176 average daily trips (ADT). It should be noted that summer camp and programmed camping would not overlap as scheduled programs. On a separate weekday not coinciding with summer camp, trip generation from overnight camping would be expected to be 22 ADT with 22 PM peak hour trips (22 in/ 0 out).

The weekday trip generation forecasts above do not represent typical weekday conditions. These events are limited in occurrence and would not be expected to affect normal day-to-day peak commute operations of the adjacent street network. Summer camp is scheduled for a four-week period in the summer months when ambient traffic volumes in the surrounding area would be expected to be lower.

Weekend trips are forecasted at most to be 528 ADT on a Saturday and 198 ADT on a Sunday. It should also be reiterated that weekend trips at maximum capacity would only occur four (4) to six (6) times annually.

TABLE 1
MAXIMUM CAPACITY PROJECT TRIP GENERATION

Trip Generator	Size	VOR ^a	# of Vehicles ^b	Peak Hour									Maximum Weekday ADT
				Volume			Volume			Volume			
				In	Out	Total	In	Out	Total	In	Out	Total	
Programmed Day Camp ^c				Weekday 8:00-9:00AM ^d			Weekday 3:00-4:00PM ^d			Weekday 5:00-6:00PM ^d			
Attendees	100 ppl	2.28	44	44	44	88	33	33	66	11	11	22	176
Campsites (Programmed Overnight Camping)				Friday 4:00-6:00PM ^e			Sunday 12:00-2:00PM ^e			—			
Attendees	50 ppl	2.28	22	22	0	22	0	22	22	—	—	—	22
Special Events ^f				Saturday 8:00-10:00AM			Saturday 6:00-8:00PM ^e			Sunday 4:00-6:00PM ^e			—
Attendees	400 ppl	2.28	176	176	176	352	88	88	176	88	88	176	—
Maximum Weekday Trip Generation ^g				AM Commute Peak Hour 7:00-9:00AM			PM Commute Peak Hour 4:00-6:00PM			—			—
				44	44	88	11	11	22	—	—	—	176

Footnotes:

- VOR = vehicle occupancy rate. Rate developed from statistical data collected on April 17, 2013 at Humphrey's Concerts by the Bay. VOR of 2.28 may be conservative for the proposed use. Based on information provided by the applicant, patrons of the site will arrive in private vehicle with "multiple people per car".
- Example: # of vehicles = 100 attendees ÷ 2.28 persons per vehicle = 44 vehicles.
- Weekday day camps are anticipated to run for a five-day period, about four (4) times annual. For the purposes of this assessment, two-way drop-off/pick-up trips two times per day were assumed arriving at the total number of daily trips (accounts for one inbound and one outbound trip generated per vehicle twice per day). Programmed day camp activities would be mutually exclusive to programmed overnight weekend camping.
- Based on information provided on the BSA website, day camps typically run from 8:30AM to 3:30PM, with after care provided from 3:30-5:30PM for an additional fee. It was assumed that 25% of the attendees remained on-site in the aftercare program.
- Weekend camping will be open every weekend to programmed groups. It would not, however, overlap with the scheduling of summer camp during a four-week period in the summer months. It is expected that there will be 20-50 people camping during these weekends, including staff and chaperones. Attendees were assumed to arrive on Friday afternoons and leave on Sunday mid-morning.
- For Special Events on-site, based on information provided by the applicant, it was assumed that 400 people will access the Camporee Field, 200 will camp (after 200 leave), 100 of those campers will attend the amphitheater while already on-site (no additional vehicle trips), including employees and chaperones. It is not expected that a cumulative 700 people will be on-site for each activity independently. In addition, all trips were assumed to be drop-off/pick-up trips. It was assumed that all 400 attendees (176 vehicles) arrive on Saturday morning for weekend special events, with all 176 trips making a drop-off round-trip from home to camp and back home. On Saturday evening, 200 of those attendees are anticipated to leave site (88 vehicles) making the pick-up round-trip from home to camp and back home again. On Sunday, the remaining 200 attendees who camped are picked up by a driver making a round-trip from home to camp and back home (88 vehicles). Employee and chaperone vehicles were conservatively assumed in the remaining 88 vehicles.
- Maximum Weekday Trip Generation combines the trips anticipated to be generated on a weekday, and during the 7-9AM and 4-6PM peak commute hours for adjacent street traffic. It should be noted that the maximum weekday trip generation would only occur during a four-week period in the summer months when day camp is programmed to occur.

TRIP DISTRIBUTION

A general Project trip distribution was developed based on information provided by the applicant. It is anticipated that this facility will be 95% people who live within a two-hour drive. About 75% will live within a one-hour drive. All trips would be expected to come from the freeway and state route system via Interstate 5 (I-5), I-805, and State Route 125 (SR-125).

PROPOSED TRANSPORTATION STUDY

The weekday trip generation calculations forecast 176 ADT with 88 AM and 22 PM peak hour trips. Although the weekday ADT is less than 200 trips which may correlate to the preparation of an Issue Specific TIS, the 88 AM peak hour trips exceed the threshold for a Focused TIS. However, as emphasized in the trip generation section of this memo, the peak weekday trip generation would only be expected to occur during a limited four-week period when summer camps are offered and ambient traffic volumes on the surrounding street network would be expected to be lower.

As a result of these site-specific trip generation characteristics, it would not seem appropriate to complete a TIS, per County guidelines. It is instead recommended that a site access study be conducted for the Project given the high accumulation of inbound/outbound drop-off/pick-up trips that will occur during start and end times for special events. The study could include an evaluation of driveway sight distance, and an on-site drop-off/pick-up assessment to ensure efficient traffic operations during these peak timeframes.

All analysis and assessments would be consistent with the requirements of the County of San Diego guidelines and industry practice.

Sincerely,

Linscott, Law & Greenspan, Engineers



Cara Hilgesen
Senior Transportation Planner

Figure 1: *Project Area Map*

Figure 2: *Conceptual Site Plan*

Attachment: *County of San Diego Report Format & Contents Requirements:
Transportation & Traffic – Excerpt*

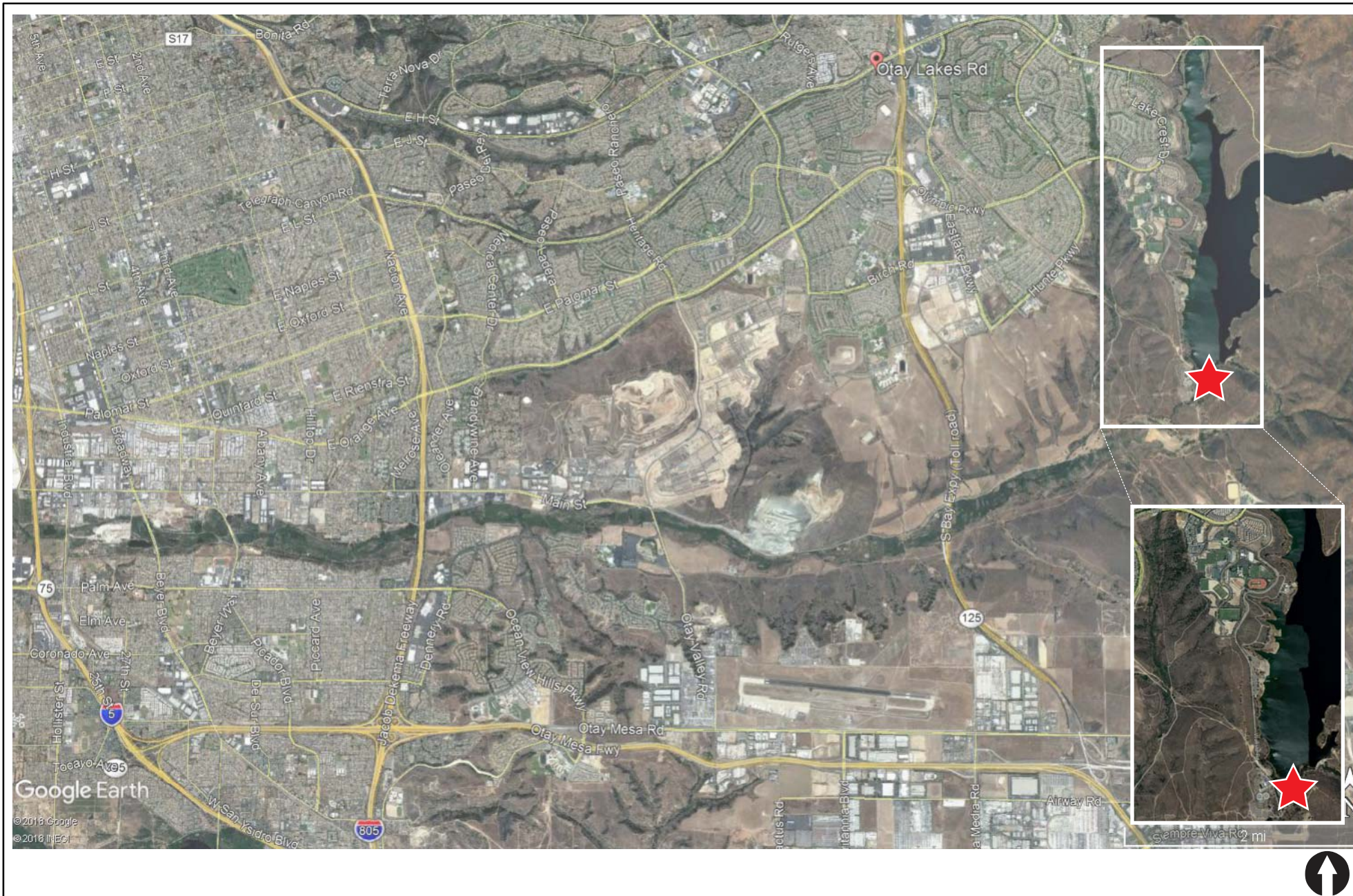


Figure 1

Project Area Map

OTAY LAKES CAMPGROUND

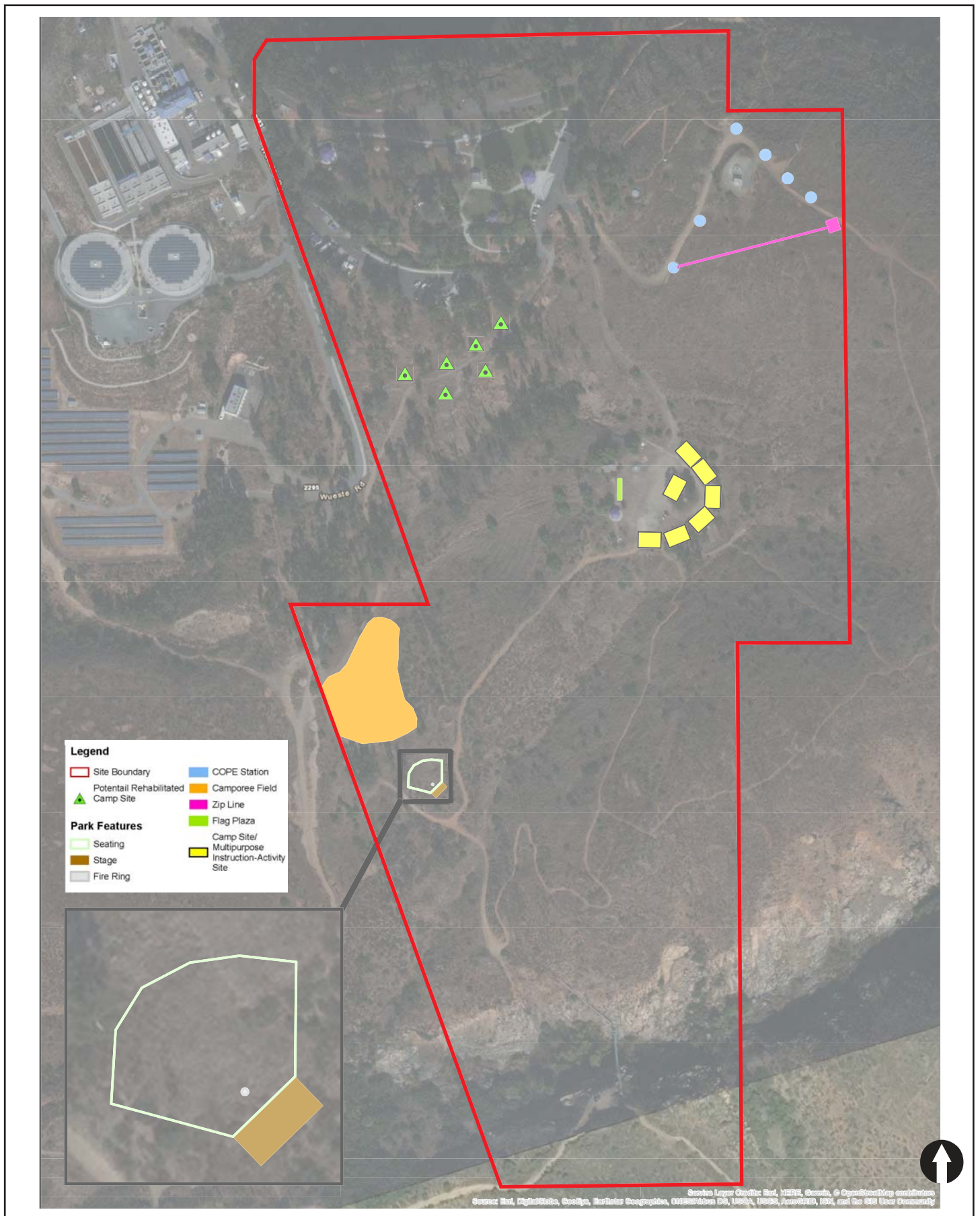


Figure 2

Site Plan

OTAY LAKES CAMPGROUND

ATTACHMENT
COUNTY OF SAN DIEGO REPORT FORMAT & CONTENT REQUIREMENTS –
TRANSPORTATION AND TRAFFIC, AUGUST 24, 2011 -- EXCERPT

COUNTY OF SAN DIEGO

REPORT FORMAT & CONTENT REQUIREMENTS

TRANSPORTATION AND TRAFFIC



LAND USE AND ENVIRONMENT GROUP

Department of Planning and Land Use
Department of Public Works

Second Revision
June 30, 2009

Second Modification
August 24, 2011

Table 1 - County Criteria for the Need to Prepare a Traffic Impact Study (TIS)

PROJECT GENERATED TRAFFIC*	ISSUE SPECIFIC TIS	FOCUSED TIS	FULL TIS NEEDED	CONGESTION MANAGEMENT ANALYSIS NEEDED
<i>Less than 200 Average Daily Trips OR Less than 20 Peak Hour Trips</i>	No*	No*	No	No
<i>200-500 Average Daily Trips OR 20- 50 Peak Hour Trips</i>	Yes	No	No	No
<i>500 Average Daily Trips OR 50 Peak Hour Trips</i>	No	Yes	No	No
<i>1,000 Average Daily Trips OR 100 Peak Hour Trips</i>	No	No	Yes	No
<i>2,400 Average Daily Trips OR 200 Peak Hour Trips</i>	No	No	Yes	Yes

* Other situations could result in a request for an Issue Specific or Focused Traffic Impact Study. These include, but are not limited to, those issues addressed in this report.

NOTE: Analysis of cumulative traffic impacts may require a Traffic Impact Study, even when project generated traffic volumes alone do not. See Attachment C.

2.1.1 Issue Specific Traffic Impact Study

Generally, an issue specific TIS will be required for projects that generate between 200 and 500 average daily trips (ADT) or between 20 and 50 peak hour trips that may potentially impact or alter the design of a nearby intersection or road segment. Typically, the scope of an issue specific traffic study is limited to nearby roads receiving over 200 ADT (100 ADT if adjacent road is operating at LOS F) and intersections receiving 21 or more peak hour trips (or 6 or more peak hour trips on a critical move for an adjacent intersection operating at LOS F). If warranted, county staff may also require an issue specific TIS based upon a field review, public comment, or recommendations of a planning group. For example, an examination of available sight distance, driveway access, access road geometrics, accident rates, capacity, parking capacity, intersection analysis or a signal timing study are issue specific/focused studies that could be required.

When a proposed project generates less than 200 average daily trips (ADT), in most cases (given the distribution of traffic onto County Circulation Element roads and the traffic impact criteria identified in Table 1), the proposed project will not result in direct traffic impacts. If the proposed project distributes over 100 ADT onto a County Circulation Element Road operating at LOS F, however, a direct impact may be

identified. Improvements to mitigate the added delay caused by the project would need to be identified. A traffic assessment to assist in the identification of appropriate mitigation may be required. Refer to attachment C for detailed discussion on the required scope of the cumulative analysis. If the proposed project is located adjacent to another jurisdiction or in close proximity to a freeway ramp, the applicant should coordinate with those jurisdictions or agencies regarding any potential need for traffic studies and/or mitigation.

2.1.2 Focused Traffic Impact Study (TIS)

A Focused TIS shall be prepared for all discretionary projects that generate between 500 and 1,000 total average daily trips (ADT) or between 50 and 100 peak-hour trips. The focused TIS shall assess potential traffic impacts to nearby local roads (streets) and intersections. The scope of the assessment of direct and cumulative traffic impacts should include the assessment of transportation facilities that would receive 25 or more peak hour trips from the proposed project. The 25 peak hour trip threshold should be based on the combined two-way (i.e. both directions, 2-way peak hour total) traffic volume of the roadway segment for either the AM or PM peak period. Other criteria for determining whether a focused traffic analysis is required may include the following:

- The proposed project includes a driveway to be located on a Circulation Element Road within 150 feet of an intersection with another Circulation Element Road.
- The proximity of transportation facilities currently operating at LOS E or F.
- The project includes a driveway that intersects an on-street bicycle lane or crosswalk in an area of high pedestrian activity.
- There are access risks or deficiencies associated with the adjoining street system due to curves, slopes, walls or other barriers to adequate lines of sight.
- The proposed project will result in a road alignment or design, which is inconsistent with the General Plan or community plan for the area or does not align with adjoining or proposed roads.

If the proposed project is located adjacent to another jurisdiction or in close proximity to a freeway ramp, additional cumulative traffic impacts outside the unincorporated area and not identified in the County's TIF program may occur. The applicant should coordinate with those jurisdictions or agencies regarding any potential need for traffic studies or mitigation. Refer to Attachment C for additional direction on determining the required scope of the cumulative analysis.

If the applicant/proposed project proposes to opt out of the County's TIF Program a full, complete and detailed cumulative traffic assessment will be required. Scoping of the detailed cumulative traffic assessment will extend beyond the 25 peak hour trip (2-way peak hour total) limit specified above and should include all roads and intersections that

may be cumulatively impacted by the proposed project. The detailed cumulative traffic analysis must be based upon the list of projects approach. Project applicants choosing to prepare a TIF Opt Out cumulative analysis should coordinate closely with County staff to develop a detailed TIS scope of work.

2.1.3 Full Traffic Impact Study (TIS)

A Full TIS shall be prepared for all discretionary projects that generate 1,000 or more total average daily trips (ADT) or 100 or more peak-hour trips. The scope of the full direct and cumulative traffic assessment shall include those roads and intersections that will receive 25 peak hour trips (2-way peak hour total). The full TIS shall assess potential impacts to regional arterials and state highways in addition to the potential impacts to nearby local roads (streets) and intersections. The study area intersections should include the intersections of Circulation Element roads and intersections where project-related traffic adds traffic to the right and/or left turn movement and exceeds the peak hour thresholds. If traffic operation issues are identified, additional side/minor street intersections may need to be included in the study area intersection analysis even though the proposed project is not expected to add significant traffic to the intersection turn movements. For example, there may be a concern that added project traffic on the major street through movement would make it difficult enter and/or exit the side/minor street.

All full traffic impact studies shall include a cumulative traffic assessment that evaluates the cumulative traffic impacts of the proposed project. The scope of the full direct and cumulative traffic assessment shall include those roads and intersections that will receive 25 peak hour trips (2-way peak hour total). For County roadways, cumulative impacts are typically mitigated via payment of the TIF fee. However, per the County's TIF Ordinance, the County may require a developer to install improvements with supplemental size, length, or capacity in order to ensure efficient and timely construction of the transportation facilities network. Such improvements would be subject to the reimbursement or credit provisions described in the TIF Ordinance. The full cumulative traffic assessment will aide in this determination. The full cumulative traffic assessment will also allow for more detailed discussion of the projects potential traffic impacts during public review and in any environmental documents that are prepared for the proposed project. Refer to Attachment C for additional direction on determining the required scope of the cumulative analysis. If the proposed project is located adjacent to another jurisdiction or in close proximity to a freeway ramp, additional cumulative traffic impacts outside the unincorporated area and not identified in the County's TIF program may occur. The applicant should coordinate with those jurisdictions or agencies regarding any potential need for traffic studies or mitigation.

If an applicant proposes to opt out of the County's TIF Program a full, a complete and detailed cumulative traffic assessment will be required. Scoping of the cumulative traffic assessment will extend beyond the 25 peak hour trip limit specified above and should include all roads and intersections that may be cumulatively impacted by the proposed

APPENDIX H – PARKING AND ON-SITE CIRCULATION REVIEW LETTER



December 23, 2019

Mr. Matthew Bohan
County of San Diego
Department of Parks and Recreation
5500 Overland Avenue #410
San Diego, CA 92123

LLG Reference: 3-19-3071

Subject: **Otay Lakes Campground Project – Parking and On-Site
Circulation Review**
San Diego, CA

Engineers & Planners
Traffic
Transportation
Parking

**Linscott, Law &
Greenspan, Engineers**
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Pasadena
Irvine
San Diego
Woodland Hills

Dear Mr. Bohan:

This letter has been prepared to provide review and comment of the parking and on-site circulation for the Otay Lakes Campground Project (Project) located on land leased by the Boy Scouts of America (BSOA) from the County of San Diego (County) adjacent to Otay Lakes County Park. A Project area map is included at the end of this letter on **Figure 1**. **Figure 2** shows the conceptual site plan.

Linscott, Law and Greenspan, Engineers (LLG) prepared a Scoping Memo for the Project (submitted on May 14, 2019) that detailed the Project's development components and their respective trip generation. This parking and on-site circulation review letter provides the County with supplemental information regarding those subjects based on the Project's operational characteristics as well as the existing infrastructure provided at the Otay Lakes County Park.

OPERATIONAL COMPONENTS

The following operational components reflect activities that will occur during three (3) mutually exclusive "operational profiles" and are used to evaluate parking demand and on-site circulation:

- Total hourly inbound/outbound trips
 - These are trips that would circulate and queue on-site for drop-off/pick-up;

Philip M. Linscott, PE (1924-2000)
William A. Law, PE (1921-2018)
Jack M. Greenspan, PE (Ret.)
Paul W. Wilkinson, PE (Ret.)
John P. Keating, PE
David S. Shender, PE
John A. Boarman, PE
Clare M. Look-Jaeger, PE
Richard E. Barretto, PE
Keil D. Maberry, PE
Walter B. Musial, PE
An LG2WB Company Founded 1966

- Typical drop-off/ pick-up duration
 - This is the estimated amount of time needed to arrive in the queue, make ready for drop-off/pick-up, complete drop-off/pick-up, and exit the queue;
- Parking demand for staff, chaperones, etc.
 - This is estimated at 10% of total population (users + staff)

LLG calculated the trip generation for each of these three operational profiles based on specific operational characteristics provided by the BSOA and detailed in the May 14, 2019 scoping memo. The trip generation for the Project presented in the scoping memo is attached to this letter as **Table 1**.

The trip generation was based on the total number of users (campers/attendees + staff). To be conservative, staff trips were included in the arrival/departure trips for the various uses, so on-site parking was not specifically addressed in that document. Based on conversations with the development team, a factor of approximately 10% of the total population could reasonably represent staff.

Using these criteria, the three operational profiles can be described as follows:

- **Day Camp** (100 campers/staff)
 - 4 times/year, 1 week each (Mon-Fri)
 - Start: 8:30 AM (44 inbound/44 outbound)
 - Finish: 3:30 PM with after-care to 5:30 PM (33 inbound/33 outbound)
 - Estimated drop-off/pick-up duration: 1 minute
 - 10 Vehicle Parking Demand (estimated at 10% of population)
- **Campsites** (50 campers in 12 sites)
 - Year round, weekends (Fri-Sun)
 - Start: 4:00-6:00 PM (22 inbound/22 outbound)
 - Finish: Noon-2:00 PM (22 inbound/22 outbound)
 - Estimated drop-off/pick-up duration: 2 minutes
 - 27 Vehicle Parking Demand (assumes all 22 inbound vehicle trips park, as do 5 staff at 10% of population)

- **Special Events** (400 attendees/staff)
 - 4-6 times annually, weekends (Sat-Sun)
 - Start: 8:00-10:00 AM (176 inbound/176 outbound)
 - Finish: 4:00-6:00 PM (88 inbound/88 outbound)
 - Estimated drop-off/pick-up duration: 2 minutes
 - 40 Vehicle Parking Demand (estimated at 10% of population)

PARKING

Figure 3 shows an aerial view of the park. A review of the existing Otay Lakes County Park reveals that 62 available parking spaces (regular and van-accessible handicapped), are provided in three (3) parking areas along the north and east sides of the park. The developed park area is approximately 5.5 acres, which would require 22 parking spaces based on the County's published off street parking regulations (4 spaces/acre for "passive" park). This would result in an apparent surplus of 40 parking spaces. However, of these 40 surplus spaces, 22 angled parking spaces provided along the south side of the park are for employees only, and are not accessible to the public as circulation along the south side of the park is prohibited via gates. Thus, the effective public surplus parking available for the Project is calculated at 18 spaces.

Based on the operational components described above, the maximum on-site parking demand would be estimated at 40 spaces for the *Special Events* profile (400 attendees + staff, 4-6 times annually).

The next highest calculated demand is 27 spaces for the *Campsites*, which occur year-round on weekends (Fridays-Sundays).

The *Day Camp* would operate for four weeks of the year, and generate the least parking demand at 10 vehicles (for staff) assuming all campers are dropped off and picked up.

Given the supply of public parking is 62 spaces, a demand of 40 spaces for the *Special Events* profile and the 27 spaces for the *Campsites* profile would likely exceed the calculated reserve capacity the lot would have on a typical weekend. Assuming no additional parking is available within the adjacent BSOA campground area, the additional 22 parking spaces on the south side of the Otay Lakes County Park could be utilized by the Project either as-is, or in an active valet-style format (vehicles tandem parked and/or parked in the parking drive-aisle) for these conditions to minimize parking effects on the balance of the lot.

The 10 spaces required for the *Day Camp* profile would likely be adequately served during the week by the 62 available public spaces and the accompanying 18-space public surplus.

Given the potential variability of the parking demand by event, it is recommended that the Project consider a developing and maintaining Parking Management Plan (PMP). The PMP would provide levels of parking management ranging from “no action” for minor event profiles such as “day camp”, up to actions such as active valet/tandem parking, or possibly off-site parking with a shuttle if necessary for the largest events.

It should also be noted that the park hours are posted as 9:30 AM to 7:00 PM, and parking is charged at a nominal fee of \$3.00/day. Each of the three operational profiles described above would have a start time preceding the park’s opening hours, and/or run for more than a single day, requiring the vehicle owner to leave the BSOA site and return on the second day to pay.

The BSOA and County will need to coordinate on how best to operate the park gates outside of official hours, and if/how the payment kiosks may be modified to accept payment for overnight/multiple-day demand.

ON-SITE CIRCULATION

The operational components described earlier show the following maximum directional (inbound or outbound) peak demand for each operational profile as follows:

- ***Special Events*** – 176 peak directional trips
- ***Day Camp*** – 44 peak directional trips
- ***Overnight Camping*** – 22 peak directional trips

For the *Special Events* and *Day Camp* profiles, the majority of trips are anticipated to be drop-off/pick-up trips which will not park, but will circulate through the park and drop-off/pick-up passengers. *Overnight Camping* users are presumed to park.

The highest hourly demand is for *Special Events*, at 176 peak trips within an hour. This is on average about 3 vehicles/minute. However, hourly distribution is never even, so a peak load can be estimated assuming 50% of the trips (88 vehicles) arrive in 15 minutes, which is 6 vehicles/minute. Assuming each vehicle requires 2 minutes to arrive, organize, pick-up/drop-off and depart, there could be 12 vehicles expected to be circulating in the drop-off/pick-up line during the peak period. A common dimension for linearly queued vehicles is 25-feet/vehicle, which would result in 300 feet of curbside queuing needed for 12 vehicles.

A review of *Figure 3* shows there is tangent queuing area available along the eastern side of the easterly-most north-south drive aisle. This would be best utilized in a counter-clockwise circulation pattern with vehicles circulating from south to north such that passengers disembark or embark from the curbside adjacent to the entry to the BSOA development east of the park. This counter-clockwise orientation would require the use of the southerly east-west drive aisle which is currently closed to public use. *Figure 4* shows a circulation concept for *Special Events*, and the 300 feet of curbside drop-off/ pick-up area that could be used. Coordination between BSOA and the County would be required to gain access to the southern drive aisle.

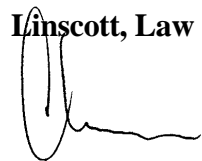
The *Special Events* condition is rare (4 times/year); as such, any disruption to park operations would be limited. A parking management plan would be recommended to determine roles and responsibilities between BSOA and County staff regarding gate openings/closures, and any on-site traffic monitors, signing or other elements that would be desirable to help minimize the effect of the *Special Events*.

The *Day Camp* also operates for a limited period out of the year (4 one-week programs). It generates approximately 25% of the peak directional traffic of the *Special Events*, and would therefore require approximately 25% of the linear curbside queuing for drop-offs and pick-ups (approximately 75 feet). Again, a south-north circulation would be recommended; however given the lower volumes a U-turn movement at the easterly gate intersection may suffice to allow vehicles to circulate without using the southern east-west drive aisle which could remain closed. *Figure 5* shows this circulation concept, as well as the curbside drop-off/ pick-up area that could be used.

Feel free to call me at 858-300-8800 with any questions or comments.

Sincerely,

Linscott, Law & Greenspan, Engineers



Chris Mendiara
Associate Principal

cc: File

Attachments :

Figure 1 : Project Area Map

Figure 2 : Conceptual Site Plan

Figure 3 : Aerial View, Otay Lakes County Park

Figure 4 : Special Events Circulation Concept

Figure 5 : Day Camp Circulation Concept

Table 1 : May 14, 2019 Scoping Memo Trip Generation

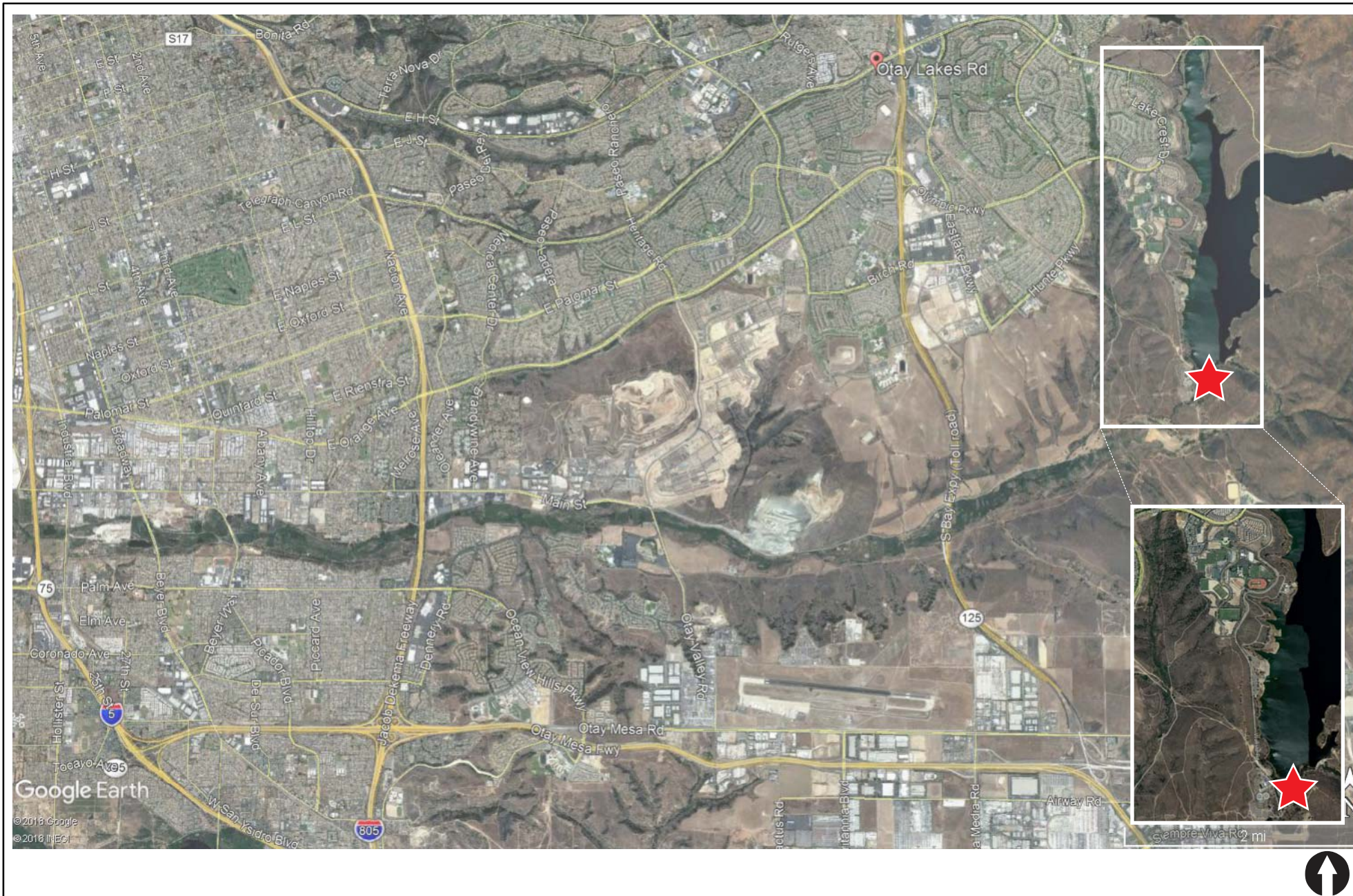


Figure 1

Project Area Map

OTAY LAKES CAMPGROUND

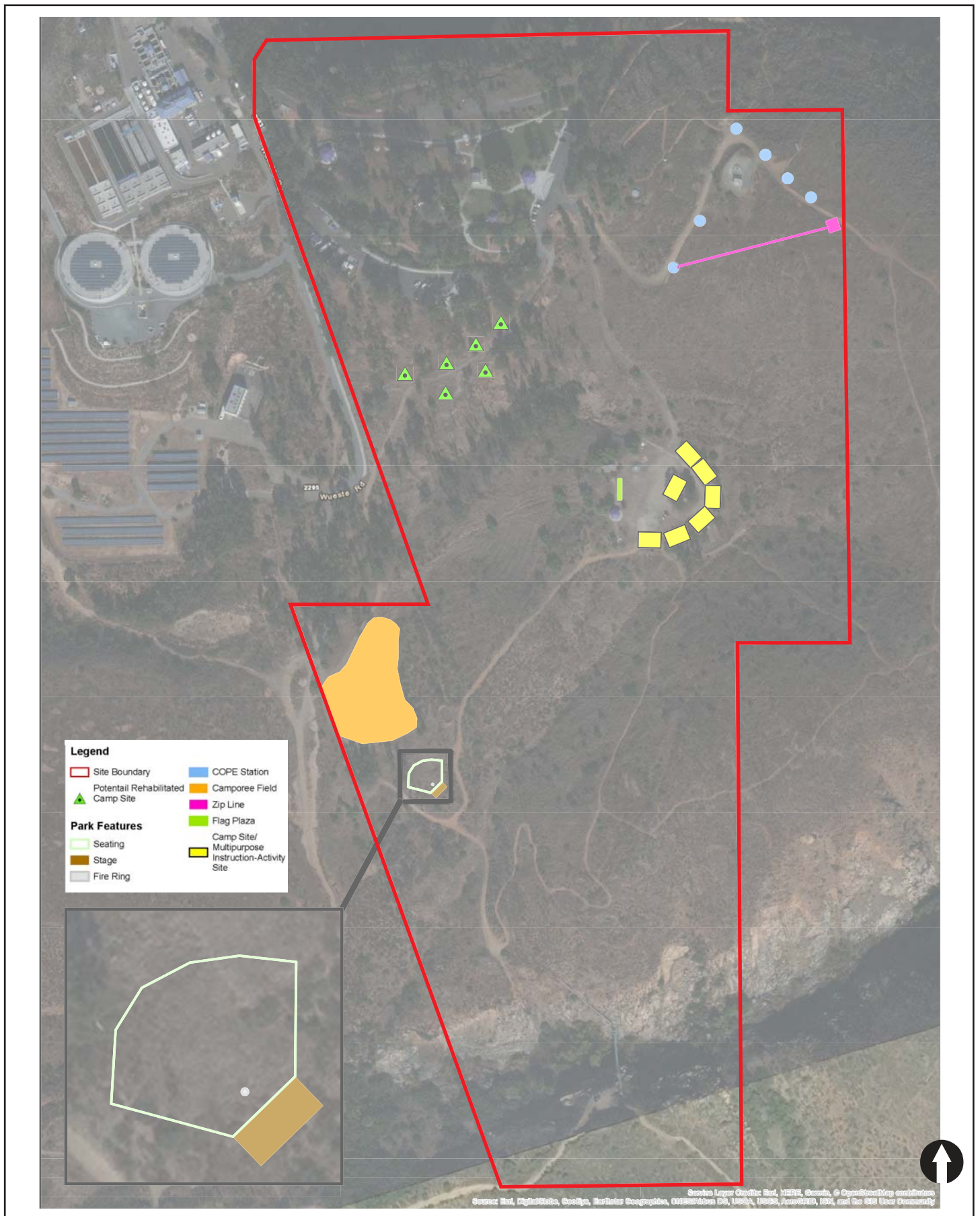


Figure 2

Site Plan

OTAY LAKES CAMPGROUND



Figure 3
Aerial View, Otay Lakes County Park



Figure 4
Circulation Concept - Special Events



Figure 5
Circulation Concept - Day Camp

TABLE 1
MAXIMUM CAPACITY PROJECT TRIP GENERATION

Trip Generator	Size	VOR ^a	# of Vehicles ^b	Peak Hour									Maximum Weekday ADT
				Volume			Volume			Volume			
				In	Out	Total	In	Out	Total	In	Out	Total	
Programmed Day Camp ^c				Weekday 8:00-9:00AM ^d			Weekday 3:00-4:00PM ^d			Weekday 5:00-6:00PM ^d			
Attendees	100 ppl	2.28	44	44	44	88	33	33	66	11	11	22	176
Campsites (Programmed Overnight Camping)				Friday 4:00-6:00PM ^e			Sunday 12:00-2:00PM ^e			—			
Attendees	50 ppl	2.28	22	22	0	22	0	22	22	—	—	—	22
Special Events ^f				Saturday 8:00-10:00AM			Saturday 6:00-8:00PM ^e			Sunday 4:00-6:00PM ^e			—
Attendees	400 ppl	2.28	176	176	176	352	88	88	176	88	88	176	—
Maximum Weekday Trip Generation ^g				AM Commute Peak Hour 7:00-9:00AM			PM Commute Peak Hour 4:00-6:00PM			—			—
				44	44	88	11	11	22	—	—	—	176

Footnotes:

- VOR = vehicle occupancy rate. Rate developed from statistical data collected on April 17, 2013 at Humphrey's Concerts by the Bay. VOR of 2.28 may be conservative for the proposed use. Based on information provided by the applicant, patrons of the site will arrive in private vehicle with "multiple people per car".
- Example: # of vehicles = 100 attendees ÷ 2.28 persons per vehicle = 44 vehicles.
- Weekday day camps are anticipated to run for a five-day period, about four (4) times annual. For the purposes of this assessment, two-way drop-off/pick-up trips two times per day were assumed arriving at the total number of daily trips (accounts for one inbound and one outbound trip generated per vehicle twice per day). Programmed day camp activities would be mutually exclusive to programmed overnight weekend camping.
- Based on information provided on the BSA website, day camps typically run from 8:30AM to 3:30PM, with after care provided from 3:30-5:30PM for an additional fee. It was assumed that 25% of the attendees remained on-site in the aftercare program.
- Weekend camping will be open every weekend to programmed groups. It would not, however, overlap with the scheduling of summer camp during a four-week period in the summer months. It is expected that there will be 20-50 people camping during these weekends, including staff and chaperones. Attendees were assumed to arrive on Friday afternoons and leave on Sunday mid-morning.
- For Special Events on-site, based on information provided by the applicant, it was assumed that 400 people will access the Camporee Field, 200 will camp (after 200 leave), 100 of those campers will attend the amphitheater while already on-site (no additional vehicle trips), including employees and chaperones. It is not expected that a cumulative 700 people will be on-site for each activity independently. In addition, all trips were assumed to be drop-off/pick-up trips. It was assumed that all 400 attendees (176 vehicles) arrive on Saturday morning for weekend special events, with all 176 trips making a drop-off round-trip from home to camp and back home. On Saturday evening, 200 of those attendees are anticipated to leave site (88 vehicles) making the pick-up round-trip from home to camp and back home again. On Sunday, the remaining 200 attendees who camped are picked up by a driver making a round-trip from home to camp and back home (88 vehicles). Employee and chaperone vehicles were conservatively assumed in the remaining 88 vehicles.
- Maximum Weekday Trip Generation combines the trips anticipated to be generated on a weekday, and during the 7-9AM and 4-6PM peak commute hours for adjacent street traffic. It should be noted that the maximum weekday trip generation would only occur during a four-week period in the summer months when day camp is programmed to occur.

APPENDIX I – WATER QUALITY TECHNICAL REPORT





BOY SCOUTS OF AMERICA

STANDARD DEVELOPMENT PROJECT
WATER QUALITY TECHNICAL REPORT
FOR
OTAY LAKES CAMPGROUND

ENGINEER OF WORK (NAME):

PE NUMBER & EXPIRATION

WET SIGNATURE:

STAMP:

PREPARED FOR:
Boy Scouts of America
San Diego-Imperial Council
207 Upas Street
San Diego CA 92103
619.298.6121

PREPARED BY:
Chambers Group, Inc.
9620 Chesapeake Drive, Suite 202
San Diego, CA 92123

Prepared: September 2019
Updated: December 2019

REPORT APPROVAL	
Reviewed and Approved:	
_____	_____
County Engineer	Date

**WATER QUALITY TECHNICAL REPORT
OTAY LAKES CAMPGROUND**

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Attachments

1. San Diego County Storm Water Intake Form
2. Soil Map – San Diego County Area, Otay Campground

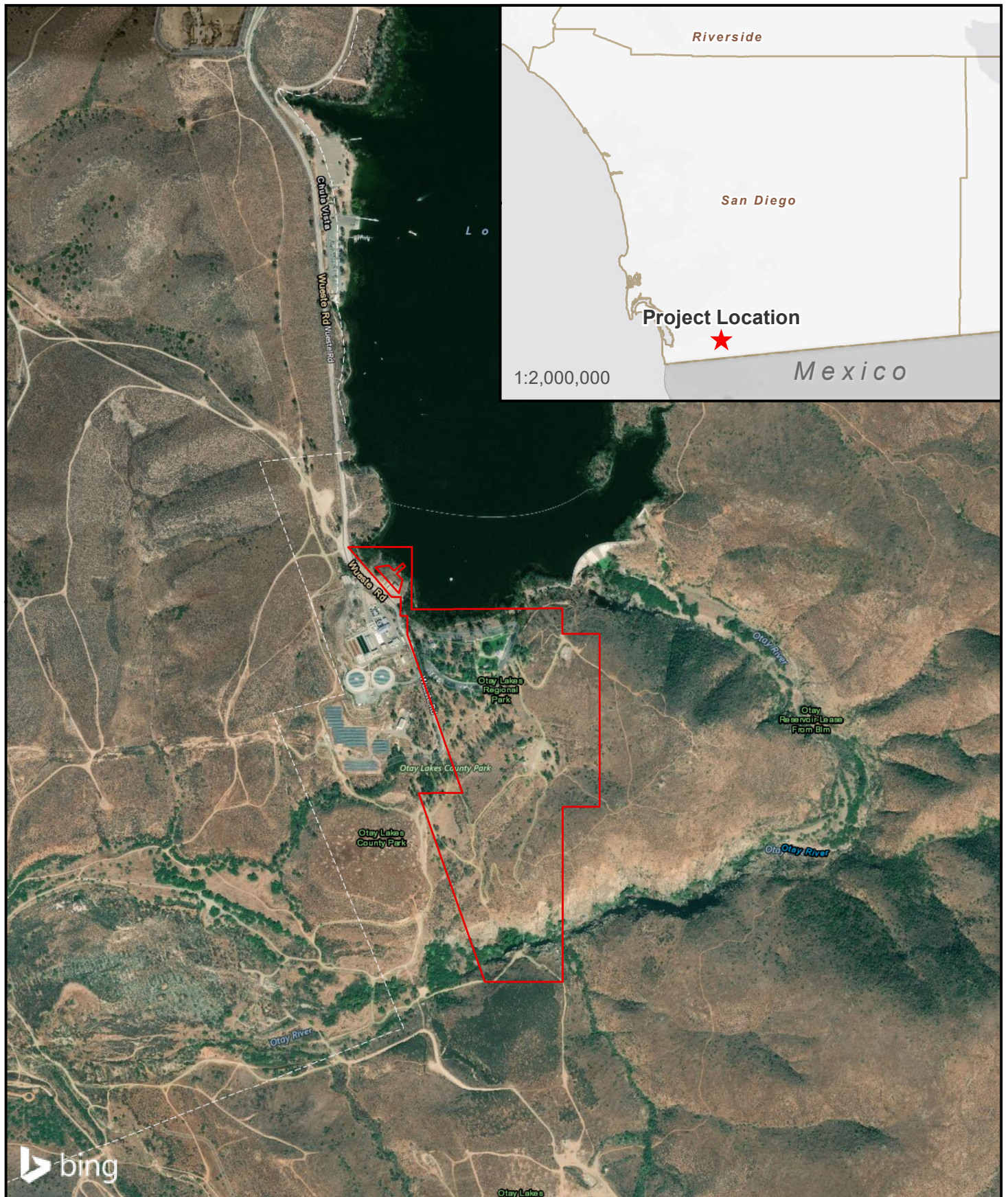
WATER QUALITY TECHNICAL REPORT OTAY LAKES CAMPGROUND

LIST OF FIGURES

- 1 Location Map
- 2 Project Site Plan

LIST OF TABLES

- 1 Estimated Impervious and Disturbed Areas



Legend

Project Location

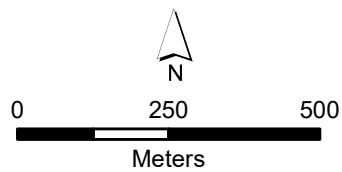
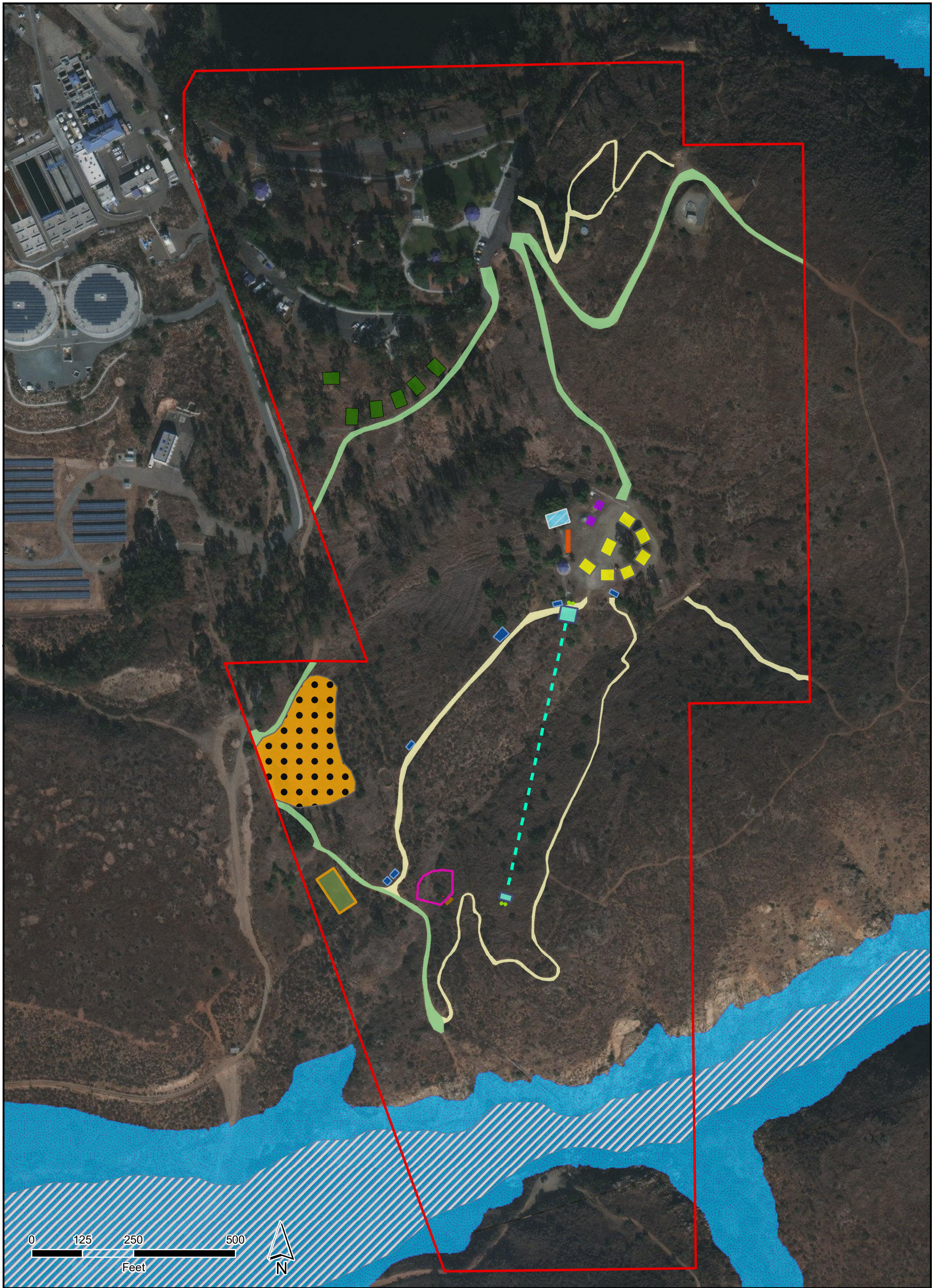


Figure 1
Project Location Map



Legend

- | | | |
|----------------------------------|----------------|--------------------|
| Study Area | New Campsite | Fire Ring |
| 100-year Floodplain | Existing Trail | COPE Station |
| Dam Inundation Area | Existing Road | Camporee Field |
| Zipline | Storage | Flag Plaza |
| Zip Line Anchor | Archery Range | Zip Line Platforms |
| Potential Rehabilitated Campsite | Seating | |
| Restroom | Stage | |

Figure 2
Site Plan

1.0 INTRODUCTION

This Water Quality Technical Report (WQTR) is intended to describe the Proposed Project within the context of local hydrology and hydraulics that could be affected by the anticipated Project development activities. It also provides a summary of the expected storm water management requirements based on Project location and regulatory requirements.

1.1 Regulatory Background

In response to the Code of Federal Regulations (CFR) Title 40, Part 122 and California Water Code Chapter 5.5, Division 7, the Regional Water Quality Control Board (RWQCB), San Diego, issued a series of Orders culminating with R9-2013-0001 (May 2013) which has been modified by Orders R9-2015-0001 (February 2015) and R9-2015-0100 (November 2015). These Orders make it the responsibility of the co-permittees (including San Diego County) to implement a program facilitating control of storm water discharge (and associated water quality stressors) due to development projects. The resulting program requires all development projects to complete and submit a *County of San Diego Stormwater Intake Form* (see Attachment 1) to document whether a project is considered a Priority Development Project (PDP) or a Standard Project. A Priority Development Project is a new development and redevelopment project that is subject to general, source control site design, pollutant control, and hydromodification management BMP requirements, and that must demonstrate compliance through a stormwater quality management plan to be approved by the County of San Diego.

Projects within Environmentally Sensitive Areas (ESAs) introducing more than 2,500 square feet of impervious surface are considered Priority Development Projects. Although the Proposed Project site is located within the County Multiple Species Conservation Plan Area, according to the County's map of ESAs, it does appear that the majority, if not the entirety, of the leased area/Proposed Project site falls outside of the nearby ESAs. In addition, drainage from the Proposed Project discharges into at least two separate ephemeral channels which head off-site, traversing land that is not an ESA before reaching the Otay River (the nearest "downstream" ESA). The larger ephemeral watershed flows to the west and traverses nearly a mile of channel before reaching its confluence with the Otay River. The smaller ephemeral watershed flows to the southwest and traverses nearly 1,000 feet of channel before reaching the Otay River. Therefore, none of the runoff from the Proposed Project discharges directly into an ESA and this Project is considered a Standard Project.

1.2 Project Description

The Project is situated on 69 acres of land in unincorporated San Diego County (County), immediately south of Lower Otay Reservoir (see Figure 1). The northern boundary of the Project area includes about 1,500 feet of shoreline, but outflow from the reservoir to the Otay River flows mostly to the east of the Project boundary before turning west southwest and crossing the extreme southern end of the property. None of the Proposed Project improvement activities are located within 500 feet of the reservoir shoreline or the river.

1.2.1 Existing Features

The Proposed Project site is currently identified as Otay Lakes County Park, which is part of the San Diego County Park System and the multi-jurisdictional Otay Valley Regional Park. It will remain under the ownership of the County after Project implementation. There are existing facilities at the Park entrance (located north of the proposed area for new Project features, adjacent to the lake). These facilities include nearly 90 parking spaces, three covered pavilions for group picnics, nearly a dozen uncovered barbecue areas, restroom facilities, and miscellaneous buildings. The developed areas include paved surfaces, concrete pads and walkways, and two large lawn areas. These facilities would remain unchanged as a result of the Proposed Project.

South of the Park facilities is a large area of open space, which would serve as the location for new Proposed Project features. Within the open space area of the Project site the existing facilities include camping areas, a restroom building (that is currently not operable), a walkway attached to a hexagonal covered (roof) pavilion with a diameter of approximately 30 to 35 feet, and a number of dirt roads that traverse the property. These facilities are currently used by the Boy Scouts to the extent needed and possible. With the exception of the proposed facilities noted in the next section, all of the currently undeveloped areas in the Project site (over half of the total area) will be left entirely undeveloped; though, previous use of the property has led to significant disturbance. For the purpose of this analysis, the pre-existing impervious surfaces in the Park are not considered and the area analyzed is limited to the open space south of the Park.

1.2.2 Proposed Facilities

This Project will include various improvement activities to occur within an existing camping and multiple purpose area that is used both for Boy Scout events and by private groups. The specific areas of new development or redevelopment described below will be included in the Project. The estimated extents of existing impervious areas, proposed new impervious areas, and surface disturbance for each specific area are provided in Table 1.

Archery Range. It is anticipated that the Archery range will provide six targets, likely using hay bales as target backing. Each target will have a 10-foot wide shooting corridor and the range will have a maximum shooting distance of 100 feet. The area will need to be cleared of brush, but no impervious surfaces will be installed for this facility. Therefore, approximately 6,000 square feet of ground surface will be disturbed.

TABLE 1. Estimated Impervious and Disturbed Areas

AREA	SURFACE TYPE	EXISTING IMPERVIOUS (ft. ²)	PROPOSED IMPERVIOUS (ft. ²)	DISTURBED AREA (ft. ²)
Archery Range	Flat	0	0	6,000
	Hillside	0	0	0
Existing Camping Areas (to be rehabilitated)	Flat	0	600	3,750
	Hillside	0	0	0
New Camping Areas (for multi-purpose use)	Flat	1,000	1,700	4,375
	Hillside	0	0	0
Flag Plaza	Flat	820	1,120	525
	Hillside	0	0	0
Restroom Facilities	Flat	375	1,800	2,275
	Hillside	0	0	0
Camporee Field	Flat	0	0	45,000
	Hillside	0	0	0
Fenced Storage	Flat	0	800	2,600
	Hillside	0	0	0
COPE Stations Area (includes Zip Line)	Flat	0	0	1,625
	Hillside	0	0	0
Amphitheater & Fire Ring	Flat	0	0	625
	Hillside	0	0	0
Roads	Flat	0	0	0
	Hillside	0	0	0
Totals, Project Activities	Flat	2,195	6,020	66,775
	Hillside	0	0	0

Notes:

Impervious areas include (1) rooftops, (2) concrete pads, (3) asphalt or concrete roads, (4) asphalt or concrete parking lots, (5) other "paved" surfaces (i.e. tiled patios, stages, walkways, etc.).

Hillside is defined as any ground surface with a slope of equal to, greater than 25%.

Proposed Impervious area includes all existing plus any change in impervious area because of the new development.

Camping Facilities. These will include both the rehabilitation of existing family-style campsites (a total of six sites) and the establishment of new campsites (a total of seven sites). Both the existing and new camp sites will be similar in form and purpose. All campsites can also serve as multi-purpose instruction-activity areas in addition to accommodating a small group or a family. Each development group (existing and new campsites) will be located in separate parts of the Project site (see Figure 2). The existing campsites are located on the northern slope of the Project site that drains to the Lower Otay Reservoir, while the new campsites/multipurpose areas are located on the southwestern slope which drains ultimately to the Otay River. Each of the existing campsites will be restored (with minimal grading) to accommodate tents for 6-8 people and include two picnic tables with a hard-surface roof to cover them. The proposed, separate multi-purpose campground area will provide similar campsite facilities (tent area, picnic tables, and a hard-surface roof) using minimal grading and leaving the ground surface uncovered (i.e. pervious). The new campground area will include a minimum of six camp sites and a maximum of 12 campsites, each of which will accommodate 6-8 people. It is anticipated that this area will also be used for instruction and activities in lieu of, or in addition to, camping. These camp sites each will add a new impervious roof surface (estimated to be 10 feet by 10 feet). For impervious area calculations, each rehabilitated camp is projected to include six new roofs, and the new camp sites are projected to add seven new roofs.

Flag Plaza. The proposed Flag Plaza will require minimal grading and excavation to install a new concrete slab anticipated to be no more than 10 feet wide by 30 feet long and will accommodate three flag poles. This will be located adjacent to the new multi-purpose campground. Current structures at this location include a round concrete pad (approximately 30-35 feet in diameter) with a hexagonal pavilion roof built on top of the pad, and a restroom structure (a covered building with an approximate area of 375 square feet).

Restrooms. The restroom noted above (located in the Flag Plaza area) uses a septic system that will be repurposed for a new restroom facility to be constructed at this location at a later date. The existing restroom is not currently in operation, and is projected to be demolished, removed, and replaced with the new restroom facility. The new restroom is expected to include multiple single user bathrooms, showers, family restrooms, and restrooms that will comply with the Americans with Disabilities Act. Initially, the new restroom will use the existing septic system, but the County of San Diego is working on permitting sewer service to the Proposed Project site. The County has reached an agreement with the City of Chula Vista to tie into the municipal sewer system south of the Proposed Project. While permitting for sewer service is underway, approval is not expected until after completion of the campground upgrades. Additionally, to serve the lower portion of the Proposed Project site, the Proposed Project will utilize existing portable toilets. To estimate proposed changes to the impervious area, we project the new building will occupy a footprint of approximately 30 feet by 60 feet, but with the removal of the existing building the net change will be an additional 1,425 square feet of impervious area.

Amphitheater. A new amphitheater will be constructed to include a stage (expected to be about 10 feet wide by 15 feet long) built from wood, and an open seating area that will also be made of wood, both on the bare ground surface without an impervious foundation, so this facility will remain entirely pervious. The seating area will require some minor leveling but no grading to accommodate the seating area. A fire ring will be installed on the bare ground surface in front of the stage, so it is also assumed to be pervious.

No existing impervious surfaces are found at this location currently, and with no proposed impervious surfaces, this area will remain 100% pervious.

Camporee Field. The large Camporee Field area will be established as an activity area for games, training, and overflow camping; and could host groups of up to 400 people. The construction of the Camporee Field will require an initial brush clearance followed by annual maintenance that could be spot clearances or mowing of larger areas depending on need. Restroom facilities will initially be provided by portable toilets, some of which will be installed and serve construction needs. Eventually the new restroom facility (described earlier) will serve Camporee Field as well the other parts of the campground. The Camporee Field area is not anticipated to require any grading during “installation” and should not include any new impervious surfaces. So, with no existing impervious surfaces at this facility, the surface area here will remain 100% pervious.

COPE Course and Zip Line. A COPE (Challenging Outdoor Personal Experience) course is proposed along the trail between the new camp sites and the amphitheater sites. The COPE course will include six stations which will be portable, and therefore temporarily set up when needed but then disassembled and stored away when not needed. Each station would involve a different activity but will not require any impervious surfaces. The Zip line will take advantage of the elevation difference between the new camp site area (higher elevation) and the amphitheater end (lower elevation) of the COPE course. No grading is anticipated for the establishment of the COPE course or the Zip line.

There will be two raised, above-ground platforms built at either end of the Zip Line that will be made of wood or trex as an open-slotted deck which is not expected to be pervious. The support for these decks will be on supports that may use holes and concrete to hold them in place, so a very minor impervious area associated with each platform. In addition, the Zip Line itself will be held aloft by single, telephone-pole-like support-column installed in conjunction with each platform. This support column will be anchored in the ground using a hole about 5-feet in diameter and up to 5 feet deep, and filled with concrete. These will be secured using cables tied to the ground using screw-in anchors. The amount of impervious surface created by the two support columns and platform pole foundations, is considered to be trivial and not included in these calculations.

Brush clearance will be required for the construction of both platforms and, most likely, for the length of the zip-line. So, the area of disturbance is calculated as the two platform areas plus the zip-line corridor (estimated at about 900 feet long by about 10' wide) which equals 10,850 sq. ft.

Fenced Storage. A fenced area to accommodate and secure two storage containers will be located adjacent to the COPE course where an existing fenced yard is presently located. These storage containers will store equipment for on-site use, including mountain and road bikes, as well as equipment for archery, fishing, canoeing, Zip line, and the COPE course. Containers to be used will be standard shipping containers that are expected to be 20 feet long by 20 feet wide. The area to be fenced will provide a 10-foot buffer around the containers, which will be spaced about 5 feet apart. A chain-link fence will be installed using fence posts that will be either set in concrete-filled holes or simply driven into the soil. The area to be disturbed during installation of the fenced storage area will be approximately 65-feet by 40 feet, or 2,600 square feet. For the impervious area calculations, we include only the two containers at 400 square feet each. No grading is anticipated to prepare the fenced area before locating these storage containers.

Road Improvements. The general site preparation and Project implementation will include some minor road improvements, expected to be filling potholes and minor leveling by applying decomposed granite on top of the existing road surface. Improvements are needed to provide an adequate surface for service vehicles attending to portable toilets and sewer servicing. There are five existing road segments identified in the Project area (see Figure 2) which are dirt roads visible on current aerial photos. Although specific road segments to be included in the improvement schedule have not yet been specified, this activity is not

expected to require any brush clearance, grading, or installation of new impervious surfaces. Since there are no existing impervious surfaces on these roads, they will remain 100% pervious.

Total Project. The total impervious area for the entire Project, including existing, replaced, and new impervious areas for all development locations is 6,020 square feet, or 0.138 acres. Based on the total Project site area of 69 acres, the new impervious surfaces within the Project site (not including those pre-existing within the park) represent only about 0.2% of the Project site which are located in five specific groups each with less than 2,000 square feet. As a result, the impervious areas are individually small and are scattered across a large Project site.

2.0 PROJECT ENVIRONMENT

The Project is situated a little over 10 miles east of San Diego Bay, about 7 miles south of the Sweetwater Reservoir, and only 3.5 miles north of the Mexican border. Most of the area within the Project boundary is undeveloped open space and is surrounded by similar undeveloped open space to the south and east. Immediately west of the Project area is the Otay Water Treatment Plant. Bordering the northern end of the Project area is Lower Otay Reservoir.

2.1 Setting and Topography

The Project location is in the Peninsular Ranges physiographic province, an area of complex geology with topographic ridges and valleys lying approximately parallel to the San Andreas Fault (trending southeast to northwest at this end of California). The site itself ranges in elevation from under 300 feet along the Otay River where it crosses the southern end of the property to over 650 feet on the eastern boundary near the COPE Course (eastern end of the Zip Line). There is a drainage divide along the northern edge of the property, with the area north of the divide draining to the reservoir, and the areas to the south draining toward the southwest, and eventually into the Otay River (downstream from the reservoir outlet). The vegetation on the property is very open with some trees and shrubs found in the area of the County Park facilities and few to none found in the eastern and southern 2/3 of the property.

2.2 Hydrology

Regional drainage consists of several large watersheds that flow west off the Pacific Slope toward the ocean or local bays. The Project site lies within the Otay River watershed (160 square miles in area) which is flanked by the Sweetwater River watershed to the north (230 square miles) and the Tijuana River to the south (1,750 square miles, of which only 470 square miles are on the U.S. side of the border with Mexico). The Otay River basin is in a semi-arid region with annual precipitation values ranging from under 9 inches per year closest to the coast to nearly 20 inches per year in the eastern-most, and highest elevations of the watershed (RWMG 2019).

The local drainage is more or less confined to an area within the Project boundary and has an internal drainage divide that effectively produces two watershed areas each less than about half the size of the total area of the Project site (which is roughly 70 acres). Although drainage conveyances are identifiable in these small watersheds, neither produces a perennial or even intermittent stream, nor are they shown as a USGS blue line channel. The Otay River immediately downstream from Savage Dam (which impounds the Lower Otay Reservoir) curves to the west and traverses the southernmost end of the Project area. Both internal drainages noted above ultimately discharge to the Otay River downstream from the dam.

There is a Federal Emergency Management Agency (FEMA) 100-year return period flood zone located along the Otay River downstream from Savage Dam extending through the location where it crosses the southern end of the Project site (FEMA 2012). This is contained within the incised channel as it crosses the Project area and does not come close to any of the proposed activity areas to be developed by the Project. Therefore, the Project will not be threatened by any 100-year flood events, nor will Project development activities encroach on any 100-year flood zones.

2.3 Soils

The Project site includes several soil series mapped by the Natural Resources Conservation Service (NRCS), as shown in Attachment 2. There are five soil series mapped in the vicinity and three other mapped features identified by the NRCS (2019) that are not soils: river wash (Rm), terrace escarpment (TeF), and water (W). All the soils are rated hydrologic “Type D” soils, identifying them as soils with very slow infiltration rates and thus high runoff potential. They also have an erodibility index in the severe range but only slight limitations for conversion from brush to grass.

Huerhuero Loam, 2 to 9 percent slopes (HrC). These soils are generally moderately-drained loams with a clay sublayer. Though found in shallow slopes, this series is hydrologic Class D, an erodibility

index in the severe range, but only a slight limitation from ground cover removal (SCS 1973).

Huerhuero Loam, 9 to 15 percent slopes (HrD2). These are moderately well drained soils found on steeper slopes, are in hydrologic Class D with a severe erodibility index. They also have only a slight limitation from native ground cover removal (SCS 1973).

Huerhuero Loam, 15 to 30 percent slopes (HrE2). These moderately well-drained soils are found on steep slopes, are in hydrologic Class D and have an erodibility index in the severe range. Like all Huerhuero loams, these soils are judged to have only slight limitation from ground cover removal (SCS 1973).

Olivenhain Cobbly Loam, 2 to 9 percent slopes (OhC). These soils are well-drained and deep with a very cobbly clay subsoil. These soils are also in hydrologic Class D and have the highest erodibility index among all the soils found on the Project site. They also have only slight limitation from ground cover removal (SCS 1973).

San Miguel-Exchequer Rocky Silt Loam, 9 to 70 percent slopes (SnG). This is a shallow soil that occurs in mountainous areas that can be quite steep, and overlie shallow bedrock. Soils in this series are also in hydrologic Class D, have an erodibility index in the severe range, and moderate limitations from ground cover disturbance (SCS 1973).

2.4 Water Quality

The Otay River (downstream from Savage Dam) is the immediate downstream receiving water body for runoff from the Project site. The Lower Otay Reservoir (impounded by Savage Dam) is an impaired water body; included on the 303 (d) list for ammonia, color, iron, manganese, nitrogen, and pH (RWMG 2019). However, this reservoir is upstream from the Project site, and therefore no drainage from the Project site would contribute to water quality issues in this reservoir.

San Diego Bay is the ultimate discharge point for the Otay River and is also an impaired water body. This water body is also on the 303(d) list for mercury, polyaromatic hydrocarbons (PAHs), and polychlorinated biphenyls (PCBs) (RWMG 2019). However, the Otay River between Savage Dam and San Diego Bay is not classified as an impaired water body, and this is the actual receiving water body for runoff from the Project site. Thus, the runoff from the Project site does not drain directly to an impaired water body. Additionally, the stretch of the Otay River immediately downstream from the Project site (and the Lower Otay Reservoir) is an ephemeral channel, which generally does not have flowing water. The main purpose for this reservoir is water supply storage, so it rarely releases water to the downstream channel. The immediate local watershed does not provide adequate runoff for channel flow, so it generally has no surface water flow.

Finally, there do not appear to be any serious threats to local surface water quality due to contaminants that could be mobilized by surface runoff from this Project site. There is very little development and/or disturbance to the Project site, with the exception of the currently unused restroom facility and another existing structure in the northeast corner of the Project site. The existing restroom facility used a septic system and therefore a leach field. Also, in the immediate surrounding area of the restroom there are several piles of accumulated junk. The other structure in the northeast corner does not have similar accumulations in the vicinity, but its purpose and function are not known. None of the proposed facilities or practices will involve the use or storage of any known contaminants, and the eventual replacement of the existing restroom facility will include the abandonment, or possible removal, of the existing leach field.

3.0 STORM WATER QUALITY MANAGEMENT

Based on the proposed development activities and limited amount of additional impervious area that will be produced by the Project, the Otay Campground development does not qualify as a Priority Development Project (PDP) as outlined in Attachment 1 and Section 1.2. The highlights of this assessment include the following:

- Although the Project is located west of the Salton Sea watershed divide, none of the PDP criteria apply.
- This Project is not part of an existing PDP.
- It does not create or replace 10,000 square feet or more of impervious surface.
- It does not create or replace impervious area in parking lots, streets, roads, highways, freeways, driveways, restaurants, or on hillsides.
- It does not create or replace impervious area in conjunction with automotive repair shops or retail gasoline outlets.
- Runoff from the Project site will not discharge directly into an “Environmentally Sensitive Areas (ESA).
- It will not generate pollutants associated with storm water runoff after site development is completed or during site development activities.
- This campground improvement is not a redevelopment Project.

3.1 Opportunities/Constraints for Storm Water Control

As a Standard Development Project, there are basic management methods available to address storm water quality which can help to preserve receiving water quality. This is accomplished by limiting the potential for the Project, both in the construction phase and in the operations phase to contribute unwanted constituents to surface water runoff during rainstorm events. These management measures include the following:

- Avoid removing plant roots during vegetation clearing activities to maintain the soil binding properties of live vegetation. [Construction Phase]
- Limit actual ground surface disturbance and vegetation clearance to the minimum area needed for each development feature. [Construction Phase]
- Limit site development activities to the dry season (April to October). [Construction Phase]
- Provide buffer areas with unaltered vegetation left in place surrounding all activity areas within the Otay Campground; to the extent possible. [Construction and Operation Phases]

3.2 Source Control

Pollution source control, even for activities such as those proposed for this Project (which provide very limited potential for pollutant introduction) will benefit from active control measures, or best management practices (BMPs) that primarily limit off-site transport of sediment

- Deploy perimeter controls (wattles, fiber roles, silt fence, etc.) around work areas to control any sediments dislodged during ground disturbing activities that might mobilize during a rainstorm.
- Re-establish vegetation in areas disturbed and/or cleared during site development.
- Institute a strong use policy requiring good housekeeping practices for waste management (i.e. trash) by facility occupants; and strictly enforce this policy.
- Deploy multiple waste collection receptacles throughout the activity areas and provide a frequent collection and disposal schedule for these receptacles.
- Establish a strong policing protocol to enforce good housekeeping practices and ensure the waste collection schedule.

4.0 CONCLUSIONS

The Proposed Project has been shown to qualify as a Standard Development Project, and not a PDP. Therefore, water quality concerns are generally considered to be minor and should be further ameliorated due to a large Project site that is primarily undeveloped and undisturbed surrounding these impervious areas, beyond the existing Park; and through the use of some basic and simple BMPs. The total impervious area within the Project site, after completion of the Project, will be only 0.2% of the total area. The total area that will be disturbed during Project implementation represents only 2.6% of the total Project site area. This does not include any disturbed area for road improvements as that is not well-enough known to estimate.

There will be significant natural buffering of the disturbed areas because of their broad distribution across the Project site. The additional BMPs recommended in Section 3 should help to further reduce potential water quality effects, to the point where they should be inconsequential.

5.0 REFERENCES

- County of San Diego. (2012). County of San Diego SUSMP: Standard Urban Stormwater Mitigation Plan Requirements for Development Applications; Appendix A, County Environmentally Sensitive Areas Map (printed 11/27/2007 – Update 6).
https://www.sandiegocounty.gov/content/dam/sdc/dpw/WATERSHED_PROTECTION_PROGR/AM/susmppdf/susmp_appendix_a.pdf
- Federal Emergency Management Agency [FEMA], 2012. Flood Insurance Rate Map (FIRM) Panel 06073C2181G, San Diego County Unincorporated Areas.
- Natural Resources Conservation Service [NRCS], (2019). Web Soil Survey (on-line soil series maps and data). [https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm]. Accessed September 7, 2019.
- Regional Water Management Group [RWMG], (2019). 2019 San Diego Integrated Regional Water Management Plan. Prepared in cooperation with the Regional Advisory Committee with support from the City of San Diego, County of San Diego, and San Diego County Water Authority.
- Soil Conservation Service [SCS], 1973. Soil Survey, San Diego Area, California. US Department of Agriculture SCS and Forest Service in cooperation with University of California Agricultural Experiment Station, US Department of the Interior, Bureau of Indian Affairs, Department of the Navy, and the US Marine Corps. Issued December 1973.

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ATTACHMENT 1

San Diego County Storm Water Intake Form



County of San Diego
Stormwater Quality Management Plan (SWQMP)
Attachment 1: Storm Water Intake Form for All Permit Applications

This form establishes Stormwater Quality Management Plan (SWQMP) requirements for Development Projects per Sections 67.809 and 67.811 of the County of San Diego Watershed Protection Ordinance (WPO). See **Storm Water Intake Form Instructions** for additional guidance and explanation of terms.

Part 1. Project Information			
Project Name:	Otay Lake Campground Project		
Record ID (Permit) No(s):			
Assessor's Parcel No(s):			
Street Address (or Intersection):	2270 Wueste Road		
City, State, Zip:	Chula Vista, CA 91915		
Part 2. Applicant / Project Proponent Information			
Name:			
Company:	San Diego - Imperial Council of the Boy Scouts of America		
Street Address:	1207 Upas Street		
City, State, Zip:	San Diego, CA 92103		
Phone Number	619-298-6121		
Email:			
Part 3. Required Information for All Development Projects			
(A)	1. Existing (pre-development) impervious surfaces (ft²)	2. Created or replaced impervious surfaces (ft²)	3. Total disturbed area (acres or ft²)
	2,195	6,020	77,625 ft ²
(B)	<input type="checkbox"/> Check here and provide a WDID# if this project is subject to the California Construction General Permit (Order No. 2009-0009-DWQ) ¹		WDID # (if issued)

For County Use Only	Reviewed By:	Review Date:
<input type="checkbox"/> Standard SWQMP	<input type="checkbox"/> PDP SWQMP	<input type="checkbox"/> Green Streets PDP Exemption SWQMP

¹ Available at: https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html

Part 4. Priority Classification & SWQMP Form Selection**(A) If your project is the following ... (select one)****(B) You must complete ...**☐ **Standard Project****→ Standard SWQMP Form**

- ☐ a. Project is East of the Pacific/Salton Sea Divide
- ☒ b. None of the PDP criteria below applies

☐ **Priority Development Project (PDP)****→ PDP SWQMP Form**

- ☐ 1. Project is part of an existing PDP, OR
- ☐ 2. Project does any of the following:
- ☐ a. Creates or replaces a total of 10,000 ft² or more of impervious surface
 - ☐ b. Creates or replaces a combined total of 5,000 ft² or more of impervious surface within one or more of the following uses: (1) parking lots; (2) streets, roads, highways, freeways, and/or driveways; (3) restaurants; and (4) hillsides
 - ☐ c. Creates or replaces a combined total of 5,000 ft² or more of impervious surface within one or more of the following uses: (1) automotive repair shops; and (2) retail gasoline outlets
 - ☐ d. Discharges directly to an Environmentally Sensitive Area (ESA) AND creates or replaces 2,500 ft² or more of impervious surface
 - ☐ e. Disturbs one or more acres of land (43,560 ft²) and is expected to generate pollutants post-construction
 - ☐ f. Is a redevelopment project that creates or replaces 5,000 ft² or more of impervious surface on a site already having at least 10,000 ft² of impervious surface

☐ **Green Streets PDP Exemption²****→ Green Streets PDP Exemption SWQMP Form****Part 5. Applicant Signature***I have reviewed the information in this form, and it is true and correct to the best of my knowledge.*

Applicant / Project Proponent Signature:

Date:

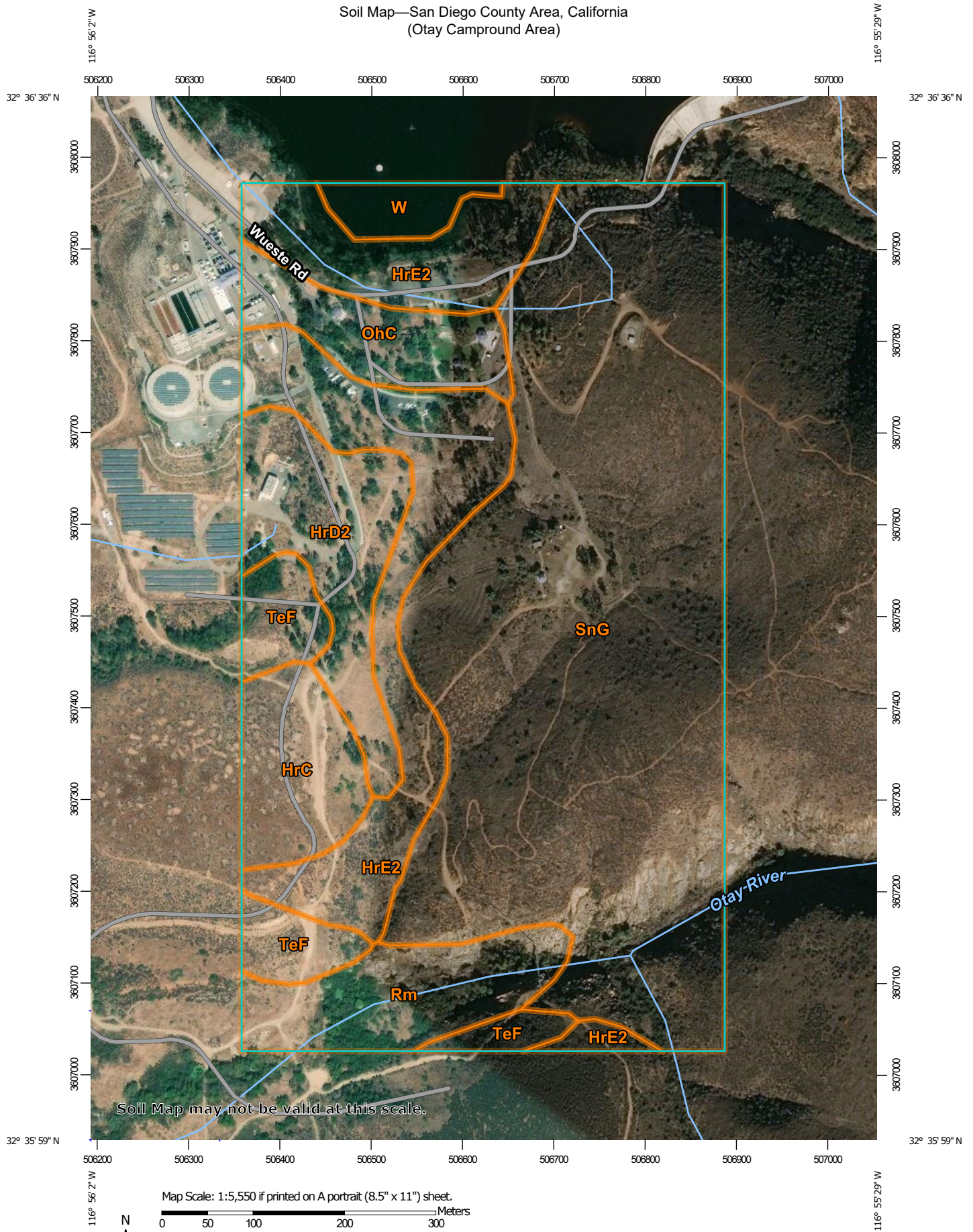
- **Upon completion** submit this form to the County.
- **If requested**, attach supporting documentation to justify selections made or exemptions claimed.
- **If this is a PDP that is part of a larger existing PDP**, you will be required to attach a copy of the existing SWQMP to the newer SWQMP submittal.

² **Green Streets PDP Exemption Projects** are those claiming exemption from PDP classification per WPO Section 67.811(b)(2) because they consist exclusively of *either* 1) development of new sidewalks, bike lanes, and/or trails; *or* 2) improvements to existing roads, sidewalks, bike lanes, and/or trails.

ATTACHMENT 2

Soil Map – San Diego County Area, Otay Campground

Soil Map—San Diego County Area, California (Otay Campground Area)



Soil Map—San Diego County Area, California
(Otay Campground Area)

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Diego County Area, California

Survey Area Data: Version 13, Sep 12, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 31, 2009—Dec 9, 2018

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
HrC	Huerhuero loam, 2 to 9 percent slopes	6.2	5.0%
HrD2	Huerhuero loam, 9 to 15 percent slopes, eroded	9.5	7.6%
HrE2	Huerhuero loam, 15 to 30 percent slopes, eroded	22.8	18.4%
OhC	Olivenhain cobbly loam, 2 to 9 percent slopes	5.9	4.8%
Rm	Riverwash	8.0	6.4%
SnG	San Miguel-Exchequer rocky silt loams, 9 to 70 percent slopes	63.7	51.3%
TeF	Terrace escarpments	6.0	4.8%
W	Water	2.2	1.7%
Totals for Area of Interest		124.2	100.0%

APPENDIX J – ROADWAY CONSTRUCTION NOISE MODEL PRINTOUTS



Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 11/21/2019
Case Description: Otay Lakes Campground - Demolition

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Nearest Offsite Worker	Industrial	50	50	50

Description	Impact Device	Usage(%)	Equipment Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Concrete Saw	No	20		89.6	900	0
Tractor	No	40		84	950	0

Equipment	Calculated (dBA)	*Lmax	Leq	Results			
				Day		Noise Limits (dBA) Evening	
				Lmax	Leq	Lmax	Leq
Concrete Saw		64.5	57.5	N/A	N/A	N/A	N/A
Tractor		58.4	54.4	N/A	N/A	N/A	N/A
Total		64.5	59.2	N/A	N/A	N/A	N/A
Total - Leq 12 hour			57				

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 11/21/2019
Case Description: Otay Lakes Campground - Site Preparation

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Nearest Offsite Worker	Industrial	50	50	50

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Tractor	No	40		84	300	0
Tractor	No	40		84	350	0
Tractor	No	40		84	400	0
Tractor	No	40		84	450	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)			
	*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq
Tractor	68.4	64.5	N/A	N/A	N/A	N/A
Tractor	67.1	63.1	N/A	N/A	N/A	N/A
Tractor	65.9	62.0	N/A	N/A	N/A	N/A
Tractor	64.9	61	N/A	N/A	N/A	N/A
Total	68.4	68.8	N/A	N/A	N/A	N/A
Total - Leq 12 hour		67				

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 11/21/2019
Case Description: Otay Lakes Campground - Building Construction

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Nearest Offsite Worker	Industrial	50	50	50

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Crane	No	16		80.6	300	0
Gradall	No	40		83.4	350	0
Gradall	No	40		83.4	400	0
Gradall	No	40		83.4	450	0
Tractor	No	40	84		500	0
Tractor	No	40	84		550	0
Tractor	No	40	84		600	0
Generator	No	50.0		80.6	650	0
Welder / Torch	No	40.0		74	700	0
Compressor (air)	No	40.0		77.7	750	0

Equipment	Calculated (dBA)		Results			
	*Lmax	Leq	Noise Limits (dBA)		Evening	Leq
			Day Lmax	Leq		
Crane	65.0	57.0	N/A	N/A	N/A	N/A
Gradall	66.5	62.5	N/A	N/A	N/A	N/A
Gradall	65.3	61.4	N/A	N/A	N/A	N/A
Gradall	64.3	60.3	N/A	N/A	N/A	N/A
Tractor	64.0	60.0	N/A	N/A	N/A	N/A
Tractor	63.2	59.2	N/A	N/A	N/A	N/A
Tractor	62.4	58.4	N/A	N/A	N/A	N/A
Generator	58.4	55.3	N/A	N/A	N/A	N/A
Welder / Torch	51.1	47.1	N/A	N/A	N/A	N/A
Compressor (air)	54.1	50.2	N/A	N/A	N/A	N/A
Total	66.5	68.9	N/A	N/A	N/A	N/A
Total - Leq 12 hour		67				

*Calculated Lmax is the Loudest value.