COUNTY OF RIVERSIDE
ENVIRONMENTAL ASSESSMENT FORM: INITIAL STUDY

State Clearing House Number:
Project Case Type (s) and Number(s): PK-9733
Lead Agency Name: Riverside County Regional Park & Open-Space District
Address: 28001 Goetz Road, Perris, CA 92587
Contact Person: Analicia Gomez, Planner
Telephone Number**:** (951) 500-7188
Applicant's Name: Riverside County Regional Park & Open-Space District
Applicant's Address: 4600 Crestmore Road, Jurupa Valley, CA 92509

I. PROJECT INFORMATION

Project Description:

Roy W. Kabian Memorial Park (Kabian Park or Park) is a 640.42-acre reserve located at 28001 Goetz Road in the City of Perris, California. The Park includes approximately 1 acre of developed space and 639 acres of hiking and equestrian trails owned and managed by the Riverside County Regional Park and Open-Space District (RivCo Parks, District). The main entrance to the Park is located north along Kabian Park Road in the southeastern corner of the Park, with an unpaved gravel pad to provide parking. RivCo Parks was granted funds by the California Resources Agency Department of Parks and Recreation, Off-Highway Motor Vehicle Recreation Division, for restoration activities within the Park. The Project proposes to install new fencing, gates, and signage; to remove unauthorized trails; and restore native habitat. RivCo Parks will act as the Lead Agency for the proposed Project. More details regarding these activities are provided below.

Project Site and History

The Park is located in the western region Riverside County (County) within the City of Perris (City) (Figure 1). The City designates zoning and land use of the Park as Open Space (OS). Neighboring parcels to the north, south, and east are zoned by the City as Single Family Residential (R6,000 and R20,000), while parcels bordering to the west are zoned by the County as Rural Residential (R-R) (City 2021b; County 2021). Regional access to the Park is provided by Interstate 215 (I-215), Interstate 15 (I-15), and State Route 74 (SR 74). Local access to the Park is provided by Goetz Road and East Drive.

The Park was established in 1968. It was bought with money donated by Madeline Kabian with the provision that the Park be named for her deceased son Roy. From the Park's inception, it was owned and operated by the City of Perris. In 1974, the City turned it over to RivCo Parks (Premier 2021). The Park provides a variety of trails for hiking, running, mountain biking, and equestrian use, as well as wildlife viewing and nature photography. Additional amenities within the Park include gazebos with barbeque grills, drinking fountains, and playground facilities.

As previously described, entrance to the Park is along Kabian Park Road. However, a number of unofficial access points currently exist along all borders of the Park. These access points have led to unauthorized Off-Highway Vehicle (OHV) entry to and use within the Park, leading to the deterioration of native habitat in the area.

Proposed Project Components

The proposed Project would involve OHV-related restoration, including new fencing, gates, and sign installation; removal of unauthorized trails; and restoration of native habitat. These activities are described below.

Fence Installation

Approximately 20,000 feet of fencing would be installed along the perimeter of the Park (Figure 2). Fence material would consist of galvanized round posts, T-posts, smooth barbless wire, and 3/8-inch cable. A standard design would be implemented, involving three-strain wire/cable with 10-foot spacings between posts. Fencing will be 4.5 to 5 feet tall depending on terrain, and posts would be anchored approximately 2 feet into the ground.

Gate Installation

Four gates would be manufactured and installed by District staff, one located at the existing entrance, two along the southern edge of the Park, and one along the northern edge of the Park (Figure 2). Gates will be approximately 4 to 5 feet tall and 12 to 16 feet wide, composed mainly of 2-inch by 2-inch square metal tubing.

Signage Installation

Signage would be installed at the developed entrance and each gated access point to the larger reserve. Signage would include information about responsible riding and provide users with a map to nearby legal riding opportunities in Riverside County, such as Wildomar OHV Park or Cahuilla Creek Motocross Park.

Unauthorized Trail Removal

Approximately 3 miles of unauthorized OHV trails would be removed from the Park (Figure 2). These trails would be disked repeatedly in order to loosen compacted soil, and the areas would be replanted with native plants. A track loader with a scarifying attachment will be used to break up hard-packed soils.

Removed OHV trails would be seeded with a nonirrigated native Riversidean sage scrub seed mix. Spot treatment herbicide applications would be conducted as needed.

Native Habitat Restoration

The Project would restore 35 acres of native habitat degraded by habitual unauthorized OHV use within the Park. String trimmers and rakes would be used to dethatch and remove non-native grasses and weeds from restoration areas. Those areas would then be seeded with a nonirrigated native forb seed mix. Spot treatment herbicide applications would be conducted as needed inside the restoration areas.

Construction

Installation of fencing, gates, and signage would require a crew of approximately four to eight workers, using equipment such as a Bobcat or other small tracked multi-terrain loader to auger holes, install metal posts, and move materials. A standard pickup truck and all-terrain vehicle (ATV) would be used to move materials. OHV trail removal and restoration would require a crew of approximately 24 workers. For OHV trail removal, workers would use a track loader or dozer with a scarifying attachment to loosen hard-packed soil. Restoration activities would require a string trimmer, hand tools, and one to three standard pickup trucks.

Project materials will be staged at the parking area for the Park, off Kabian Park Road, or at the adjacent groundskeeper's property as needed. All trails will remain open during construction. The small, developed portion of the Park located just north beyond the main entrance may be closed temporarily to allow safe ingress/egress of equipment and materials if needed.

Construction Timing

Fence, gate, and signage installation and restoration activities are anticipated to start in approximately November 2021 and end in approximately February 2022. Continued maintenance to restorations areas, such as string trimming and herbicide applications, would occur as needed following February 2022 to ensure the viability of plantings.

Public construction projects and facilities owned or operated by or for a governmental agency are exempt from the County's Noise Ordinance (County 2007). Although the proposed Project is exempt from limitations on construction hours, to the maximum extent feasible, RivCo Parks would voluntarily limit construction activities to the hours between 6:00 a.m. and 6:00 p.m. during the months of June through September and between 6:00 a.m. and 7:00 p.m. during the months of October through May, consistent with requirements codified in the County's Noise Ordinance for private construction projects located within 0.25 mile of a residence.

Figure 1 – Project Site and Vicinity

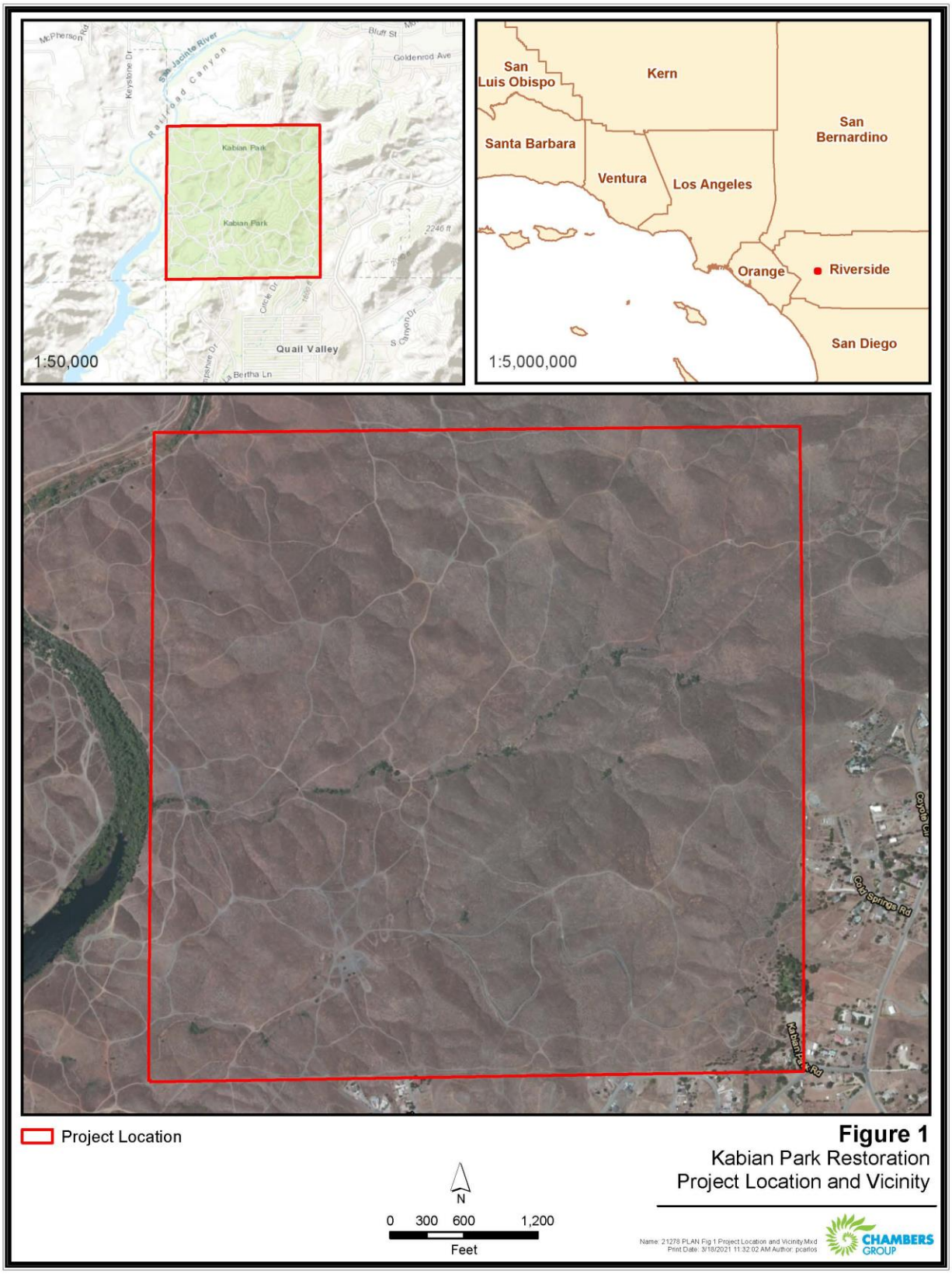
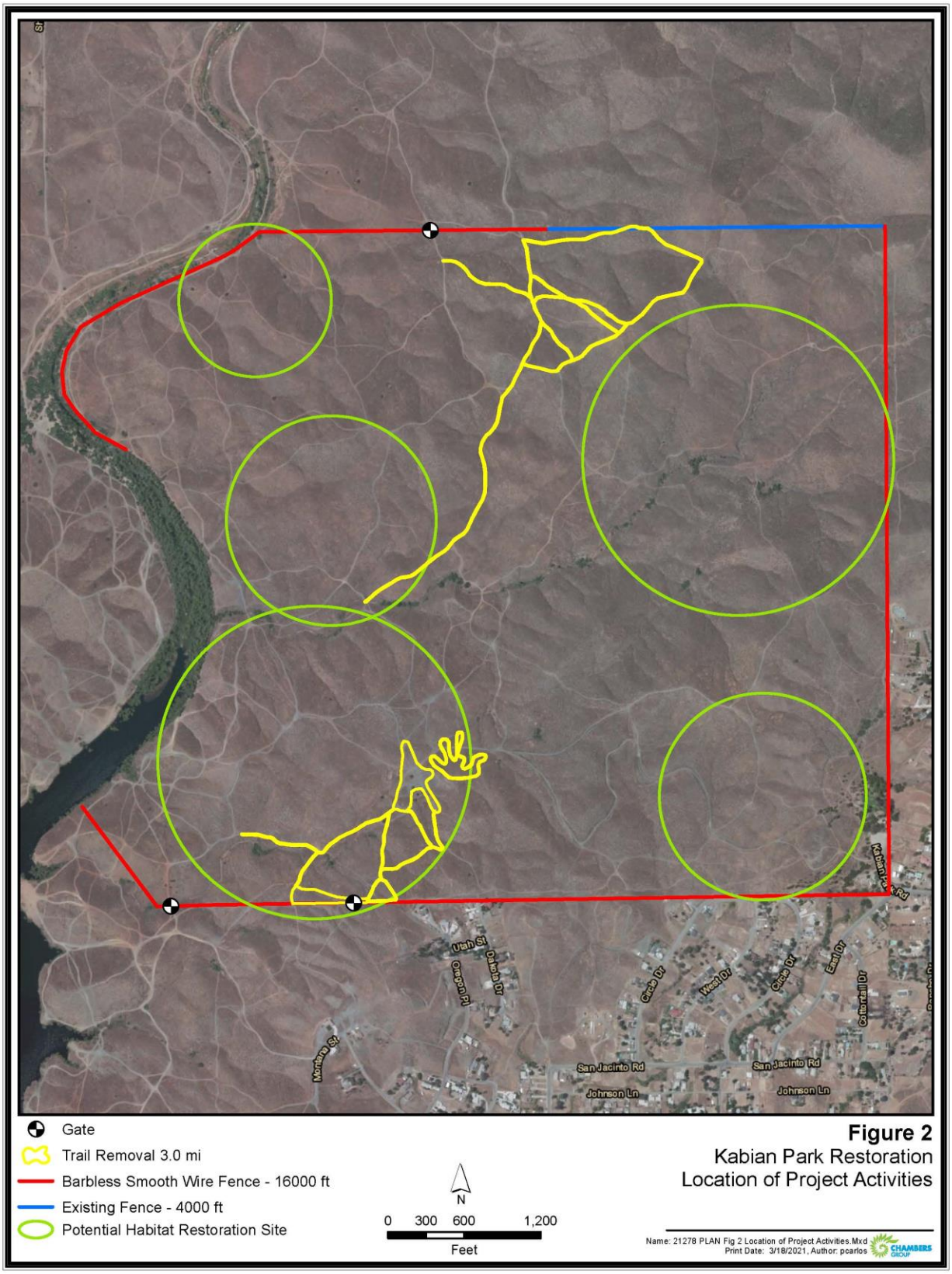


Figure 2 – Locations of Proposed Project Activities



A. Type of Project: Site Specific ☒; Countywide ☐; Community ☐; Policy ☐.

B. Total Project Area:

Residential Acres:	**Lots:**	**Units:**	**Projected No. of Residents:**
Commercial Acres:	**Lots:**	**Sq. Ft. of Bldg. Area:**	**Est. No. of Employees:**
Industrial Acres:	**Lots:**	**Sq. Ft. of Bldg. Area:**	**Est. No. of Employees:**
Other: 640.42 acres total Project site; 35 acres of restoration			

C. Assessor's Parcel No(s): 349-210-001

Street References: Goetz Road and Kabian Park Road

D. Section, Township & Range Description or reference/attach a Legal Description: Section 24, Township 5S, Range 4W

E. Brief description of the existing environmental setting of the project site and its surroundings: The Park is located in the western region of Riverside County (County) within the City of Perris. The Park is approximately 1.25 miles northeast of Canyon Lake. The northern and western borders of the Park are adjacent to undeveloped land, and the southern and eastern borders of the Park are adjacent to residential development. Numerous residences are within 0.25 mile of the Park. The Project site is composed primarily of undeveloped habitat, with steep hills and rocky terrain. Flora is mainly composed of chaparral, tall grasses, and Juniper trees. Soils within the Project site are characterized by primarily Lodo rocky loam (USDA 2021). The highest elevation within the Park is approximately 1,700 feet, and the lowest elevation is approximately 1,400 feet.

II. APPLICABLE GENERAL PLAN AND ZONING REGULATIONS

F. General Plan Elements/Policies:

1. **Land Use:** The Project site is located within Planning Area 10: South Residential and is designated as Open Space (OS). The OS Zone is to protect public health and safety; provide areas for recreational opportunities; conserve natural resources, scenic beauty, and agriculture; and, preserve areas of major historic or cultural interest in accordance with the goals and policies of the open space and conservation element of the City's General Plan (City 2008b).

2. **Circulation:** All materials laydown and construction staging would occur within the Project site, limiting potential transportation impacts along Kabian Park Road, Goetz Road, and East Road. The proposed Project would not measurably affect any other transportation facilities referenced in the General Plan and meets all applicable circulation policies (City 2008a).

3. **Multipurpose Open Space:** The proposed Project does not include construction of new drinking fountains or permanent restroom facilities. As such, implementation of the Project would not increase demand for domestic water or wastewater facilities. No agricultural, forest, mineral, or energy resources are present at the Project site.

4. **Safety:** The proposed Project does not include any habitable structures that may be impacted by geologic and/or flood hazards. The Project is in a local responsibility area very high fire hazard severity zone. The entrance to the Park is located approximately 0.9 mile

from the closest fire station, and the implementation of the proposed Project would not increase the risk of fire hazards (CAL FIRE 2021). The proposed new signage, which would be displayed at gates entering the Park, would prohibit hunting, fires, shooting, and other potential ignition sources. Similar signage is also at the existing main entrance. Additionally, the Project would remove opportunities for OHVs to utilize the site, thereby decreasing the risk of a fire associated with vehicles on site. RivCo Parks would continue to conduct regular weed abatement to reduce ladder fuels 100 feet from residences.

5. **Noise:** The Park is directly adjacent to residential neighborhoods on the south and east boundary lines and is approximately 0.25 mile from residences to the northeast and northwest. Construction activities would comply with the City and County Noise Ordinances, and long-term noise compatibility issues as a result of intermittent trail maintenance are not expected (City 2000; County 2007).

6. **Housing:** The proposed Project does not include the construction of housing and would not create permanent employment opportunities which would require housing.

7. **Air Quality:** Construction activities would be minor, short-term, and temporary and would not result in a significant increase in emissions. Operation of the proposed Project would not include activities that would result in additional new stationary or mobile air emissions, as the Project is needed for safe ongoing use of the Park.

8. **Healthy Communities:** The Project would increase community access to recreational open space, providing safe opportunities for recreation and physical activities.

9. **Environmental Justice (After Element is Adopted):** As of June 2021, the Environmental Justice Element has not been adopted.

G. General Plan Area Plan(s): Mead Valley Area Plan

H. Foundation Component(s): Open Space

I. Land Use Designation(s): Planning Area 10: South Residential; Open Space

J. Overlay(s), if any: Western Riverside County Multiple Species Habitat Conservation Plan

K. Policy Area(s), if any: N/A

L. Adjacent and Surrounding:

1. **General Plan Area Plan(s):** Elsinore Area Plan to the west; Sun City/Menifee Valley Area Plan to the east and south

2. **Foundation Component(s):** N/A

3. **Land Use Designation(s):** Single Family Residential to the north and east; Rural Residential to the east and south; Rural Mountainous to the south and west; and Conservation Habitat to the west

4. **Overlay(s), if any:** Western Riverside County Multiple Species Habitat Conservation Plan

5. **Policy Area(s), if any:** N/A

M. Adopted Specific Plan Information

1. **Name and Number of Specific Plan, if any:** N/A

2. **Specific Plan Planning Area, and Policies, if any:** N/A

N. Existing Zoning: Open Space

O. Proposed Zoning, if any: N/A

P. Adjacent and Surrounding Zoning: Single Family Residential to the north and east; Rural Residential to the east and south; Rural Mountainous to the south and west; and Conservation Habitat to the west

III. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below (x) would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" or "Less than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Hazards & Hazardous Materials	☐ Recreation
☐ Agriculture & Forest Resources	☐ Hydrology / Water Quality	☐ Transportation
☐ Air Quality	☐ Land Use / Planning	☒ Tribal Cultural Resources
☒ Biological Resources	☐ Mineral Resources	☐ Utilities / Service Systems
☒ Cultural Resources	☐ Noise	☐ Wildfire
☐ Energy	☐ Paleontological Resources	☒ Mandatory Findings of Significance
☐ Geology / Soils	☐ Population / Housing	
☐ Greenhouse Gas Emissions	☐ Public Services	

IV. DETERMINATION

On the basis of this initial evaluation:

A PREVIOUS ENVIRONMENTAL IMPACT REPORT/NEGATIVE DECLARATION WAS NOT PREPARED
☐ 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 project, described in this document, have been made 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.

A PREVIOUS ENVIRONMENTAL IMPACT REPORT/NEGATIVE DECLARATION WAS PREPARED
☐ I find that although the proposed project could have a significant effect on the environment, **NO NEW ENVIRONMENTAL DOCUMENTATION IS REQUIRED** because (a) all potentially significant effects of the proposed project have been adequately analyzed in an earlier EIR or Negative Declaration pursuant to applicable legal standards, (b) all potentially significant effects of the proposed project have been avoided or mitigated pursuant to that earlier EIR or Negative Declaration, (c) the proposed project will not result in any new significant environmental effects not identified in the earlier EIR or Negative Declaration, (d) the proposed project will not substantially increase the severity of the environmental

effects identified in the earlier EIR or Negative Declaration, (e) no considerably different mitigation measures have been identified and (f) no mitigation measures found infeasible have become feasible.

☐ I find that although all potentially significant effects have been adequately analyzed in an earlier EIR or Negative Declaration pursuant to applicable legal standards, some changes or additions are necessary but none of the conditions described in California Code of Regulations, Section 15162 exist. An **ADDENDUM** to a previously-certified EIR or Negative Declaration has been prepared and will be considered by the approving body or bodies.

☐ I find that at least one of the conditions described in California Code of Regulations, Section 15162 exist, but I further find that only minor additions or changes are necessary to make the previous EIR adequately apply to the project in the changed situation; therefore a **SUPPLEMENT TO THE ENVIRONMENTAL IMPACT REPORT** is required that need only contain the information necessary to make the previous EIR adequate for the project as revised.

☐ I find that at least one of the following conditions described in California Code of Regulations, Section 15162, exist and **a SUBSEQUENT ENVIRONMENTAL IMPACT REPORT** is required: (1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; (2) Substantial changes have occurred with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any the following:(A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;(B) Significant effects previously examined will be substantially more severe than shown in the previous EIR or negative declaration;(C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measures or alternatives; or,(D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR or negative declaration would substantially reduce one or more significant effects of the project on the environment, but the project proponents decline to adopt the mitigation measures or alternatives.

Signature

Date

For:

Printed Name

V. ENVIRONMENTAL ISSUES ASSESSMENT

In accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000-21178.1), this Initial Study has been prepared to analyze the proposed Project to determine any potential significant impacts upon the environment that would result from construction and implementation of the project. In accordance with California Code of Regulations, Section 15063, this Initial Study is a preliminary analysis prepared by the Lead Agency, the County of Riverside, in consultation with other jurisdictional agencies, to determine whether a Negative Declaration, Mitigated Negative Declaration, or an Environmental Impact Report is required for the proposed project. The purpose of this Initial Study is to inform the decision-makers, affected agencies, and the public of potential environmental impacts associated with the implementation of the proposed project.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
AESTHETICS Would the project:				
1. Scenic Resources a) Have a substantial effect upon a scenic highway corridor within which it is located?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings and unique or landmark features; obstruct any prominent scenic vista or view open to the public; or result in the creation of an aesthetically offensive site open to public view?	☐	☐	☒	☐
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐

The Project site is not located within the immediate vicinity of any California Department of Transportation (Caltrans) officially designated State scenic highways (Caltrans 2019). Nonetheless, State Route (SR) 74 approximately 1.5 miles northwest of the Project site is a State eligible scenic highway, and Interstate 215 (I-215) approximately 3 miles east of the Project site is a County eligible scenic highway (County 2015). The Project site encompasses numerous recreational trails within the Park; and, although none of the trails have designated scenic overlooks, Project activities may temporarily interrupt views for Park users. Pedestrian facilities, such as sidewalks, are not provided along the residential roads bordering the Park. While pedestrians may walk along the shoulder of the paved roadway, views along Circle Drive, East Drive, and Dakota Drive are generally limited to residents on these streets and are not often accessed by the general public. Further, views along roads within the immediate vicinity of the Project site include rolling hills and mountainous topography. The Project's staging area, which would be located within the existing dirt parking lot, may be visible to those traveling along East Drive/Kabian Park Road; however, vehicles would likely be traveling at speeds of 25 miles per hour (mph) or more. The Project site may be visible for short periods along public roads; nonetheless, due to existing topography and vegetation along the road, views of the Project site are largely obscured.

Source(s): Caltrans List of Eligible and Designated State Scenic Highways; Riverside County General Plan Figure C-8 "Scenic Highways"

Findings of Fact:

a) **No Impact.** As previously described, no officially designated scenic highways are located near the Project site. The nearest eligible scenic corridors are SR 74, approximately 1.5 miles northwest of the Project site, and I-215, approximately 3 miles east of the Project site (Caltrans 2019). However, substantial amounts of residential development exists between I-215 and the Project site, as well as ridges and hillsides between SR-74 and the Project site, which block views of the Park from the highway corridor. Therefore, no impacts would be associated with the implementation of the proposed Project.

b, c) **Less Than Significant.** The proposed Project may relocate existing small to medium-sized boulders located within the Project site but would not damage any scenic resources, including rock outcroppings and unique or landmark features within the Park. Additionally, no trees would be removed as a result of the Project. As mentioned above, no designated scenic overlooks are within the Park, but Project activities may be visible to Park trail users from publicly accessible vantage points of the surrounding landscape. Required construction equipment for the Project would be visible from areas adjacent to the Project site on short-term and temporary basis, lasting for a period of approximately four months. Vehicles may be visible in the existing day use parking and staging area, particularly in areas that are located immediately adjacent or at some higher elevations within the Park. Due to the existing vegetation, rolling hills, and mountainous topography, the views of the vehicles at the Project site would be limited throughout the entire 640.42-acre Park. Ultimately, removal of unauthorized trails and restoration of native vegetation as a result of the Project would improve views of the Park in the long term. Therefore, impacts associated with the implementation of the proposed Project would be less than significant.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

2. Mt. Palomar Observatory a) Interfere with the nighttime use of the Mt. Palomar Observatory, as protected through Riverside County Ordinance No. 655?	☐	☐	☐	☒

Source(s): Riverside County GIS database, Ord. No. 655 (Regulating Light Pollution)

Findings of Fact:

a) **No Impact.** The Project site is located approximately 34 miles northwest of the Mt. Palomar Observatory (County 2021). All construction activities at the Project site would take place during the daylight hours between 6:00 a.m. at the earliest and 7:00 p.m. at the latest and, therefore, would not require nighttime lighting. Further, the Project would not include permanent lighting since the Park closes at sunset every day. Therefore, the proposed Project would neither directly nor indirectly interfere with the nighttime use of the Mt. Palomar Observatory, and there would be no impacts.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3. Other Lighting Issues a) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒
b) Expose residential property to unacceptable light levels?	☐	☐	☐	☒

Source(s): Onsite Inspection, Project Application Description

Findings of Fact:

a, b) **No Impact.** As previously described, all construction activities at the Project site would take place during the daylight hours between 6:00 a.m. and 7:00 p.m. and, therefore, would not require nighttime lighting. Further, the proposed Project would not include permanent lighting since the Park closes at sunset every day. Therefore, no impacts would be associated with the implementation of the proposed Project.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

AGRICULTURE & FOREST RESOURCES Would the project:				
4. Agriculture a) 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?	☐	☐	☐	☒
b) Conflict with existing agricultural zoning, agricultural use or with land subject to a Williamson Act contract or land within a Riverside County Agricultural Preserve?	☐	☐	☐	☒
c) Cause development of non-agricultural uses within 300 feet of agriculturally zoned property (Ordinance No. 625 "Right-to-Farm")?	☐	☐	☐	☒
d) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	☒

The Park is located within Planning Area 10: South Residential and is designated as OS (City 2021b; Menifee 2019). No current or historical agricultural and ranching operations are known to have occurred within the Project site.

Source(s): City of Perris GIS Database; California Department of Conservation Important Farmland Finder; Menifee Zoning Map

Findings of Fact:

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

a) **No Impact.** According to the California Department of Conservation's Important Farmland Finder, the Project site is not located in an area designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. A small portion of the Project site is designated as Farmland of Local Importance, but none of the proposed Project elements would convert existing farmland to non-agricultural use (DOC 2021a). Therefore, no impacts to farmland would be associated with the implementation of the proposed Project.

b) **No Impact.** The Project site is neither zoned for agricultural uses nor under a Williamson Act Contract (City 2008b). Therefore, the proposed Project would not conflict with existing zoning for agricultural use or a Williamson Act Contract, and there would be no impacts.

c) **No Impact.** The Project site is not located within 300 feet of any property zoned for agricultural uses. The closest agriculturally zoned area is located approximately 6 miles to the southeast of the Project site in the City of Menifee (Menifee 2019). Therefore, no impacts would be associated with the implementation of the proposed Project.

d) **No Impact.** The Project does not involve other changes to the existing environment which, due to their location or nature, would result in conversion of farmland to non-agricultural use. Therefore, no impacts would be associated with the implementation of the Project.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

5. Forest	☐	☐	☐	☒
a) 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 Govt. Code section 51104(g))?				
b) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of forest land to non-forest use?	☐	☐	☐	☒

Source(s): City of Perris GIS Database

Findings of Fact:

a-c) **No Impact.** As previously described, the Project site is located within Planning Area 10: South Residential and is designated as OS (City 2021b). Neither the Project site nor the surrounding vicinity is zoned as forest land or timberland. The implementation of the proposed Project would not result in the conversion of forest land to non-forest use. Therefore, the Project would not conflict with existing zoning or otherwise result in the conversion of forest land to non-forest use; no impacts would occur.

Mitigation: No mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

Monitoring: No monitoring is required.

AIR QUALITY Would the project:				
6. Air Quality Impacts a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c) Expose sensitive receptors, which are located within one (1) mile of the project site, to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

Source(s): City of Perris Climate Action Plan ("CAP"), Riverside County Climate Action Plan ("CAP"), SCAQMD CEQA Air Quality Handbook

The Project site is located within the South Coast Air Basin (SCAB or Air Basin), and the air quality regulation is administered by the South Coast Air Quality Management District (SCAQMD). The SCAQMD implements the programs and regulations required by the federal and State Clean Air Acts. The Air Basin includes many areas of the four counties: all of Orange County, most of Los Angeles and Riverside Counties, and a portion of San Bernardino County (SCAQMD 1999). 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 combination of topography and inversion layers generally prevents dispersion of air pollutants in the Air Basin.

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 (O_3), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), inhalable particulate matter (PM10), fine particulate matter (PM2.5), 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 SCAB has been designated by the United States Environmental Protection Agency (EPA) as a nonattainment area for O_3, lead, and suspended particulates (PM10 and PM2.5). Currently, the SCAB is in attainment with the ambient air quality standards for CO, SO_2, and NO_2 (SCAQMD 2016). Further, both the City's and County's applicable Climate Action Plans (CAP) updated in February 2016 and November 2019, respectively, would apply to the proposed Project.

Findings of Fact:

a) **Less Than Significant.** Construction of the Project would generate emissions from site clearing, equipment transport, worker travel, fuel combustion, hauling supplies, and use of the construction equipment. The Project requires, at most, a Bobcat or other small tracked multi-terrain loader, a track

loader or dozer, a string trimmer, hand tools, and three standard pickup trucks. For ongoing maintenance activities, only hand tools would be required. Equipment needed for the Project would be minor; and use of all the necessary equipment would be temporary in nature, lasting approximately four months. All equipment would be permitted by SCAQMD, and Project activities would comply with rules set forth in the SCAQMD Rule Book. No amendments to the current land uses are proposed, and no population growth is anticipated as a result of the Project.

As a point of reference, the Project was compared to activities associated with the Harford Springs Reserve Day Use Staging Area Project (Harford Project) proposed and analyzed by RivCo Parks in October 2020. The Harford Project involves construction of an approximately 1.8-acre day use parking and staging area in the southeast corner of the Harford Springs Reserve, approximately 7 miles northwest of Kabian Park. According to the Initial Study prepared for the Harford Project, development of the proposed day use parking and staging area involves minimal vegetation clearing and grubbing, rough and finish grading, base compaction, limited concrete paving, delineation of individual parking spaces, and construction of a perimeter split rail fence. Equipment listed in the Harford Project's CalEEMod outputs includes off-highway trucks; tractors/loaders/backhoes; graders; plate compactors; rubber-tired dozers; cement and mortar mixers. As reported in the Initial Study, the Harford Project would not result in any significant regional criteria pollutant emissions despite intensive construction equipment for grading and paving (County 2020). The Project would not require grading, only minimal soil disruption at shallow depths necessary to remove unauthorized trails and install fence posts.

Given the minor scope of the construction effort, the project would not emit a significant amount of regional criteria pollutant emissions nor would it create a localized air quality impact. Furthermore, all require South Coast AQMD requirements and conditions, as needed, would be implemented. Given the temporary and localized efforts, and that the Project would not involve extended construction or operations that would result in permanent emissions, the operational/maintenance activities are not expected to create significant emissions. The proposed Project is not expected to conflict with or obstruct implementation of the SCAQMD's air quality plan; thus, impact would be less than significant.

b) **Less Than Significant.** Cumulative projects would include local development and general growth within the Air Basin. Mobile sources are considered to be one of the greatest sources of emissions within the Air Basin. From an air quality standpoint, the cumulative analysis would extend beyond any local projects and, when wind patterns are considered, would cover an even larger area. Accordingly, the cumulative analysis for the proposed Project's air quality must be generic by nature.

The Project would result in the emission of pollutants during ground-disturbing activities with the use of construction equipment. As mentioned in Impact a), the Project requires at most a Bobcat or other small tracked multi-terrain loader, a track loader or dozer, a string trimmer, hand tools, and three standard pickup trucks. For ongoing maintenance activities, only hand tools would be required. Equipment required for the Project would be minor, and equipment use would be temporary in nature. All equipment would be permitted by the SCAQMD, and operations would comply with rules set forth in the SCAQMD Rule Book including 403 (Fugitive Dust), to reduce short-term air pollutants. Use of the equipment and vehicles would not result in a cumulatively considerable net increase of any criteria pollutant. Impacts would be less than significant.

c) **Less Than Significant.** The eastern and southern portions of the Project site borders sensitive receptors, including mainly rural residences. However, as mentioned in Impacts a) and b), the equipment for the Project would be minor; and construction equipment use would be temporary in nature. All equipment would be permitted by the SCAQMD, and Project activities would comply with

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

rules set forth in the SCAQMD Rule Book (SCAQMD 2021). Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations, and impacts would be less than significant.

d) **Less Than Significant.** Odors produced during the approximately four-month construction period would be localized and attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment. Such odors would be temporary and consistent with standard construction activities and would not affect substantial numbers of people in the vicinity of the Project site — particularly given that the construction areas would be located approximately 0.25 mile from the nearest sensitive receptor with intervening vegetation and roadways. Operation odors would remain unchanged from existing current conditions. Because of the temporary nature of the Project, and with the limited use of construction equipment, impacts would be less than significant.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

BIOLOGICAL RESOURCES Would the project:				
7. Wildlife & Vegetation a) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state conservation plan?	☐	☒	☐	☐
b) Have a substantial adverse effect, either directly or through habitat modifications, on any endangered, or threatened species, as listed in Title 14 of the California Code of Regulations (Sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations (Sections 17.11 or 17.12)?	☐	☒	☐	☐
c) 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. Wildlife Service?	☐	☒	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐
e) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U. S. Fish and Wildlife Service?	☐	☐	☒	☐
f) Have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☒	☐
g) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒

The Project site is composed primarily of undeveloped habitat, with steep hills and rocky terrain. Flora is mainly composed of chaparral, tall grasses, and Juniper trees. Soils within the Project site are characterized by primarily Lodo rocky loam (USDA 2021). The highest elevation within the Park is approximately 1,700 feet, and the lowest elevation is approximately 1,400 feet.

Chambers Group, Inc. (Chambers Group) was contracted by RivCo Parks to conduct focused surveys for Quino checkerspot butterfly (*Euphydryas editha quino*; QCB), coastal California gnatcatcher (*Polioptila californica californica*; CAGN), and Stephens' kangaroo rat (*Dipodomys stephensi;* SKR) for the Project during the spring season of 2021.

The first year of surveys for both QCB, CAGN, and SKR species were completed. QCB surveys occurred within the Project site from February 19 to May 7, 2021, while CAGN surveys occurred from March 18 to April 30, 2021. SKR surveys occurred from August 27 to August 30, 2021. In order to evaluate the benefits of prohibiting OHV usage and restoring the habitat, a second year of QCB and CAGN surveys for the Project will need to be completed for a minimum of one more year, through 2022 (see mitigation measure MM-BIO-2). Additionally, small mammal trapping surveys for the Project will need to be completed for a minimum of one more year, through 2022 (see mitigation measure MM-BIO-4). Results from each survey year for each of the three species (45-Day Focused Survey Reports) will be submitted to the United States Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW).

Below is a summary of methods used for the Spring 2021 QCB and CAGN surveys.

Quino Checkerspot Butterfly

A QCB habitat assessment was conducted within the Project features, plus a 15-foot buffer (QCB Survey Area). 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 Survey Area 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 CDFW California Natural Diversity Database (CNDDB; CDFW 2021) and the USFWS Species Occurrences Database (USFWS 2021) for QCB records of occurrence within 5 miles of the Project.

Chambers Group Biologists recorded the location of all larval host plants electronically with the aid of hand-held Global Positioning System (GPS) units and/or by hand onto high-resolution aerial field maps.

Habitat communities within the Survey Area were characterized and mapped. Any areas that were developed or contained closed-canopy habitat were identified and subsequently excluded from focused surveys. The remaining habitat within the Survey Area was deemed appropriate to survey, regardless of the presence of host plants, per the definition above.

Chambers Group permitted Biologists conducted QCB focused surveys within the QCB Survey Area according to the 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 the USFWS on January 29, 2021. Surveys were conducted for five continuous weeks at a minimum, at least four days apart. If no QCB were detected during the first five 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 8, 2021). 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.

Permitted Biologists from Chambers Group conducted a total of 12 QCB focused surveys within the QCB Survey Area from February 19 to May 7, 2021. No QCB were detected during the 2021 focused surveys (Appendix A). Chambers Group submited a Focused Survey Report of results to the USFWS and CDFW within 45 days of completion of the surveys in accordance with the 2014 Survey Guidelines.

Coastal California Gnatcatcher

In order to determine the survey area for CAGN, a site assessment was conducted by a USFWS 10(a)(1)(A) permitted Chambers Group Biologist prior to the commencement of surveys.

Qualified permitted Chambers Group Biologists conducted one round of protocol-level coastal California gnatcatcher surveys at the Project site, which began on March 18 and concluded on April 30, 2021. In accordance with the USFWS protocol, Chambers Group performed a total of six surveys during the nesting season (March 15 to August 30). Each survey was spaced at least one week apart.

During the surveys, a total of three breeding pairs were observed within the proposed restoration areas (Appendix B). Following the completion of the CAGN survey effort, Chambers Group completed a report within 45 days of receiving results in accordance with the 1997 USFWS protocol.

Below is a summary of methods used for the 2021 SKR survey.

A live-trapping survey was carried out in the Park over five consecutive nights from August 27 to 31, 2021 in areas proposed for habitat rehabilitation activities. The live-trapping effort used large (3 x 3.75 x 12”) Sherman live-traps with doors shortened to avoid tail damage. Traps were set in 23 clusters within and adjoining the areas proposed for restoration activities. The traps were set both by sign (i.e., near to potential SKR burrows) and to cover the restoration areas even if potential burrows were lacking. Figure 2 of Appendix C shows the trap locations relative to planned restoration activities. Traps were opened and baited with bird seed and checked at night and in the morning. Animals were identified and released at the point of capture.

A total of 16 SKR were captured, with 15 captured in the western part of the survey area and one in the eastern part of the survey area (Appendix C). Chambers Group submitted a Focused Survey Report of results to the USFWS and CDFW within 45 days of completion of the surveys in accordance with the 2014 Survey Guidelines.

Source(s): GIS database, WRCMSHCP, QCB Focused Survey Report (Appendix A) and CAGN Focused Survey Report (Appendix B), SKR Focused Survey Report (Appendix C)

Findings of Fact:

a) **Less Than Significant with Mitigation Incorporated.** Section 7 of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) discusses covered activities and allowable uses in the Conservation Area. The Project is covered under Section 7.2.5 of the MSHCP stating that "public facilities within existing Public/Quasi-Public Lands may be maintained by Permittees within the existing disturbance area of each existing facility, and without any changes in the operating characteristics of the facility that would affect Covered Species." As mentioned, fence material would consist of galvanized round posts, T-posts, smooth barbless wire, and 3/8 inch cable. A standard design would be implemented, involving three-strain wire/cable with 10-foot spacings between posts. Fencing will be 4.5 to 5 feet tall depending on terrain, and posts would be anchored approximately 2 feet into the ground. Although the main goal of the Conservation Area is to protect sensitive biological resources, another primary objective is to provide recreational and educational opportunities within the Conservation Area while providing adequate protection for special status species and their habitats. Public access is a very important part of the MSHCP because it gives the public an opportunity to experience and appreciate the natural environment that is being protected.

The Project site is located along the Urban/Wildlands Interface; therefore, potential indirect edge effects, which include noise, trash/debris, urban and stormwater runoff, toxic materials, exotic plant and animal infestations, dust, trampling and unauthorized recreational use, and their relation to the functions and values of the areas to be conserved, must be minimized or eliminated. Compliance with Mitigation Measure MM-BIO-1 would ensure the Project follows the MSHCP mitigation efforts and would address these indirect effects. Therefore, impacts would be reduced to less than significant with mitigation incorporated.

b, c) **Less Than Significant with Mitigation Incorporated.** As previously mentioned, due to the habitat identified on site, RivCo Parks indicated that the following federally and/or State listed species have the potential to occur within the Project site or the immediate vicinity:

Quino checkerspot butterfly – The Quino checkerspot butterfly is a federally listed endangered species that occurs in sunny openings within chaparral and coastal sage shrublands. Quino checkerspot butterflies require high densities of food plants *Plantago erecta, P. insularis*, and *Orthocarpus purpurescens.*

Coastal California Gnatcatcher – The coastal California gnatcatcher is a federally listed threatened species that inhabits sage scrub in low-lying foothills and valleys and sparse chaparral habitats.

Stephens' kangaroo rat – Stephens' kangaroo rat is a federally listed endangered and State-listed threatened species that occurs in primarily annual and perennial grasslands but also occurs in coastal scrub and sagebrush habitats with sparse canopy cover. Specifically, this species prefers buckwheat, chamise, brome grass, and filaree.

Focused survey reports for QCB, CAGN, and SKR were written for the first year of surveys and will be written for the Project following the completion of the last round of surveys. A full analysis of these special status species on site will be contained in that report.

Burrowing Owl - The Project site is located within an area that has the potential to contain Burrowing Owl (BUOW) habitat (RCA MSHCP 2022). Typical BUOW habitat is open, dry, sparsely vegetated land with available burrows, perches and food supply.

Potential Impacts

Implementation of the Project would involve minor ground-disturbing activities at shallow depths (2 inches up to a maximum of 2 feet) necessary to remove unauthorized trails and install fence posts. These activities may have the potential to directly impact special status plants (e.g., removal or trampling) and animals (e.g., mortality or injury) with moderate to high potential to occur on the Project site. All federally listed and State-listed species with potential to occur within the Project site are covered under the MSHCP. The Project site is not located in a narrow endemic plant survey area, and therefore no special status plant surveys are required. Due to the nature of the Project and the restoration activities, native and sensitive species would be avoided. Additionally, the intent of the Project is to restore habitat and species to the area. MM-BIO-2 would require focused QCB and CAGN surveys through at least the next year (2022) to determine presence or absence of the species within the Project site to evaluate the benefits of the Project. Surveys for QCB are complete for the Spring 2021 season, with no QCB detected. CAGN surveys for the Spring 2021 season are complete, with three breeding pairs observed within the Project site. Construction of the Project would occur outside the nesting season from March 15 to August 30 to the extent possible; and, if not, a qualified Biologist shall monitor ground-disturbing activities to ensure QCB and CAGN avoidance during construction in accordance with MM-BIO-2. Additionally, if construction would occur during nesting bird season, MM-BIO-3 would be implemented. This mitigation measure requires survey(s) to be conducted within 72 hours prior to Project implementation by a qualified biologist to determine whether breeding birds occur in or within 500 feet of the impact areas. If active nests are detected, the appropriate buffers would be established to comply with MM-BIO-3.

Additionally, Stephens' kangaroo rat is covered by a separate habitat conservation plan administered by the Riverside County Habitat Conservation Agency (RCHCA) (RCHCA 1996). The Project site is located within the Stephens' kangaroo rat fee area but is not within any conservation area. Due to the nature of the Project and the restoration activities, sensitive species would be avoided. Additionally, the intent of the Project is to restore habitat and species to the area. MM-BIO-4 would continue to require focused surveys through at least the next year (2022) to determine presence or absence of the species within the Project site to evaluate the benefits of the Project. Surveys for SKR are complete for the Summer 2021 season, with a total of 16 SKR detected. If the 2022 live trapping surveys determine SKR are present where construction would occur, MM-BIO-4 also requires a qualified Biologist monitor during all ground-disturbing activities to ensure avoidance during construction. Further, the revegetation plan for unauthorized OHV trails will take into account the preference of SKR for disturbed open grassland and scrub habitats.

As previously mentioned, the Project site is covered by the MSHCP and the site contains habitat that may support BUOWs. Additionally, the MSHCP requires preconstruction surveys for any Projects in the area (RCA MSHCP 2022). MM-BIO-5 would ensure that the Project complies with the MSHCP and would require that a lead biologist be on-site during all construction activities in suitable burrowing owl habitat. Additionally, MM-BIO-5 describes further actions if BUOWs or BUOW burrows are found on site.

Following the completion of the Project, operation of the Park would remain the same and would not result in substantial new disturbance to special status species within the vicinity. Additionally, with implementation of the Project, restoration of the site would improve habitat for the aforementioned special status species and may result in an increase in special status species in the area. Thus, with implementation of mitigation measures MM-BIO-2, MM-BIO-3, MM-BIO-4, and MM-BIO-5 impacts to surrounding biological resources, including special status animal species, would be less than significant.

d) **Less Than Significant with Mitigation Incorporated.** The Project site is located in the Mead Valley Area Plan, which is discussed in Section 3.3.9 of the MSHCP. Adjacent to the Project site is Proposed Linkage 7, consisting of a patchwork of riparian habitat associated with the San Jacinto River and Canyon Lake and adjacent upland habitat occurring within the Park. Linkage 7 provides for movement of species connecting to Sedco Hills, Alberhill, and areas upstream along the San Jacinto River. Species for which habitat is provided for within Linkage 7 include Bell's sage sparrow, coastal California gnatcatcher, least Bell's vireo, and bobcat. Other species that could benefit from Linkage 7 include Quino checkerspot butterfly, western pond turtle, burrowing owl, Cooper's hawk, southern California rufous-crowned sparrow, grasshopper sparrow, yellow warbler, white-tailed kite, southwestern willow flycatcher, California horned lark, loggerhead shrike, mountain quail, tree swallow, and Stephens' kangaroo rat.

The implementation of the Project would have a minimal effect on Proposed Linkage 7. Construction of the Project, particularly fencing around the Park, would result in disturbance but would neither block the proposed linkage nor substantially interfere with the movements of native or migratory animal species. Fence material would consist of galvanized round posts, T-posts, smooth barbless wire, and 3/8-inch cable. Fencing will be 4.5 to 5 feet tall depending on terrain, and posts would be anchored approximately 2 feet into the ground. Smaller species would be able to crawl under the wire, and larger species would be able to go over. Nonetheless, with implementation of mitigation measure MM-BIO-1,RivCo Parks would be required to comply with siting and construction requirements established in the MSHCP, reducing any impacts to wildlife corridors or linkages to less than significant levels with mitigation incorporated. The project may temporarily deter wildlife from taking certain routes but would not inhibit movement and would likely improve movement long term if OHV use is reduced. With incorporation of mitigation, impacts would be less than significant.

e,f) **Less Than Significant.** Implementation of the Project would involve minor ground-disturbing activities at shallow depths (2 inches up to a maximum of 2 feet) necessary to remove unauthorized trails and install fence posts. According to the USFWS's National Wetlands Inventory, potential jurisdictional water resources are present within the Project site, all of which will be avoided by restoration activities (USFWS 2021b). The western edge of the Project site borders a USFWS-mapped freshwater forested/shrub wetland and the San Jacinto River. The closest restoration activities would take place over 1,000 feet east of this wetland and riverine habitat; therefore, impacts would be avoided. There are two USFWS-mapped ephemeral drainages with connectivity to the San Jacinto River in the southern half of the Project site: one that crosses a trail restoration area, and one that crosses through the southeast restoration area. These drainages will be avoided during trail restoration activities. A third USFWS-mapped ephemeral drainage with connectivity to the San Jacinto River runs east to west through the center of the Project site, crossing dirt roads that run between the northern and southern Project restoration areas. Drainage crossings within roads would be avoided if heavily saturated, such as, after rain events. Therefore, impacts would be less than significant.

g) **No Impact.** County Ordinance Number 559 requires a tree removal permit for removal of living native trees on any parcel or property greater than 0.5 acre in size, located in an area above 5,000 feet in

elevation, and within the unincorporated area of the County (County 2000). However, no trees are proposed to be removed during the Project. Therefore, no impact to protected biological resources would occur that may conflict with local ordinances.

Mitigation: The potential adverse impacts to biological resources would be mitigated to a less than significant level through implementation of the measures described below.

MM-BIO-1: The Project shall be required to follow the MSHCP guidelines intended to address indirect effects associated with locating development in proximity to the Conservation Area or within the Conservation Area:

1. Drainage: Proposed developments in proximity to the MSHCP Conservation Area shall incorporate measures, including measures required through the National Pollutant Discharge Elimination System (NPDES), to ensure that the quantity and quality of runoff discharged to the MSHCP Conservation Area is not altered in an adverse way when compared with existing conditions. In particular, measures shall be put in place to avoid discharge of untreated surface runoff from developed and paved areas into the MSHCP Conservation Area. Stormwater systems shall be designed to prevent the release of toxins, chemicals, petroleum products, exotic plant materials or other elements that might degrade or harm biological resources or ecosystem processes within the MSHCP Conservation Area. This can be accomplished using a variety of methods including natural detention basins, grass swales, or mechanical trapping devices. Regular maintenance shall occur to ensure effective operations of runoff control systems.

2. Toxics: Land uses proposed in proximity to the MSHCP Conservation Area that use chemicals or generate bioproducts such as manure that are potentially toxic or may adversely affect wildlife species, habitat, or water quality shall incorporate measures to ensure that application of such chemicals does not result in discharge to the MSHCP Conservation Area. Measures such as those employed to address drainage issues shall be implemented.

3. Lighting: Night lighting shall be directed away from the MSHCP Conservation Area to protect species within the Conservation Area from direct night lighting. Shielding shall be incorporated in project designs to ensure ambient lighting in the MSHCP Conservation Area is not increased.

4. Noise: Proposed noise-generating land uses affecting the MSHCP Conservation Area shall incorporate setbacks, berms, or walls to minimize the effects of noise on Conservation Area resources pursuant to applicable rules, regulations, and guidelines related to land use noise standards. For planning purposes, wildlife within the MSHCP Conservation Area should not be subject to noise that would exceed residential noise standards.

5. Invasives: When approving landscape plans for development that is proposed adjacent to the MSHCP Conservation Area, permittees shall avoid

the use of invasive species for the portions of development that are adjacent to the Conservation Area.

6. Barriers: Proposed land uses adjacent to the MSHCP Conservation Area shall incorporate barriers, where appropriate in individual project designs, to minimize unauthorized public access, domestic animal predation, illegal trespass, or dumping. Such barriers may include native landscaping, rocks/boulders, fencing, walls, signage, and/or other appropriate mechanisms.

7. Grading/Land Development: Manufactured slopes associated with proposed site development shall not extend into the MSHCP Conservation Area.

MM-BIO-2: Prior to the start of Project construction a qualified Biologist shall conduct at least one more round of focused Quino checkerspot butterfly (QCB) and coastal California gnatcatcher (CAGN) surveys within the Project site, in accordance with USFWS guidelines. If results of the 2022 QCB focused surveys indicate presence within the Project, the following measures will be implemented:

- Avoid all direct impacts to QCB host plants, as mapped during the 2021 and 2022 QCB focused surveys. Host plant patches shall be delineated for avoidance with flagging and signage.
- Avoid construction activities within the QCB flight season (defined as 3rd week of February through the 2nd Saturday in May by the USFWS Survey Guidelines [USFWS 2014]). If construction activities occur during the QCB flight season, a biologist familiar with identification of QCB and its host plants shall monitor the work. All ground-disturbance within a 300-ft buffer of all QCB occurrences shall be prohibited during the QCB flight season. The prescribed buffer may be adjusted by the qualified biologist in coordination with the County. Vehicle speeds within 0.6 mile of QCB occurrences shall be reduced to 10 miles per hour during the QCB flight season.
- Conduct environmental awareness training for all construction personnel

MM-BIO-3: If Project construction activities occur during the breeding seasons for migratory birds and raptors (February 1 – August 31), survey(s) shall be conducted within 72 hours prior to Project implementation by a qualified biologist to determine whether breeding birds occur in or within 500 feet of the impact areas.

If it is determined at the completion of surveys that there are no nesting birds (includes nest building or other breeding/nesting behavior) within the potential impact area, project activities shall be allowed to proceed.

If active nests or nesting birds are observed within the area, the biologist shall flag the active nests and construction activities shall avoid active nests until nesting behavior has ceased, nests have failed, or young have fledged. Construction near an active nest (within 300 feet for passerines, 500 feet for raptors, or as otherwise determined by a qualified biologist) shall either:

(i) be postponed until a qualified biologist determines the nest(s) is no longer active or until after the respective breeding season; or

(ii) not occur until a temporary noise barrier or berm is constructed at the edge of the development footprint and/or around the piece of equipment to ensure that noise levels are reduced to below 60 dBA or ambient noise levels. Decibel output may be confirmed by a County-approved noise specialist and intermittent monitoring would be required by a qualified biologist to ensure that conditions have not changed.

If Project activities are to resume in an area where they have not occurred for a period of seven or more days during the breeding season, an update survey for avian nesting shall be conducted.

MM-BIO-4: RivCo Parks shall retain a qualified Biologist to conduct focused nocturnal live-trapping surveys for a minimum of two consecutive years to determine the presence of the Stephens' kangaroo rat. If determined present where construction would occur, a qualified Biologist shall monitor during all ground-disturbing activities to ensure avoidance during construction. No ground disturbance shall occur within 25 feet of potential burrows.

MM BIO-5: RivCo Parks shall implement the following measures during proposed Project construction and operation, with respect to burrowing owls:

- The lead biologist(s) shall be onsite during all construction activities in suitable burrowing owl habitat. A qualified wildlife biologist (i.e., a wildlife biologist with previous burrowing owl survey experience) shall conduct pre-construction surveys of the permanent and temporary impact areas to locate active breeding or wintering burrowing owl burrows no more than 30 days prior to construction. The survey methodology shall be consistent with the methods outlined in the California Department of Fish and Game (CDFG) Staff Report (CDFG 2012). Copies of the survey results shall be submitted to CDFW and the City.
- If no burrowing owls are detected, no further mitigation is necessary. If burrowing owls are detected, no ground-disturbing activities, such as road construction or installation of solar arrays or ancillary facilities, shall be permitted except in accordance with the staff report or by written authorization of CDFW staff. Burrowing owls shall not be excluded from burrows unless or until a Burrowing Owl Exclusion Plan is developed by the lead biologist and approved by the applicable local CDFW office and submitted to the City. The plan shall adhere to the requirements set forth in the Burrowing Owl Mitigation Staff Report (CDFW 2012).
- In accordance with the Burrowing Owl Exclusion Plan, a qualified wildlife biologist shall excavate burrows using hand tools. Sections of flexible plastic pipe or burlap bag shall be inserted into the tunnels during excavation to maintain an escape route for any animals inside the burrow. One-way doors shall be installed at the entrance to the active burrow and other potentially active burrows within 160 feet of the active burrow. Forty-eight hours after the installation of the one-way doors, the doors can be removed, and ground disturbing activities can proceed. Alternatively, burrows can be filled to prevent reoccupation.
- During construction activities, monthly and final compliance reports shall be provided to CDFW, the City, and other applicable resource agencies

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

documenting the effectiveness of mitigation measures and the level of burrowing owl take associated with the proposed Project.

Monitoring: Compliance with these mitigation measures would require monitoring by qualified biologists.

CULTURAL RESOURCES Would the project:				
8. Historic Resources a) Alter or destroy a historic site?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of a historical resource, pursuant to California Code of Regulations, Section 15064.5?	☐	☒	☐	☐

Chambers Group provided cultural resources services for the Project from March 2021 through May 2021. The methods and results are summarized in a Cultural Resources Letter Report (Appendix D).

On March 25, 2021, Chambers Group conducted a California Historical Resources Information System (CHRIS) records search through the Eastern Information Center (EIC), located at the University of California, Riverside Department of Anthropology, Riverside, California. In addition, Chambers Group conducted a Sacred Lands File search through the Native American Heritage Commission (NAHC), as well as a Paleontological records search through the Western Science Center. The records search area included the Project area of potential effects (APE) along with a 0.5-mile (0.80-kilometer) radius buffer. The APE comprises approximately 42 acres of the Park and is defined by the proposed restoration of approximately 3 miles of unauthorized trails, installation of approximately 20,000 feet of perimeter fence line, and restoration of native habitat on up to 35 acres of other lands, as identified by the District. Additionally, any relevant historic maps, previously recorded archaeological site records, and previously conducted surveys were reviewed.

On May 6 and 7, 2021, Chambers Group conducted the cultural resources survey, visually inspecting all areas proposed for restoration and fence installation. The intensive pedestrian survey covered all areas of the Project APE. The survey consisted of systematic surface inspection in all trails identified by the County for restoration with transects walked at 10-meter intervals or less and 5-meter intervals for the proposed 20,000-foot fence boundary that surrounds the Project area. This method was selected to ensure that all surface-exposed artifacts and sites could be identified.

Source(s): Cultural Resources Letter Report (Appendix D)

Findings of Fact:

a,b) **Less Than Significant with Mitigation Incorporated.** As defined by CEQA Public Resources Code Section 5020.1(j), a historical resource consists of, but is not limited to, “any object, building, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California.” In addition, CEQA Guidelines define historical resources as: (1) resources listed in or eligible for listing in the California Register of Historical Resources (CRHR); (2) listed in a local register of cultural resources; or (3) determined to be significant by a Lead Agency (California

Code of Regulations 15064.5[a][1]-[3]). A resource may be eligible for listing in the CRHR if it meets any one of the ensuing criteria (Public Resources Code 5024.1[c]):

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

In addition to CEQA Guidelines Criteria, Riverside County has established the following criteria for listing a resource as a Riverside County Historical Landmark (RCHC 2008):

1. Is associated with events that have made a significant contribution to the broad patterns of Riverside County's history and cultural heritage
2. Is associated with the lives of persons important to the history of Riverside County or its communities
3. Embodies the distinctive characteristics of a type, period, Riverside County region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values
4. Has yielded or may be likely to yield information important in Riverside County, state of California, or national prehistory or history

The CHRIS records search performed for the Project identified seven previously recorded cultural resources located within 0.5 mile of the APE. Of these resources, none were mapped within portions of the APE (Appendix D). No potentially significant prehistoric or historic sites or resources eligible for listing in the CRHR or as a Riverside County Historical Landmark were identified during the cultural resources survey. Additionally, construction of the Project would be limited to minor ground-disturbing activities at shallow depths (2 inches up to a maximum of 2 feet); therefore, the potential to encounter previously unknown buried archaeological resources would be low.

However, the cultural resources survey revealed low ground surface visibility due to dense vegetation along most of the proposed fence line. Thus, ground disturbance of native soil during Project construction may have potential impacts to unanticipated cultural resources. MM CUL-1 would require that a Riverside County-certified Registered Professional Archaeologist be on site for all initial ground-disturbing work. MM CUL-2 would ensure that if unanticipated resources are found, that they would be properly handled. MM CUL-3 requires that any consulting Tribe(s), monitor during initial ground disturbance. MM CUL-4 requires that any resources found are either preserved in place or properly relocated. MM CUL-5 would require that a cultural resources monitoring report be prepared after ground disturbing activities are completed. MM CUL-6 would require that if found on site, that human remains are properly handled. Mitigation measures MM-CUL-1 through MM-CUL-6 would be implemented to reduce potential impacts to historic resources to less than significant levels.

Mitigation: The potential adverse impacts to cultural resources would be mitigated to a less than significant level through implementation of the measures described below.

MM CUL-1 Prior to issuance of grading permits, RivCoParks shall retain a Riverside County-certified Registered Professional Archaeologist to develop and implement a Cultural Resource Monitoring Program (CRMP) in consultation with consulting tribe(s). The CRMP shall

address the details of all activities; provide procedures that must be followed in order to reduce the impacts to cultural and historic resources to a level that is less than significant; and address potential impacts to undiscovered buried archaeological resources associated with the proposed Project. The CRMP shall be provided to the RivCoParks for review and approval prior to issuance of the grading permit. The CRMP shall contain at a minimum the following:

a. Qualified Archaeological Monitor – An adequate number of Qualified Archaeological Monitors shall be on-site to ensure all earth moving activities are observed for areas being monitored. This includes all grubbing, grading, and trenching on-site. Inspections shall vary based on the rate of excavation, the materials excavated, and the presence and abundance of artifacts and features. The frequency and location of inspections shall be determined and directed by the Registered Professional Archaeologist. The Registered Professional Archaeologist may submit a detailed letter to RivCoParks during grading requesting a modification to the monitoring program if circumstances are encountered that reduce the need for monitoring.

b. Cultural Sensitivity Training – The Registered Professional Archaeologist, and a representative of the consulting tribe(s), shall attend the pre-grading meeting with the contractors to provide Cultural Sensitivity Training for all construction personnel. Training shall include a brief review of the cultural sensitivity of the Project site and the surrounding area; the areas to be avoided during grading activities; what resources could potentially be identified during earthmoving activities; the requirements of the monitoring program; the protocols that apply in the event unanticipated cultural resources are identified, including who to contact and appropriate avoidance measures until the find(s) can be properly evaluated; and any other appropriate protocols. This shall be a mandatory training and all construction personnel must attend prior to beginning work on the Project site. A sign-in sheet for attendees of this training shall be included in the Cultural Resources Monitoring Report.

MM CUL-2 Unanticipated Resources – If unanticipated cultural resources are discovered during ground disturbing activities, the following provisions shall apply:

a. All ground disturbing activities within 100 feet of the discovered cultural resources shall be halted until a meeting is convened between the Registered Professional Archaeologist, the Native American monitor(s), and RivCoParks to discuss the significance of the find. At the meeting, the significance of the discoveries shall be discussed and after consultation with the Registered Professional Archaeologist and the Native American monitor, a decision shall be made, with the concurrence of RivCoParks, as to the appropriate mitigation (e.g., documentation, recovery, avoidance, etc.) for the cultural resources.

b. Ground disturbance shall not resume within the area of the discovery until RivCoParks, in consultation with the Registered Professional Archaeologist and the consulting tribe(s), has reached a decision as to the appropriate mitigation. Work shall be allowed to continue outside of the buffer area and will be monitored by tribal monitor(s), if needed.

c. If the find is determined to be significant and avoidance is infeasible, a Phase III Data Recovery Plan shall be prepared by the Registered Professional Archeologist, in consultation with the consulting tribe(s), and shall be submitted to RivCoParks for review and approval prior to implementation of the plan.

d. Pursuant to California Public Resources Code Section 21083.2(b), avoidance is the preferred method of preservation for archaeological resources and cultural resources. If the Registered Professional Archaeologist and the Native American monitor cannot agree on the significance or the mitigation for the archaeological or cultural resources, these issues shall be presented to RivCoParks. RivCoParks shall make the determination based on the provisions of CEQA with respect to archaeological resources, recommendations of the Registered Professional Archeologist and shall take into account the cultural and religious principles and practices of the tribe(s).

MM CUL-3 Prior to the issuance of grading permits, RivCoParks shall enter into agreement(s) with the consulting tribe(s) for (a) Native American monitor(s). The Native American monitor(s) shall be on-site during all initial ground disturbing activities and excavation of each portion of the project site including clearing, grubbing, tree removals, grading, and trenching. In conjunction with the Qualified Archaeological Monitor, the Native American monitor(s) shall have the authority to temporarily divert, redirect, or halt the ground disturbance activities to allow identification, evaluation, and potential recovery of cultural resources. RivCoParks shall submit a fully executed copy of the agreement to the Registered Professional Archaeologist as verification of compliance with this requirement.

MM-CUL-4 Cultural resources shall be preserved in place, where feasible. Preservation in place is defined as avoiding the resources, leaving them in place where they were found with no development affecting the integrity of the resource. When preservation in place in not feasible, upon completion of ground disturbing activities, resources recovered during construction activities and made available by the affected landowner(s), the following procedures shall be carried out for final disposition of the discoveries:

a. Historic Resources – All historic archaeological materials recovered during the archaeological investigations shall be curated at a Riverside County curation facility that meets the State Office of Historic Preservation Guidelines for the Curation of Archeological Resources ensuring access and use pursuant to the Guidelines.

b. Prehistoric Resources (reburial of the resources on the Project site) – Any reburial of resources on the Project site shall be performed in a manner and location that shall ensure they are protected from any future impacts in perpetuity. Reburial shall not occur until all legally required non-destructive cataloguing, analysis, and studies have been completed on the cultural resources, with an exception of sacred items, grave goods, Tribal cultural resources, and Native American human remains. Human remains and grave goods shall not be subjected to testing, cataloguing, studies, or laboratory analysis unless approved in writing by the Most Likely Descendant. Listing of contents and location of the reburial shall be included in the confidential Cultural Resources Monitoring Report. The Cultural Resources Monitoring Report shall be filed with the District under a confidential cover and not subject to a Public Records Request.

c. Prehistoric Resources (if reburial is not agreed upon by the consulting tribes) – The resources shall be curated at a culturally appropriate manner at a Riverside County curation facility that meets the State Office of Historic Preservation Guidelines for the Curation of Archeological Resources ensuring access and use pursuant to the Guidelines. The collection and associated records shall be transferred, including title, and are to be accompanied by payment of the fees necessary for permanent curation. Evidence of curation in the form of a letter from the curation facility stating that subject

archaeological materials have been received and that all fees have been paid, shall be maintained on file at RivCoParks.

MM-CUL-5 Upon completion of ground disturbing activities, a Phase IV Cultural Resources Monitoring Report shall be prepared, consistent with the County of Riverside Planning Department Cultural Resources (Archaeological) Investigations Standard Scope of Work. The report shall include results of any feature relocation or residue analysis required as well as evidence of the required cultural sensitivity training for the construction staff held during the required pre-grade meeting and evidence that any artifacts have been treated in accordance with procedures stipulated in the Cultural Resources Monitoring Program. Once the report is determined to be adequate including review of the draft from the consulting tribe(s), two (2) copies shall be submitted to the Eastern Information Center (EIC) at the University of California Riverside (UCR) and one (1) copy shall be submitted to the consulting tribe(s).

MM-CUL-6 If human remains are encountered, California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the Riverside County Coroner has made the necessary findings as to origin. Further, pursuant to Public Resource Code Section 5097.98(b), remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the Riverside County Coroner determines the remains to be Native American, the NAHC shall be contacted within the period specified by law (i.e., 24 hours). Subsequently, the NAHC shall identify the "most likely descendant." The most likely descendant shall then make recommendations and engage in consultation concerning the treatment of the remains as provided in Public Resources Code Section 5097.98.

Monitoring: Compliance with these mitigation measures would be subject to periodic site inspections by RivCoParks.

9. Archaeological Resources a) Alter or destroy an archaeological site?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource, pursuant to California Code of Regulations, Section 15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

Source(s): Cultural Resources Letter Report (Appendix D)

Findings of Fact:

a, b) **Less Than Significant with Mitigation Incorporated.** As described in Section 8, Historic Resources, the Cultural Resources Letter Report concluded that no prehistoric or historic archaeological resources or sites have been previously recorded within the APE; and none were encountered during the pedestrian field survey conducted within the APE (Chambers Group 2021). Additionally, construction of the Project would be limited to minor ground-disturbing activities at shallow depths (2 inches up to a maximum of 2 feet); therefore, the potential to encounter previously unknown buried archaeological resources would be low. However, the cultural resources survey revealed low ground surface visibility due to dense vegetation along most of the proposed fence line. Thus, ground disturbance of native soil during Project construction may have potential impacts to unanticipated

cultural resources. Thus, mitigation measures MM-CUL-1 through MM-CUL-6 would be implemented to reduce potential impacts to archaeological resources to less than significant levels.

c) **Less Than Significant**. As previously mentioned, the Cultural Resources Letter Report concluded that no prehistoric or historic archaeological resources or sites have been previously recorded within the APE, and none were encountered during the pedestrian field survey conducted within the APE (Chambers Group 2021). Additionally, construction of the Project would be limited to minor ground-disturbing activities at shallow depths (2 inches up to a maximum of 2 feet); therefore, the potential to encounter human remains would be low. However, in the unlikely event that human remains are discovered during ground-disturbing activities, then the proposed Project would be subject to California Health and Safety Code 7050.5, CEQA Section 15064.5, and California Public Resources Code Section 5097.98. If human remains are found during ground-disturbing activities, State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the County Coroner shall be notified immediately. If the human remains are determined to be prehistoric, the County Coroner shall notify the NAHC, which shall notify a most likely descendant (MLD). The MLD shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. Impacts would remain less than significant.

Mitigation: Refer to mitigation measures MM-CUL-1 through MM-CUL-6.

Monitoring: Compliance with these mitigation measures would require monitoring by a Qualified Archaeologist and a Supervising Archaeologist.

ENERGY Would the project:				
10. Energy Impacts a) Result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a State or Local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

Source(s): City of Perris Climate Action Plan ("CAP"), Riverside County Climate Action Plan ("CAP")

Findings of Fact:

a) **Less Than Significant.** Consumption of energy resources associated with the Project would include the use of electricity and natural gas. The use of these resources would be limited to construction equipment that would be used such as trucks for haul trips and commutes, operation of heavy machinery, and watering of exposed soils. Construction would be temporary and would require a negligible amount of machinery usage. The Project does not include permanent restrooms, lighting, or a change in current employees accessing the site; therefore, no additional operational energy would be used. Any consumption of energy resources associated with visitors and maintenance activities would be negligible as the removal of unauthorized OHV trails; fencing, gate, and signage installation; and native habitat restoration is not anticipated to substantially increase visitation or maintenance

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

requirements (refer to Section 6, Air Quality). Therefore, potential impacts related to energy use would be less than significant.

b) **No impact**. Based on the limited scope of the Project, neither trail removal; fencing, gate, and signage installation; nor native habitat restoration and maintenance would conflict with or obstruct a State or local plan for renewable energy or energy efficiency. Therefore, no impact would be associated with the implementation of the Project.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

GEOLOGY AND SOILS Would the project directly or indirectly:				
11. Alquist-Priolo Earthquake Fault Zone or County Fault Hazard Zones a) Be subject to 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?	☐	☐	☒	☐

Source(s): Riverside County GIS database

Findings of Fact:

a) **Less Than Significant.** The Project site is not located within an Alquist-Priolo Earthquake Fault Zone. The nearest Alquist-Priolo fault to the Project site is the Elsinore Fault, located approximately 6.7 miles southwest of the Project site at its closest point. The proposed Project would restore Park habitat and would include fencing, gate, and signage installation, removal of unauthorized trails, and native habitat revegetation. These activities would not require significant ground disturbance in depths that could induce rupture of a known fault. Therefore, the likelihood of surface fault rupture and related hazards at the Project site is considered to be low, and impacts would be less than significant.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

12. Liquefaction Potential Zone a) Be subject to seismic-related ground failure, including liquefaction?	☐	☐	☐	☒

Source(s): Riverside County GIS Database

Findings of Fact:

a) **No Impact.** Liquefaction occurs when saturated, cohesionless soils temporarily lose shear strength (i.e., liquefy) due to increased pore water pressures induced by strong, cyclic ground motion during an earthquake. According to the County's GIS Database, the Project site is not within an area susceptible

to liquefaction (County 2021). Therefore, no impact would be associated with the implementation of the proposed Project.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

13. Ground-shaking Zone a) Be subject to strong seismic ground shaking?	☐	☐	☒	☐

Source(s): California Geological Survey Earthquake Shaking Potential for California

Findings of Fact:

a) **Less Than Significant.** According to California Geological Survey (CGS) maps, the Park is located in an area with moderate risk of ground shaking (CGS 2016). Additionally, a Riverside County-designated fault line travels through the Project site from the southwest corner to the northeast corner (County 2021). No habitable structures are proposed; and, as such, the proposed Project would have limited potential for structural damage or loss of life related to seismic activity. Project activities would also not require significant ground disturbance that could induce rupture of a fault and lead to seismic ground shaking, with trail removal requiring scarification up to 4 inches deep and fence posts being anchored up to 2 feet deep. Further, Project activities would occur temporarily, lasting approximately four months, and intermittently throughout the Project site. Impacts related to earthquake faults or seismic ground shaking would be less than significant.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

14. Landslide Risk a) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, collapse, or rockfall hazards?	☐	☐	☒	☐

Source(s): California Department of Conservation Landslide Inventory Map; City of Perris General Plan Exhibit S-4: Slope Instability

Findings of Fact:

a) **Less Than Significant.** According to the CGS Deep-Seated Landslide Inventory Map, the closest active/historical landslide was documented approximately 17.48 miles southwest of the Park in the Santa Ana Mountain Range (CGS 2010). However, the City General Plan identifies many areas throughout the Project site as having a high landslide and rockfall susceptibility (City 2016). Project activities would not require significant ground disturbance that could induce a landslide (DOC 2021b). The proposed Project may relocate existing small to medium-sized boulders located within the Project; however, the removal of these boulders would not

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

disturb unstable trail or sloped areas of the site. Moreover, the Project activities would occur temporarily, lasting approximately four months, and intermittently throughout the Project site. The Project also would not include construction of any habitable structures that would increase prolonged use and stability of the Project site. As such, implementation of the Project would not introduce engineered slopes or otherwise increase the potential for landslide risk. Impacts would be less than significant.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

15. Ground Subsidence a) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in ground subsidence?	☐	☐	☐	☒

Source(s): United States Department of Agriculture Websoil Survey; Riverside County GIS Database

Findings of Fact:

a) **No Impact.** Subsidence is a gradual settling or sudden sinking of the Earth's surface caused by natural events such as earthquakes, soil compaction, glacial isostatic adjustment, erosion, sinkhole formation, and addition of water to fine soils deposited by wind. The Project site is characterized primarily by Lodo rocky loam (USDA 2021). The Lodo series is characterized as shallow, somewhat excessively drained soils that formed in material weathered from hard shale and fine grained sandstone (USDA 2009). According to the County's GIS database, the Project site is not located within a subsidence area (County 2021). Therefore, no impact would be associated with the implementation of the proposed Project.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

16. Other Geologic Hazards a) Be subject to geologic hazards, such as seiche, mudflow, or volcanic hazard?	☐	☐	☒	☐

Source(s): California Department of Conservation Landslide Inventory Map

Findings of Fact:

a) **Less Than Significant.** The Project site is located approximately 1 mile from Canyon Lake, the closest water body, and therefore may be susceptible to seiches. However, Project activities would occur temporarily, lasting approximately four months, and intermittently throughout the Project site. In the event that weather conditions may lead to a seiche, workers associated with the Project would evacuate the Project site. The Project also would not include construction of any habitable structures that would increase prolonged use of the Project site. The higher hills throughout the Project site have a moderate landslide susceptibility, but Project activities would not require significant ground

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

disturbance that could induce a mudslide. The closest volcano is Salton Buttes, which is over 100 miles from the Project site. Additionally, the County is part of the Multi-Jurisdictional Local Hazard Mitigation Plan, which would address natural disasters if they were to occur on site. Therefore, potential impacts related to seiches, mudflows, or volcanic hazards would be less than significant.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

17. Slopes				
a) Change topography or ground surface relief features?	☐	☐	☒	☐
b) Create cut or fill slopes greater than 2:1 or higher than 10 feet?	☐	☐	☐	☒
c) Result in grading that affects or negates subsurface sewage disposal systems?	☐	☐	☐	☒

Findings of Fact:

a) **Less Than Significant.** The Project site is located at an elevation ranging from approximately 1,400 to 1,700 feet above mean sea level. The proposed changes in topography associated with the Project activities would be minor, with ground disturbances ranging from 2 inches to a maximum of 2 feet. These proposed disturbances would not create a significant change to the topography of the Project; therefore, impacts would be less than significant.

b, c) **No Impact.** Construction of the proposed Project would be limited to minor ground-disturbing activities at shallow depths (2 inches up to a maximum of 2 feet) necessary to remove unauthorized trails and install fence posts. The proposed Project would not create cut or fill slopes greater than 2:1 or higher than 10 feet. No major grading that could affect subsurface sewage is proposed for the Project. Additionally, the proposed Project would not include the construction of permanent restrooms or otherwise require or affect sewage disposal systems. Therefore, no impacts would be associated with the implementation of the proposed Project.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

18. Soils				
a) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
b) Be located on expansive soil, as defined in Section 1802.3.2 of the California Building Code (2007), creating substantial direct or indirect risks to life or property?	☐	☐	☐	☒
c) Have soils incapable of adequately supporting use of septic tanks or alternative waste water disposal systems	☐	☐	☐	☒

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
where sewers are not available for the disposal of waste water?				

Source(s): U.S.D.A. Soil Conservation Service Soil Surveys, Onsite Inspection, Soils Report

Findings of Fact:

a) **Less Than Significant.** Implementation of the proposed Project would result in minor soil disturbance from trail removal activities and fence post installation. However, all Project activities would be required to comply with standard engineering practices for erosion control (refer to discussion of SCAQMD requirements in Section 6, *Air Quality*; see also Section 23, *Water Quality Impacts*). Any minor potential for soil erosion impacts would be effectively avoided or minimized through implementation of these procedures. Project operation would not substantially increase potential for soils to be subject to erosion. Additionally, with restoration of the Park, the Project itself would increase prolonged use and stability of the Project site. Overall, it is anticipated that impacts regarding erosion or the loss of topsoil as a result of the proposed Project would be less than significant.

b, c) **No Impact.** Expansive soils have a significant amount of clay particles which can give up water (shrink) or take on water (swell). The change in volume exerts stress on buildings and other loads placed on these soils. The Project site is characterized primarily by Lodo rocky loam (USDA 2021). The Lodo series is characterized as shallow, somewhat excessively drained soils that formed in material weathered from hard shale and fine grained sandstone (USDA 2009). The Project site is not located on expansive soil, and no habitable structures are proposed. Additionally, the Project would not include the construction of any facilities that would generate wastewater or require septic tanks or alternative waste water systems. Therefore, no impacts would be associated with the implementation of the Project.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

19. Wind Erosion and Blowsand from project either on or off site. a) Be impacted by or result in an increase in wind erosion and blowsand, either on or off site?	☐	☐	☒	☐

Source(s): Riverside County General Plan Figure S-8 "Wind Erosion Susceptibility Map," Ord. No. 460, Article XV & Ord. No. 484

Findings of Fact:

a) **Less Than Significant.** According to the Riverside County General Plan Wind Erosion Susceptibility Map, the Project site is surrounded by areas considered to have a moderate wind erodibility rating (County 2019). However, the Project would require minor ground-disturbing activities at shallow depths, up to a maximum of 2 feet, necessary to install fence posts. While the ground-disturbing activities would result in soil exposure, all exposed soils would be watered during trail removal consistent with SCAQMD Rule 403 (Fugitive Dust). Following the completion of Project activities, restored native vegetation on removed unauthorized OHV trails will help prevent wind erosion on site. Therefore, the potential for wind erosion as a result of the proposed Project would be less than significant.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

GREENHOUSE GAS EMISSIONS Would the project:				
20. Greenhouse Gas Emissions a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

Greenhouse gases (GHGs) trap heat in the atmosphere and occur from natural processes as well as human activities. Human activities that produce GHGs are the burning of fossil fuels (e.g., coal, oil, and natural gas for heating and electricity; gasoline and diesel for transportation); methane (CH_4) from landfill wastes and raising livestock; deforestation activities; and some agricultural practices. Scientific evidence indicates a correlation between the worldwide proliferation of GHG emissions by mankind over the past century and increasing global temperatures (IPCC 2014). The principal GHGs that enter the atmosphere because of human activities are:

- Carbon dioxide (CO_2) enters the atmosphere through the burning of fossil fuels (e.g., oil, natural gas, and coal), agriculture, irrigation, and deforestation, as well as the manufacturing of cement.
- Methane (CH_4) is emitted through the production and transportation of coal, natural gas, and oil, as well as from livestock. Other agricultural activities (e.g., ranching, dairy production, and fertilizer) influence CH_4 emissions as well as the decay of waste in landfills.
- Nitrous oxide (N_2O) is released most often during the burning of fuel at high temperatures. This GHG is caused mostly by motor vehicles, which also include non-road vehicles such as those used for agriculture.
- Fluorinated Gases are emitted primarily from industrial sources, which often include hydrofluorocarbons (HRC), perfluorocarbons (PFC), and sulfur hexafluoride (SF_6). Though they are often released in smaller quantities, they are referred to as High Global Warming Potential Gases because of their ability to cause global warming.

These gases have different potentials for trapping heat in the atmosphere, called global warming potential (GWP). Further, both the City's and County's applicable Climate Action Plans (CAPs) updated in February 2016 and November 2019, respectively, would apply to the proposed Project.

Source(s): City of Perris Climate Action Plan ("CAP"), Riverside County Climate Action Plan ("CAP")

Findings of Fact:

a) **Less Than Significant.** Project activities involve installation of new fencing, gates, and signs; removal of unauthorized OHV trails; and restoration of native habitat. The equipment required to complete these activities is minimal, consisting of a Bobcat or other small tracked multi-terrain loader, a track loader or dozer, as well as a string trimmer, hand tools, and one to three standard pickup trucks. Project construction activities would be temporary with limited efforts, lasting approximately four months

and requiring up to 64 vehicle trips to and from the site per day. Nonetheless, this is a worst-case scenario as crew members may choose to carpool. Project activities are therefore not anticipated to generate significant GHG emissions that would impact the environment. Operation of equipment would occur intermittently throughout the Project site and would meet State and federal emission requirements. Following completion of the Project, visitor trips to the Park are also not expected to increase; thus, an increase in long-term GHG emissions would be negligible. Ultimately, the Project would result in less than significant impacts.

b) **No Impact.** As described above, Project activities require a Bobcat or other small tracked multi-terrain loader, a track loader or dozer, as well as a string trimmer, hand tools, and one to three standard pickup trucks. All equipment usage would meet State and federal emission requirements; and, because of the limited amount of equipment used during construction, and with the short time frame of construction activities, the Project construction would not be expected to exceed GHG emissions that would impact the environment. The Project does not include any new uses or facilities that would generate a substantial increase in long-term GHG emissions. GHG emissions from Project implementation and subsequent Park use would be negligible and would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the GHG emissions; thus, no impact would be associated with the Project.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

HAZARDS AND HAZARDOUS MATERIALS Would the project:				
21. Hazards and Hazardous Materials a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) 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?	☐	☐	☒	☐
c) Impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan?	☐	☐	☐	☒
d) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter (1/4) mile of an existing or proposed school?	☐	☐	☐	☒
e) 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?	☐	☐	☐	☒

Findings of Fact:

a, b) **Less Than Significant.** During Project activities, typical construction-related hazardous materials would be used at the Project site, including petroleum, oils, and lubricants as well as hydraulic fluids for

heavy equipment. The Project may include the transport and onsite storage of petroleum products for the purpose of fueling heavy equipment. However, the use and transport of these materials during Project activities would be short-term in nature and would occur in accordance with standard construction Best Management Practices (BMPs) included in the Storm Water Pollution Prevention Plan (SWPPP) required in accordance with the NPDES Construction General Permit to control the discharge of material from the Project site. All transport, handling, use, and disposal of substances such as petroleum products would comply with applicable federal, State, and local health and safety regulations. All vehicle fueling and maintenance would occur off site. Additionally, RivCo Parks would be required to develop and implement a SWPPP per the requirements of the NPDES Construction General Permit to ensure that reasonably foreseeable risks of upset involving the release of hazardous materials into the environment are avoided and minimized. Following the completion of Project activities these materials would be removed from the Project site, and no hazardous materials would be required for operation of the Park. Therefore, impacts associated with the Project would be less than significant.

c) **No Impact.** The Project would not include any change to roadway designs and would not introduce incompatible uses or line-of-sight issues. The Project would not conflict with an emergency response plan, and traffic flows would not be interrupted on any roadway such that they would impair or otherwise interfere with emergency access to local roads. Additionally, the Project would not result in traffic delays that could substantially increase emergency response times or reduce emergency vehicle access. Construction vehicles would not park on roadways and, thus, would not create a hazard, interrupt vehicle line-of-sight, or otherwise block emergency access. The Project would not prevent the implementation of the Multi-Jurisdictional Local Hazard Mitigation Plan; therefore, the Project would have no impact.

d) **No Impact.** The Project site is not located within 0.25 mile of a school. Therefore, no impact would be associated with implementation of the Project.

e) **No Impact.** According to the State Water Resources Control Board's (SWRCB) GeoTracker database and the Department of Toxic Substances' (DTSC) EnviroStor database, the Project site is not located within the vicinity of a contaminated site. The closest active contaminated site is a Leaking Underground Storage Tank approximately 3 miles east of the Project site (DTSC 2021; SWRCB 2021). Therefore, no impact would be associated with implementation of the Project.

e) **No Impact.** The Project site is not located within an airport land use plan (RCALUC 2004). Therefore, no impact would be associated with implementation of the Project.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

22. Airports				
a) Result in an inconsistency with an Airport Master Plan?	☐	☐	☐	☒
b) Require review by the Airport Land Use Commission?	☐	☐	☐	☒
c) For a project located within an airport land use plan or, where such a plan has not been adopted, within two (2) miles of a public airport or public use airport, would the	☐	☐	☐	☒

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
project result in a safety hazard for people residing or working in the project area?				
d) For a project within the vicinity of a private airstrip, or heliport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒

Source(s): City of Perris Exhibit S-19: Perris Valley Airport Influence Areas, GIS database

Findings of Fact:

a-d) **No Impact.** The nearest public airport, Perris Valley Airport, is located approximately 2.75 miles northeast of the Project site. The Project site is not covered by an airport master plan, is not located within the planning area of an airport land use plan, and is not within 2 miles of a public airport or public use airport (RCALUC 2004). Additionally, the Project site is also not within the vicinity of a private airstrip or heliport; therefore, the Project would not result in a safety hazard for people residing or working in the Project area. No impacts would occur.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

HYDROLOGY AND WATER QUALITY Would the project:				
23. Water Quality Impacts a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces?	☐	☐	☒	☐
d) Result in substantial erosion or siltation on-site or off-site?	☐	☐	☒	☐
e) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-site or off-site?	☐	☐	☒	☐
f) 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?	☐	☐	☒	☐
g) Impede or redirect flood flows?	☐	☐	☒	☐
h) In flood hazard, tsunami, or seiche zones, risk the release of pollutants due to project inundation?	☐	☐	☒	☐

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
i) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

Source(s): Riverside County General Plan Figure S-9 "Special Flood Hazard Areas," Figure S-10 "Dam Failure Inundation Zone," Riverside County Flood Control District Flood Hazard Report/ Condition, GIS database

Findings of Fact:

a) **Less Than Significant.** The Project site is located within the Santa Ana Hydrologic Basin Planning Area (SARWQCB 2019). City of Perris water service is provided by the Eastern Municipal Water District (EMWD). The majority of EMWD's potable water demand is supplied by imported water from the Metropolitan Water District of Southern California (MWD) through its Colorado River Aqueduct and its connections to the State Water Project. Approximately 20 percent of EMWD's potable water demand is supplied by EMWD groundwater wells (EMWD 2021). Very minimal wastewater discharge is expected to result from the Project activities, resulting only from watering for dust control. Nonetheless, the Project would comply with all applicable water quality standards including those set in the Urban Water Management Plan and Draft Groundwater Sustainability Plan for EMWD, as well as the Basin Plan written by the Santa Ana Regional Water Quality Control Board (SARWQCB). While the Project would include ground-disturbing activities that would disturb soils, these could potentially create dirty runoff affecting surface water quality. However, the Project construction activities would be temporary, and proposed activities would comply with the Project's BMPs outlined in the SWPPP as well as comply with water quality standards set by EMWD and SARWQCB. Therefore, this would ensure that impacts from the Project would be less than significant.

b) **Less than Significant.** Short-term water demand for Project activities such as watering exposed soils pursuant to SCAQMD Rule 403 (Fugitive Dust) would be minimal. Given the location of the Project site, water would likely be imported to the Project site using a water truck. Nonetheless, the water demand would be minor and would have a negligible effect on local groundwater supplies. The Project does not include permanent restrooms, water fountains, or any other facilities that require the use of water, therefore, the proposed Project would not result in increased operational demand for domestic water. Additionally, restored native vegetation on site would be nonirrigated.

The Project would install metal fencing around the site; however, this would not result in an increase of impervious surfaces. The remainder of the Project site would remain as it currently exists. Therefore, implementation of the Project would not result in an increase in impervious surfaces and would have no effect on the potential for groundwater recharge within the groundwater basin. Therefore, the Project would have a less than significant impact on groundwater supplies, groundwater recharge, or aquifers.

c, e-g) **Less Than Significant.** The Project does not require grading, only minimal soil disruption; thus, the existing drainage patterns throughout the majority of the Park would be maintained. Further, no additional impervious surfaces would be introduced as a result of the Project. It is anticipated that the Project would reduce surface runoff through native habitat restoration. Additionally, the Project would not include any habitable structures that could be impacted by flooding during heavy storm events. Therefore, implementation of the Project would result in less than significant impacts related to stormwater drainage and flooding.

d) **Less Than Significant.** The Project would not require grading, only minimal soil disruption; thus, the existing surface water drainage would be maintained. Trail removal activities would require ground disturbance at depths up to 2 feet, which could alter drainage patterns and introduce potential for erosion and sedimentation during the four months of Project construction. However, because construction activities would disturb more than 1 acre, RivCo Parks would develop and implement a SWPPP prior to the commencement of any Project activities in accordance with the NPDES Construction General Permit. The SWPPP would include standard construction BMPs (e.g., offsite fueling and maintenance of equipment), which would be in place for the duration of the Project to avoid potential impacts to surface water quality due to potential pollutant discharge. If construction becomes necessary during the rainy season, all required erosion control materials (e.g., straw bales, wattles, silt fence materials, etc.) would be available on site and stockpiled at convenient locations to facilitate rapid installation of temporary devices or to repair any damaged erosion control measures when rain is imminent. Additionally, native vegetation restoration following trail removal would reduce surface runoff, erosion, and sedimentation over the long term. Impacts regarding erosion and siltation would be less than significant.

h) **Less Than Significant.** The Project site is located approximately 30 miles west of the Pacific Ocean and is therefore not at risk of tsunami. The majority of the Park is within an area of minimal flood hazard, according to Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Panels 06065C2032G, 06065C2034G, and 06065C2055H; and a small portion of the Project site is located within the 100-year floodplain along the western border of the site. Canyon Lake, the closest water body, is approximately 1 mile southwest of the Project site; therefore, the site may be susceptible to seiches. However, Project construction activities would occur temporarily, lasting approximately four months; and operational activities would occur intermittently throughout the Project site. In the event that weather conditions may lead to a seiche, workers, visitors, and residents would be notified to evacuate the Project site in accordance with the Multi-Jurisdictional Local Hazard Mitigation Plan. The Project would not include construction of any habitable structures that would increase prolonged use of the Project site. While the Project would utilize potentially hazardous materials during construction and maintenance, workers handling these materials will do so in compliance with local, State, and federal guidelines in handling, storing, and discarding hazardous materials. Furthermore, in the event of a flood, the quantities of hazardous materials that are proposed to be used are not in significantly large quantities that could result in a significant impact in the event of a flood. Should an immediate evacuation occur, these materials would either be removed immediately or stored in such a way to minimize an accidental release. Therefore, the risks of a flood, tsunami, or seiche releasing pollutants due to project site inundation is low, and impacts would be less than significant.

i) **Less Than significant.** The Project would require minor ground-disturbing activities at shallow depths up to 2 feet, as necessary for fence post installation. The Project would not result in an increase of impervious surfaces. The implementation of standard construction BMPs from the SWPPP (e.g., offsite fueling and maintenance of equipment), would avoid potential impacts to surface water quality due to potential pollutant discharge during Project activities. The Project does not include permanent restrooms, water fountains, or any other structures that require the use of domestic water. Further, native habitat restored as part of the Project would be nonirrigated. Therefore, the Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan because it would not increase demand for water supply at the Project site. Impacts would be less than significant.

Mitigation: No mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

Monitoring: No monitoring is required.

LAND USE/PLANNING Would the project:				
24. Land Use a) 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?	☐	☐	☐	☒
b) Disrupt or divide the physical arrangement of an established community (including a low-income or minority community)?	☐	☐	☐	☒

Source(s): City of Perris General Plan, Riverside County General Plan

Findings of Fact:

a) **No Impact.** The Project would not change the existing land use of the Project site, and Project activities would not conflict with City or County General Plan policies. No impact would occur.

b) **No Impact.** No separation of land uses between land use types would occur as a result of the Project. Although traffic associated with construction would travel along Goetz Road, it would not disrupt the current uses. Additionally, land use would not change in association with operation of the Project. Therefore, the Project would not divide an established community, and no impact would occur.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

MINERAL RESOURCES Would the project:				
25. Mineral Resources a) Result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the State?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒
c) Potentially expose people or property to hazards from proposed, existing, or abandoned quarries or mines?	☐	☐	☐	☒

Source(s): Riverside County General Plan Figure OS-6 “Mineral Resources Area”

Findings of Fact:

a-c) **No Impact.** According to the CGS, the Project site is designated as Mineral Resource Zone (MRZ) 3, meaning the significance of mineral deposits in the area is undetermined. However, there are no significant State-designated mineral sectors in the vicinity of the Project (County 2015) and no proposed, existing, or abandoned mines on the site. Further, given the nature of the Project and the

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

limited ground disturbance depths associated with Project activities (up to 2 feet deep), the Project would not result in the permanent loss of availability of a potential mineral resource recovery site. Therefore, the Project would not result in the loss of availability of a known mineral resource or result in a hazard from proposed or existing mines, and no impact to mineral resources would occur.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

NOISE Would the project result in:				
26. Airport Noise a) For a project located within an airport land use plan or, where such a plan has not been adopted, within two (2) miles of a public airport or public use airport would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
b) For a project located within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Source(s): City of Perris Exhibit S-19: Perris Valley Airport Influence Areas; Riverside County Airport Land Use Compatibility Plan

Findings of Fact:

a-b) **No Impact.** The nearest public airport, Perris Valley Airport, is located approximately 2.75 miles northeast of the Project site. The Project site is not located within the planning area of an airport land use plan or within 2 miles of a public airport or public use airport (RCALUC 2004). Additionally, the Project site is also not within the vicinity of a private airstrip or heliport; therefore, the Project would not expose people residing or working in the Project area to excessive noise levels. No impact would occur.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

27. Noise Effects by the Project a) 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, noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Generation of excessive ground-borne vibration or ground-borne noise levels?	☐	☐	☒	☐

Source(s): Riverside County Noise Ordinance

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

Findings of Fact:

a) **Less Than Significant.** Residential lots exist directly adjacent to the Project site. However, as mentioned in Section I – Project Information, public construction projects and facilities owned or operated by or for a governmental agency are exempt from the County's Noise Ordinance (County 2007). Although the proposed Project is exempt from limitations on construction hours, to the maximum extent feasible, RivCo Parks would voluntarily limit construction activities to the hours between 6:00 a.m. and 6:00 p.m. during the months of June through September, and between 6:00 a.m. and 7:00 p.m. during the months of October through May, consistent with requirements codified in the County's Noise Ordinance for private construction projects located within 0.25 mile of a residence. Nonetheless, construction activity would be considered minimal. The most equipment that would be required consists of a Bobcat or other small tracked multi-terrain loader, a track loader or dozer, a string trimmer, hand tools, and three standard pickup trucks. This equipment would not create a substantial temporary increase in noise. Additionally, operation of the Project would largely not change, except for the decrease in OHV's which would ultimately result in less noise at the Project site. Noise impacts associated with the Project would therefore be less than significant.

b) **Less Than Significant.** The Project would require, at most, a Bobcat or other small tracked multi-terrain loader, a track loader or dozer, a string trimmer, hand tools, and three standard pickup trucks. For ongoing maintenance activities, use of hand tools needed for the Project would be minor; and use of all the necessary equipment would be temporary in nature, lasting approximately four months. Although the Project site borders residential neighborhoods, the Project site itself is designated as open space and is uninhabited. None of the above-mentioned equipment would result in excessive groundborne vibration or groundborne noise levels. Additionally, Project activities do not require pile driving, blasting, drilling, or additional processes that would contribute to groundborne vibration or groundborne noise levels. Impacts would be less than significant.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

PALEONTOLOGICAL RESOURCES:				
28. Paleontological Resources a) Directly or indirectly destroy a unique paleontological resource, site, or unique geologic feature?	☐	☐	☒	☐

Source(s): Riverside County GIS Database

Findings of Fact:

a) **Less Than Significant Impact.** According to the Riverside County GIS database, the entire Park is in an area that is considered to have undetermined paleontological sensitivity (County 2021). Chambers Group performed a paleontological records search through the Western Science Center as part of their cultural resources investigation, which identified no paleontological resources recorded within the APE. Further, during the intensive pedestrian survey performed on site, no resources were identified (Appendix D). Project construction would be limited to minor ground-disturbing activities at shallow depths (2 inches up to a maximum of 2 feet); therefore, the potential to encounter previously unknown

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

buried paleontological resources is considered low. The Project would result in less than significant impacts to paleontological resources.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

POPULATION AND HOUSING Would the project:				
29. Housing a) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
b) Create a demand for additional housing, particularly housing affordable to households earning 80% or less of the County's median income?	☐	☐	☐	☒
c) 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)?	☐	☐	☐	☒

Findings of Fact:

a-c) **No Impact.** The fencing, gate, and signage installation; trail removal; and native habitat restoration activities associated with the Project would not displace any existing people, establish new housing, or extend any roads or urban services that would indirectly result in additional population growth. Additionally, the Project would not create demand for additional housing or induce substantial unplanned population growth because of its limited scale. Due to the short time frame of construction activities, it is assumed that construction employees would come from the existing nearby population. The Project is intended to enhance the Park for existing Park users. Therefore, no impact would be associated with the implementation of the Project.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

PUBLIC SERVICES Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the 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 of the following public services:				
30. Fire Services	☐	☐	☐	☒

Source(s): City of Perris General Plan Safety Element, Riverside County General Plan Safety Element

Findings of Fact:

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

No Impact. The City of Perris began contracting with the Riverside County Fire Department (RCFD) for fire and emergency services in 1983. The City of Perris has 14 firefighters assigned to two fire stations (City 2021a). RCFD Station 60 is located approximately 1 mile southwest of the Project site and is the closest station to the Project site. During Project activities, emergency access to the Project site would be maintained along roadways, and no lane closures would occur. The Project would not induce population growth or substantially increase, either directly or indirectly, the need for fire protection services over existing conditions. The new signage installed as part of the Project would state no hunting, no fires, and no shooting are permitted within the Park boundaries. Additionally, RivCo Parks conducts regular weed abatement to reduce ladder fuels 100 feet from residences. Therefore, no impact on fire services would be associated with the implementation of the Project.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

31. Sheriff Services	☐	☐	☐	☒

Source(s): Riverside County General Plan

Findings of Fact:

No Impact. The closest police station to the Project site is the Perris Police Station, located approximately 4.35 miles northeast of the Project site. Fence, gate, and sign installation; trail removal; and native vegetation restoration associated with the Project would not result in temporary interruption or delays for law enforcement response time. Additionally, use of the Park following Project implementation would neither measurably increase the demand for law enforcement nor require the construction of new facilities such as police or sheriff stations. Therefore, no impact on sheriff services would be associated with the implementation of the Project.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

32. Schools	☐	☐	☐	☒

Findings of Fact:

No Impact. No new residential units would be constructed as a part of the Project, and the Project would not result in new permanent populations that would require school facilities. Therefore, no impact on schools would be associated with the implementation of the proposed Project.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
33. Libraries	☐	☐	☐	☒

Findings of Fact:

No Impact. No new residential units would be constructed as a part of the Project, and the Project would not result in new permanent populations that would increase demand on libraries or any other public services or facilities. Therefore, no impact on libraries would be associated with the implementation of the proposed Project.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

34. Health Services	☐	☐	☒	☐

Findings of Fact:

Less Than Significant Impact. No new residential units would be constructed as a part of the Project, and the Project would not result in new permanent populations that would increase demand on health services. Construction workers associated with the Project may require health services; however, any added health service demand would be minor and temporary, as the crew is anticipated to be up to 24 people on site for approximately four months. Therefore, impacts on health services associated with the implementation of the Project would be less than significant.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

RECREATION Would the project:				
35. Parks and Recreation a) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☒	☐
b) Increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
c) Be located within a Community Service Area (CSA) or recreation and park district with a Community Parks and Recreation Plan (Quimby fees)?	☐	☐	☐	☒

Source(s): Riverside County GIS database; City of Perris Parks and Recreation Master Plan; City of Perris Ordinance Number 953

Findings of Fact:

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

a) **Less Than Significant.** The Project would enhance the existing recreational amenities at Kabian Park through preventing unauthorized OHV use within the Park and restoring native habitat. Signage installed as part of the Project would encourage responsible OHV riding and provide riders with a map to nearby legal riding opportunities in Riverside County, such as Wildomar OHV Park or Cahuilla Creek Motocross Park. The Project would not require the construction or expansion of recreational facilities that could have an adverse physical effect on the environment, and impacts would be less than significant.

b) **Less Than Significant.** The proposed Project would prevent substantial deterioration of the existing Park by restricting unauthorized OHV use within the Park and restoring native habitat. The Project would therefore enhance the Park for hikers, runners, mountain bikers, and equestrians currently using the Park for its intended uses. While the Project would install signage which directs OHV riders to nearby legal riding opportunities, such as Wildomar OHV Park or Cahuilla Creek Motocross Park, implementation of the Project would not result in any significant and irreversible physical deterioration of these established facilities. Therefore, impacts associated with the implementation of the Project would be less than significant.

c) **No Impact.** The Project is not located within a Community Service Area (CSA) or a Community Parks and Recreation Plan. No development is proposed; therefore, no Quimby fees would be associated with the Project.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

36. Recreational Trails a) Include the construction or expansion of a trail system?	☐	☐	☐	☒

Findings of Fact:

a) **No Impact.** The Project would be limited to the installation of fencing, gates, and signage; the removal of unauthorized OHV trails; and the restoration of native habitat in the Park. The Project would not include the construction of new trails or the expansion of the trail system and focuses only on enhancing trail users' experiences on existing trails within the Park. The Project would create a beneficial impact to the Park by reducing the deterioration of the Project site by restricting unauthorized OHV use within the Park and restoring native habitat. Therefore, no impact on recreational trails would be associated with the implementation of the Project.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

TRANSPORTATION Would the project:				
37. Transportation	☐	☐	☐	☒

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?				
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?	☐	☐	☐	☒
d) Cause an effect upon, or a need for new or altered maintenance of roads?	☐	☐	☐	☒
e) Cause an effect upon circulation during the project's construction?	☐	☐	☐	☒
f) Result in inadequate emergency access or access to nearby uses?	☐	☐	☐	☒

Source(s): City of Perris General Plan, Riverside County General Plan

Findings of Fact:

a, b) **No Impact.** Construction and operation of the Project would not conflict with adopted policies, plans, and programs supporting alternative transportation. The Project would require minor ground disturbance, with no soil export or import of fill material needed. A limited number of heavy haul trucks used to deliver equipment and materials to the Project site would access the Project site from Goetz Road turning west onto Kabian Park Road. Heavy construction equipment would remain in the construction staging area throughout the duration of construction, which would limit trips to and from the Project site. It is estimated that installation of fencing, gates and signage would require a crew of approximately four to eight workers; and OHV trail removal and restoration would require a crew of approximately 24 workers. Thus, the Project would result in a maximum of 64 round trips per day (32 trips each way). According to a technical advisory on evaluating transportation impacts from the State of California Governor's Office of Planning and Research (OPR), "[a]bsent substantial evidence indicating that a project would generate a potentially significant level of vehicle miles traveled (VMT), or inconsistency with a Sustainable Communities Strategy (SCS) or general plan, projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less than significant transportation impact" (OPR 2018). The proposed construction activities would generate fewer trips than the OPR's threshold of 110 trips per day.

The Project would not conflict with any policies for roadways near the Project site and would not conflict with any congestion management programs within the City or County. The Project would also reduce illegal OHV use on roads surrounding the Park and congestion resulting from vehicles with OHV trailers parking in the area. Implementation of the Project would have no adverse impacts on transportation. Impacts would be less than significant.

c-f) **No Impact.** Local access to the Park is provided by Goetz Road, which is a two-lane roadway that provides local north-south access, and Kabian Park Road, which is a paved road that provides local east-west access. The Project would not result in changes to the design of existing roadway configurations or other transportation infrastructure within the vicinity of the Project site. No new road

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

maintenance would be required as a result of the Project. The entrance and exit gates associated with the Project would not introduce incompatible uses or line-of-sight issues. Additionally, the Project's proposed fencing, gates, and signage would decrease hazards resulting from incompatible OHV use in the Park and on surrounding roads. Moreover, the Project would not result in traffic delays that could substantially increase emergency response times or reduce emergency vehicle access. Therefore, no impact on recreational trails would be associated with implementation of the Project.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

38. Bike Trails a) Include the construction or expansion of a bike system or bike lanes?	☐	☐	☐	☒

Findings of Fact:

a) **No Impact.** The Project would be limited to the installation of fencing, gates, and signage; the removal of unauthorized OHV trails; and the restoration of native habitat. The Project would not include the construction or expansion of a bike system or bike lanes and focuses only on enhancing trail users' experiences on existing trails within the Park. No impacts would occur.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

TRIBAL CULTURAL RESOURCES 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, or 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:				
39. Tribal Cultural Resources a) 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)?	☐	☒	☐	☐
b) 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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.)	☐	☒	☐	☐

Assembly Bill (AB) 52, which went into effect on July 1, 2015, established a consultation process with all California Native American tribes and required consideration of Tribal Cultural Resources in the determination of potential environmental impacts. Tribal Cultural Resources are defined as a site feature, place, cultural landscape, sacred place, or object which is of cultural value to a Tribe that is either: (1) on or eligible for the California Historic Register or a local historic register; or (2) treated by the lead agency, at its discretion, as a traditional cultural resource per Public Resources Code 21074 (a)(1)(A)-(B).

As described in Section 8, Cultural Resources, Chambers Group contacted the NAHC on March 25, 2021, to determine if any Native American resources were known within or immediately adjacent to the APE. On April 7, 2021, the NAHC responded that the Sacred Lands File records search did not identify any sites within the APE. The District provided a list of 22 tribes who have requested to be consulted pursuant to AB 52 as follows:

Agua Caliente Band of Cahuilla Indians
Augustine Band of Cahuilla Mission Indians
Cabazon Band of Mission Indians
Campo Band of Diegueño Mission Indians
Ewiiaapaayp Band of Kumeyaay Indians
Jamul Indian Village
La Jolla Band of Luiseño Indians
La Posta Band of Diegueño Mission Indians
Los Coyotes Band of Cahuilla and Cupeño Indians
Manzanita Band of Kumeyaay Nation
Morongo Band of Mission Indians
Pala Band of Mission Indians
Pauma Band of Luiseño Indians
Pechanga Band of Luiseño Indians
Ramona Band of Cahuilla
Rincon Band of Luiseño Indians
San Pasqual Band of Mission Indians
Soboba Band of Luiseno Indians
Sycuan Band of the Kumeyaay Nation
Torres-Martinez Desert Cahuilla Indians
Viejas Band of Kumeyaay Indians

AB 52 letters were sent on April 16, 2021, to the above tribes. Of the 22 tribes, two tribes, including the Agua Caliente Band of Cahuilla Indians and Viejas Band of Kumeyaay Indians (“Viejas”), responded, stating that that the Project is not located within either Tribe’s Traditional Use Area and does not have cultural significance to the Tribes. The Pechanga Band of Luiseño Indians (“Pechanga”) and Rincon Band of Luiseño Indians (“Rincon”) also responded noting that the Project area is culturally sensitive, and requested further consultation.

A second consultation letter was sent on September 2, 2021 to the above 22 tribes in order to alert them of availability of this Initial Study for review. Three tribes, Rincon, Soboba Band of Luiseño Indians (“Soboba”), and Pechanga responded requesting consultation.

Consultation with Rincon was on October 14, 2021 and they recommended monitors on site during ground disturbance. This recommendation was included as MM CUL-3 in this initial study. Verbal consultation was concluded and a letter concluding consultation was received on November 16, 2021.

Consultation with Soboba was on December 9, 2021 and they requested some small changes to the existing MM CUL-1 through CUL-5. These changes were made per their verbal request and changes were confirmed through written confirmation on March 24, 2022. Consultation was concluded.

An initial consultation with Pechanga was on November 3, 2021 and the Project Description was discussed, but the District’s Historic Preservation Officer was unable to attend and the consultation was postponed until January 25, 2022. During this consultation, Pechanga requested a site visit to walk to

the site. The District made a full faith effort to attempt to set up a site visit by contacting Pechanga several times, however, since no response was received, it is assumed that consultation was concluded.

Source(s): Cultural Resources Letter Report, AB 52 Tribal Consultation

Findings of Fact:

a,b) **Less Than Significant with Mitigation Incorporated.** No tribal cultural resources were encountered at the Project site during the cultural resources survey. Potential impacts would be mitigated through the implementation of mitigation measures MM-CUL-1 through MM-CUL-6. These mitigation measures would include construction training and would also require an archaeological monitor to be present during ground-disturbing activities. In the unlikely event that previously unknown archaeological resources are discovered during ground-disturbing activities associated with the proposed Project, construction activities would temporarily cease within the vicinity until a qualified archaeologist could evaluate the significance of the resource(s) in consultation with RivCo Parks and an appropriate Native American representative(s). Additionally, during the first round of AB 52 consultation two tribes responded, the Agua Caliente Band of Cahuilla Indians and Viejas Band of Kumeyaay Indians ("Viejas"), stating that that the Project is not located within either Tribe's Traditional Use Area and does not have cultural significance to the Tribes. Pechanga and Rincon responded during the first round of consultation, noting that the Project area is culturally sensitive and requested further consultation.

A second consultation letter was sent on September 2, 2021 to the above 22 tribes in order to alert them of availability of this Initial Study for review. Three tribes, Rincon, Soboba, and Pechanga responded requesting consultation.

Consultation with Rincon was on October 14, 2021 and they recommended monitors on site during ground disturbance. This recommendation was included as MM CUL-3 in this initial study. Verbal consultation was concluded and a letter concluding consultation was received on November 16, 2021.

Consultation with Soboba was on December 9, 2021 and they requested some small changes to the existing MM CUL-1 through CUL-5. These changes were made per their verbal request and changes were confirmed through written confirmation on March 24, 2022. Consultation was concluded.

An initial consultation with Pechanga was on November 3, 2021 and the Project Description was discussed, but the District's Historic Preservation Officer was unable to attend and the consultation was postponed until January 25, 2022. During this consultation, Pechanga requested a site visit to walk to the site. The District made a full faith effort to attempt to set up a site visit by contacting Pechanga several times, however, since no response was received, it is assumed that consultation was concluded.

With the conclusion of AB 52 consultation and implementation of mitigation measures MM-CUL-1 through MM-CUL-6, potential impacts to tribal cultural resources would be less than significant with mitigation incorporated.

Mitigation: Refer to mitigation measures MM-CUL-1 through MM-CUL-6.

Monitoring: Compliance with these mitigation measures would be subject to periodic site inspections by RivCoParks.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
UTILITIES AND SERVICE SYSTEMS Would the project:				
40. Water a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage systems, whereby the construction or relocation would cause significant environmental effects?	☐	☐	☐	☒
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☐	☐	☐	☒

Findings of Fact:

a, b) **No Impact.** The Project would not include the construction of permanent restrooms, water fountains, or any other structures that require the use of domestic water. All native vegetation seeded on site would be nonirrigated. Therefore, the Project would not require new water, wastewater, or drainage systems and would have no impacts on water supplies.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

41. Sewer a) Require or result in the construction of new wastewater treatment facilities, including septic systems, or expansion of existing facilities, whereby the construction or relocation would cause significant environmental effects?	☐	☐	☐	☒
b) Result in a determination by the wastewater treatment provider that serves or may service the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒

Findings of Fact:

a, b) **No Impact.** The Project would not include the construction of permanent restrooms, water fountains, or any other structures that require the use of domestic water or that create of wastewater. Therefore, the Project would not require new wastewater treatment facilities and would not strain existing systems. No impact would occur.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

42. Solid Waste a) Generate solid waste in excess of State or Local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☐	☒

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Comply with federal, state, and local management and reduction statutes and regulations related to solid wastes including the CIWMP (County Integrated Waste Management Plan)?	☐	☐	☐	☒

Findings of Fact:

a, b) **No Impact.** Project activities would require minor ground-disturbing activities at shallow depths, reaching a maximum of 4 inches for unauthorized trail removal and a maximum of 2 feet for fence post installation. No building demolition or other solid waste generating activities would be required during construction. A minimal amount of solid waste is anticipated to be generated by construction workers on site; however, construction would be temporary, lasting up to four months. Additionally, construction workers would dispose of all solid waste in accordance with City regulations, which would be taken to the permitted Perris Transfer Station and Materials Recovery Facility at 1706 Goetz Road. Further, all soil disturbed during trail removal activities would be redistributed and remain on site. Following Project completion, operational usage of the Park is not expected to increase; and trash receptacles would continue to be provided for use. Thus, overall operational waste would not increase. Therefore, the proposed Project would have no impacts on solid waste generation and would comply with all applicable regulations related to solid waste.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

43. Utilities Would the project impact the following facilities requiring or resulting in the construction of new facilities or the expansion of existing facilities, whereby the construction or relocation would cause significant environmental effects?				
a) Electricity?	☐	☐	☒	☐
b) Natural gas?	☐	☐	☒	☐
c) Communications systems?	☐	☐	☒	☐
d) Street lighting?	☐	☐	☒	☐
e) Maintenance of public facilities, including roads?	☐	☐	☒	☐
f) Other governmental services?	☐	☐	☐	☒

Findings of Fact:

a-d) **Less Than Significant.** The proposed Project would not include structures that would use electricity, natural gas, communication systems, or lighting. Electricity would be required for Project construction activities, but electricity use would last up to four months and would be required for minor amounts of equipment. Minimal activities would be required to maintain native habitat restored on the Project site (discussed below). Impacts to utilities resulting from the Project would be less than significant.

e) **Less Than Significant.** Native habitat restoration associated with the Project would include minor maintenance activities in the Park, such as string trimming and herbicide applications. Maintenance would be required intermittently, most often during peak use in the spring and summer months, to

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

ensure successful growth of restored habitat. Furthermore, maintenance of the Park is an ongoing and existing activity and would not be a new activity being introduced to the Park. Impacts of minor maintenance activities required for the Project would be less than significant.

f) **No Impact.** No other government services would be required as a result of the Project; therefore, the Project would have no impact.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

WILDFIRE If located in or near a State Responsibility Area ("SRA"), lands classified as very high fire hazard severity zone, or other hazardous fire areas that may be designated by the Fire Chief, would the project:				
44. Wildfire Impacts a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d) 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?	☐	☐	☒	☐
e) Expose people or structures either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	☒	☐

The Project is in a local responsibility area (LRA) very high fire hazard severity zone (FHSZ). The main entrance and trail access points throughout the Park will have signs installed that state that hunting, fires, and shooting are prohibited within the Park. Similar signage will also be placed every 300 feet along Circle Drive. The Park is also regularly cleared of ladder fuels 100 feet from residences. RivCo Parks staff also regularly conduct mowing, weeding, and tree trimming near residences.

Source(s): Riverside County General Plan Figure S-11 "Wildfire Susceptibility", GIS database

Findings of Fact:

a) **No Impact.** As previously described in Section 37, Transportation, the Project would not include any change to roadway designs and would not introduce incompatible uses or line-of-sight issues. The Project would not conflict with an emergency response plan, and traffic flows would not be interrupted on any roadway such that they would impair or otherwise interfere with emergency access to local

roads. Additionally, the Project would not result in traffic delays that could substantially increase emergency response times or reduce emergency vehicle access. Construction vehicles would not park on roadways and, thus, would not create a hazard, interrupt vehicle line-of-sight, or otherwise block emergency access. Therefore, the Project would have no impact.

b) **Less than Significant.** Slopes and hillsides present within the Project site may exacerbate wildfire risks. Additionally, the Project site is located within the LRA Very High Fire Hazard Severity Zone (VHFHSZ) as identified by the CAL FIRE Fire Hazard Severity Zones Viewer (CAL FIRE 2021). However, no new habitable structures are included as a part of the Project; therefore, no new people or structures would be exposed to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Furthermore, the proposed construction activities are not expected to include hot work activities, such as welding, that could create and increase a fire risk; and a reduction in OHV use as a result of the Project would reduce wildfire potential associated with combustion engines. Impacts therefore would be less than significant.

c) **No Impact.** The Project involves installation of new fencing, gates, and signage; removal of unauthorized OHV trails; and restoration of native habitat. No new infrastructure is proposed as part of the Project that would exacerbate fire risk. Moreover, the fencing, gates, and signs are anticipated to be constructed solely out of metal materials and thus, would not be flammable. Therefore, the proposed Project would not result in infrastructure that would exacerbate fire risks; and no impact would occur.

d, e) **Less Than Significant.** As mentioned above, CAL FIRE designates the Project site as a LRA VHFSZ (CAL FIRE 2021). The Project site is also characterized by rolling hills and the City General Plan identifies many areas throughout the Project site as having a high landslide and rockfall susceptibility (City 2016). Nonetheless, the Project does not propose to construct any habitable structures that would increase risk of loss, injury, or death involving wildland fires. Further, implementation of the Project would not introduce engineered slopes or otherwise increase the potential for landslide risk. Therefore, impacts would be less than significant.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required

MANDATORY FINDINGS OF SIGNIFICANCE Does the Project:				
45. Have the potential to substantially 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, substantially 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?	☐	☒	☐	☐

Source(s): QCB Focused Survey Report, CAGN Focused Survey Report, and Cultural Resources Letter Report

Findings of Fact:

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

Less Than Significant With Mitigation Incorporated. With the implementation of Mitigation Measures BIO-1 through BIO-5 and Mitigation Measures CUL-1 through CUL-6, implementation of the proposed Project would not substantially degrade the quality of the environment, substantially reduce the habitat of fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or 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. Therefore, impacts would be less than significant with mitigation incorporated.

46. Have impacts which 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, other current projects and probable future projects)?	☐	☒	☐	☐

Findings of Fact:

Less Than Significant Impact With Mitigation Incorporated. The potential for cumulative impacts occurs when the independent impacts of the Project are combined with the impact of related projects in proximity to the Project such that impacts occur that are greater than the impacts of the Project alone. As discussed above, it has been determined that the Project would have no impact, or impacts would be less than significant, or impacts would be less than significant with implementation of mitigation measures. Where the Project would have no impact or a less than significant impact, it would not contribute to cumulative impacts. Project impacts during construction would be minimal and once operational, no impact would occur. The Project proposes OHV-related restoration in Kabian Park, including new fencing, gates, and sign installation; removal of unauthorized trails; and restoration of native habitat; thus, it would not contribute to the cumulative effects of population growth. Since these impacts associated with the proposed Project would not be significant when compared to applicable thresholds, none of the impacts associated with the proposed Project would make cumulatively considerable, incremental contributions to significant cumulative impacts.

47. Have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Findings of Fact:

Less than Significant. Environmental effects that could cause indirect or direct impacts to human beings would relate to air quality, noise, geology, and traffic. Based on the analyses provided, the proposed construction and operational activities would not result in potentially significant impacts with regards to significant air quality and greenhouse gas emissions, substantial noise exposure, risks involving ground shaking or unstable soils, or transportation impacts such as introduction of extreme design features. The proposed Project would not result in environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly. Impacts would be less than significant.

VI. EARLIER ANALYSES

Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration as per California Code of Regulations, Section 15063 (c) (3) (D). In this case, a brief discussion should identify the following:

Earlier Analyses Used, if any: N/A

Location Where Earlier Analyses, if used, are available for review: N/A

Location: County of Riverside Planning Department
4080 Lemon Street, 12th Floor
Riverside, CA 92505

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APPENDIX A – Quino Checkerspot Butterfly (QCB) Focused Survey Report

June 14, 2021
21278

Ms. Stacey Love
Recovery Permit Coordination
United States Fish and Wildlife Service
2177 Salk Avenue, Suite 250
Carlsbad, CA 92008

SUBJECT: **RESULTS OF THE 2021 QUINO CHECKERSPOT BUTTERFLY (*EUPHYDRYAS EDITHA QUINO*) FOCUSED SURVEYS FOR THE PROPOSED KABIAN PARK RESTORATION PROJECT, RIVERSIDE COUNTY, CALIFORNIA**

Dear Ms. Love:

Chambers Group, Inc. (Chambers Group) was contracted by the Riverside County Regional Park and Open-Space District (RivCo Parks, District) to conduct focused surveys for Quino checkerspot butterfly (*Euphydryas editha quino*; QCB) during the spring season of 2021 for the proposed Kabian Park Restoration project (Proposed Project) located in Riverside County, California. The primary purpose of this effort was to identify QCB individuals and habitat within the proposed work areas.

Project Location and Background

Roy W. Kabian Memorial Park (Kabian Park or Park) is a 640.42-acre reserve located at 28001 Goetz Road in the City of Perris (City) within the western region of Riverside County (County), California (Attachment 1: Project Location and Vicinity Map). The Park is located within a corridor of open space contiguous with San Jacinto River to the west that feeds into Canyon Lake, and with connectivity to Lake Elsinore approximately 5 miles to the southwest; this connectivity is constrained by a bottleneck of residential development between Interstate 15 and Lake Elsinore. Perris Reservoir is located approximately 9 miles to the northeast, past a network of agricultural fields. The Park is further surrounded by residential development.

The Park includes approximately one acre of developed space and 639 acres of hiking and equestrian trails owned and managed by the RivCo Parks. The Park provides a variety of trails for hiking, running, mountain biking, and equestrian use, as well as wildlife viewing and nature photography. Additional amenities within the Park include gazebos with barbeque grills, drinking fountains, and playground facilities.

The main entrance to the Park is located north along Kabian Park Road in the southeastern corner of the Park, with an unpaved gravel pad to provide parking. However, a number of unofficial access points currently exist along all borders of the Park. These access points have led to unauthorized Off-Highway Vehicle (OHV) entry to and use within the Park, leading to the deterioration of native habitat in the area. RivCo Parks was granted funds by the California Resources Agency Department of Parks and Recreation, Off-Highway Motor Vehicle Recreation Division, for restoration activities within the Park. The Proposed Project involves installation of new fencing, gates, and signage; removal of unauthorized trails; and restoration of native habitat (Attachment 1). Focused surveys for QCB were conducted within these Proposed Project features, plus a 15-foot buffer (Attachment 2: QCB Survey Area on United States Geographical Survey [USGS] Quadrangle Map).

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, 1998). 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 (Parmeasan 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 QCB habitat assessment was conducted within the Proposed Project features, plus a 15-foot buffer (Survey Area; Attachment 2: QCB Survey Area on USGS Quadrangle Map). 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 Survey Area 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 (CNDDB; CDFW 2021) and the United States Fish and Wildlife Service (USFWS) Species Occurrences Database (USFWS 2021) for QCB records of occurrence within 5 miles of the Proposed Project.

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. Habitat communities within the Survey Area were characterized and mapped. Any areas that were developed or contained closed-canopy habitat were identified and subsequently excluded from focused surveys. The remaining habitat within the Survey Area was deemed appropriate to survey, regardless of the presence of host plants, per the definition above.

Focused Surveys

Chambers Group permitted 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 January 29, 2021.

Surveys were conducted for 5 continuous weeks at a minimum, at least 4 days apart. 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 8, 2021). 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

Biologist	*USFWS Permit Number*
Laurie Gorman	TE-233367-3
Kris Alberts	TE-039640-5

Results

Habitat Assessment

Based on the literature search, there has been one historical record of occurrence for QCB documented within five miles of the Survey Area, on April 9, 2002 (CDFW 2021 and USFWS 2021). This occurrence was recorded approximately three miles southwest of the Survey Area, between Lake Elsinore and Canyon Lake.

The Survey Area is composed primarily of open Riversidean sage scrub (approximately 14.67 acre) and bare ground (approximately 5.53 acres) with grassland (approximately 0.6 acre) intermixed, and a few small patches of disturbed habitat (approximately 0.07 acre) and peninsular Juniper woodland (approximately 0.04 acre) also present. These habitat types are displayed on aerial maps of the Proposed Project as Attachment 3: Vegetation Communities Map.

Pursuant to the USFWS 2014 Survey Guidelines criteria for designating Excluded Areas, Peninsular Juniper woodland, a closed-canopy vegetation community, was excluded from the surveys (see page 3 in Attachment 3). As a result, a total of approximately 20.87 acres of suitable habitat for QCB was identified within the Survey Area.

Potential QCB host plants mapped within the Survey Area included dwarf plantain. Host plant patches were stunted due to severe drought conditions in Riverside County, based on average rainfall tracked by the National Oceanic and Atmospheric Administration (NOAA 2021). 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), and high (over 100 individual plants per square meter). The results of the 2021 host plant mapping effort are provided as Attachment 4: QCB Host Plant Location Map.

Focused Surveys

Permitted biologists (Table 1) conducted a total of 12 QCB focused surveys within the Survey Area from February 19 to May 7, 2021. Photographs of the host plant patches and habitat within the Survey Area are provided as Attachment 5: Site Photographs.

No QCB were detected during the surveys. A total of 10 butterfly species were observed. A complete list of butterfly species observed is provided as Attachment 6: Butterfly Species Detected. A complete list of flowering plant species (as potential nectar sources) observed is provided as Attachment 7: Flowering Plant Species Observed. Weather conditions during the QCB surveys are provided as Attachment 8: Weather Conditions. A Biologist Signature Page certifying these results are an accurate representation of the permitted biologists' findings is provided as Attachment 9: QCB Survey Project Biologists Signature Page. Field survey forms of the survey results are provided as Attachment 10: Field Survey Forms; these forms contain notes on the abundance of each butterfly species observed, flowering plants observed, and habitat quality per survey.

Discussion

A total of approximately 20.87 acres of suitable habitat for QCB were surveyed within the Proposed Project features plus a 15-foot buffer. No QCB were detected during the 2021 focused surveys.

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

Laurie Gorman
Senior Biologist

Attachments

Attachment 1 – Project Location and Vicinity Map
Attachment 2 – QCB Survey Area on USGS Quadrangle Map
Attachment 3 – Vegetation Communities Map
Attachment 4 – QCB Host Plant Location Map
Attachment 5 – Site Photographs
Attachment 6 – Butterfly Species Detected
Attachment 7 – Flowering Plant Species Observed
Attachment 8 – Weather Conditions
Attachment 9 – QCB Survey Project Biologists Signature Page
Attachment 10 – Field Survey Forms

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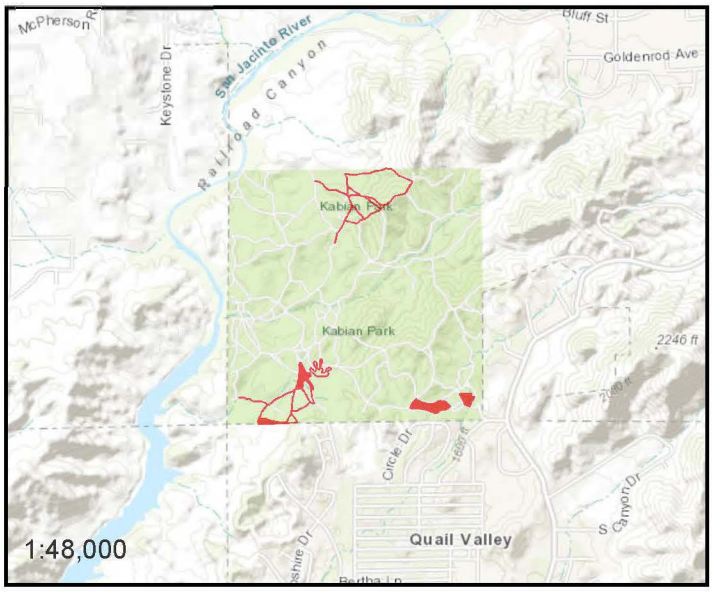
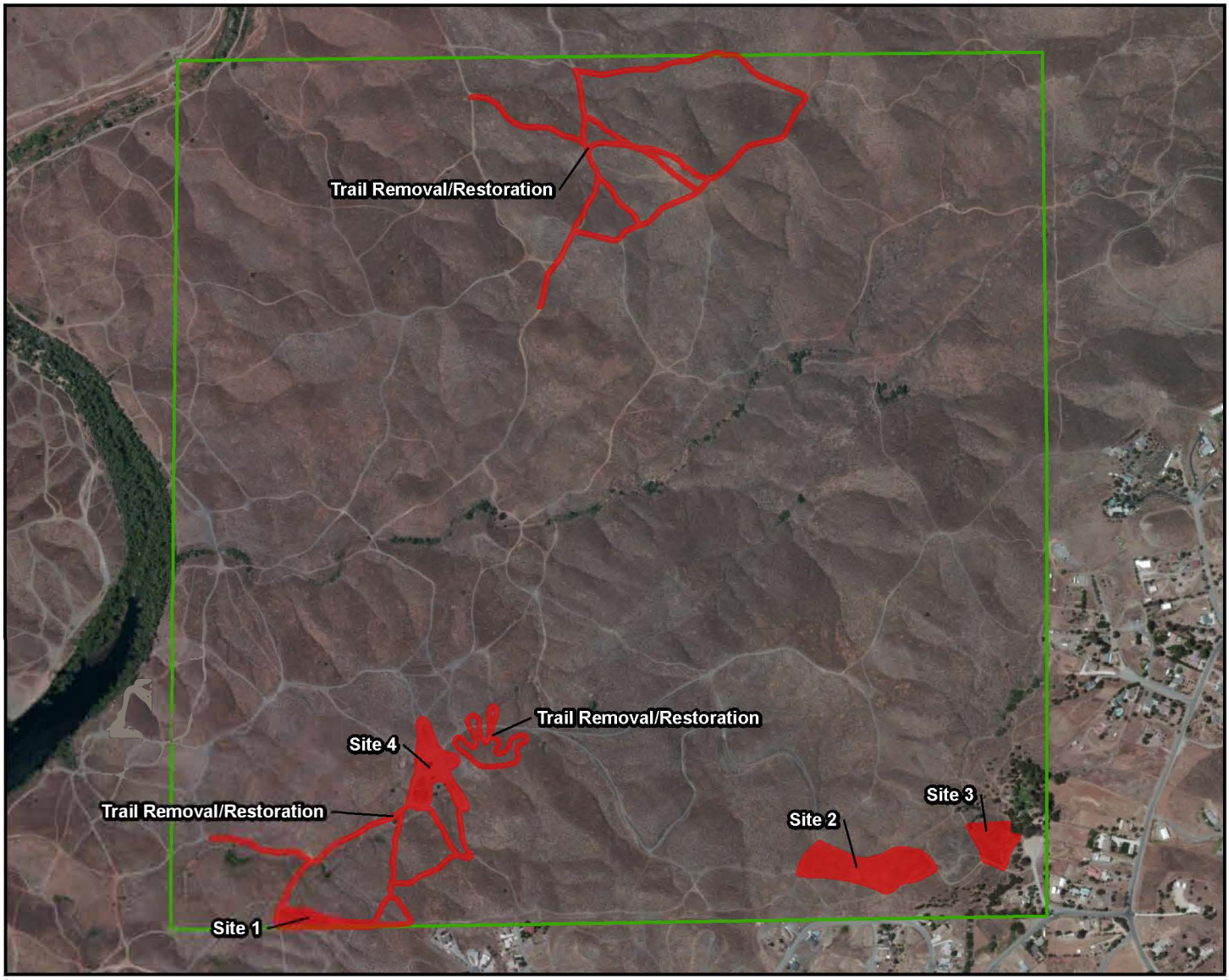
ATTACHMENT 1 – PROJECT LOCATION AND VICINITY MAP





Survey Area

Kabian Reserve Boundary

N

0 400 800 1,600

Feet

Attachment 1

Kabian Park Restoration

Project Location and Vicinity Map

Name: 21278 BIO Attach 1 Project Location and Vicinity Mxd
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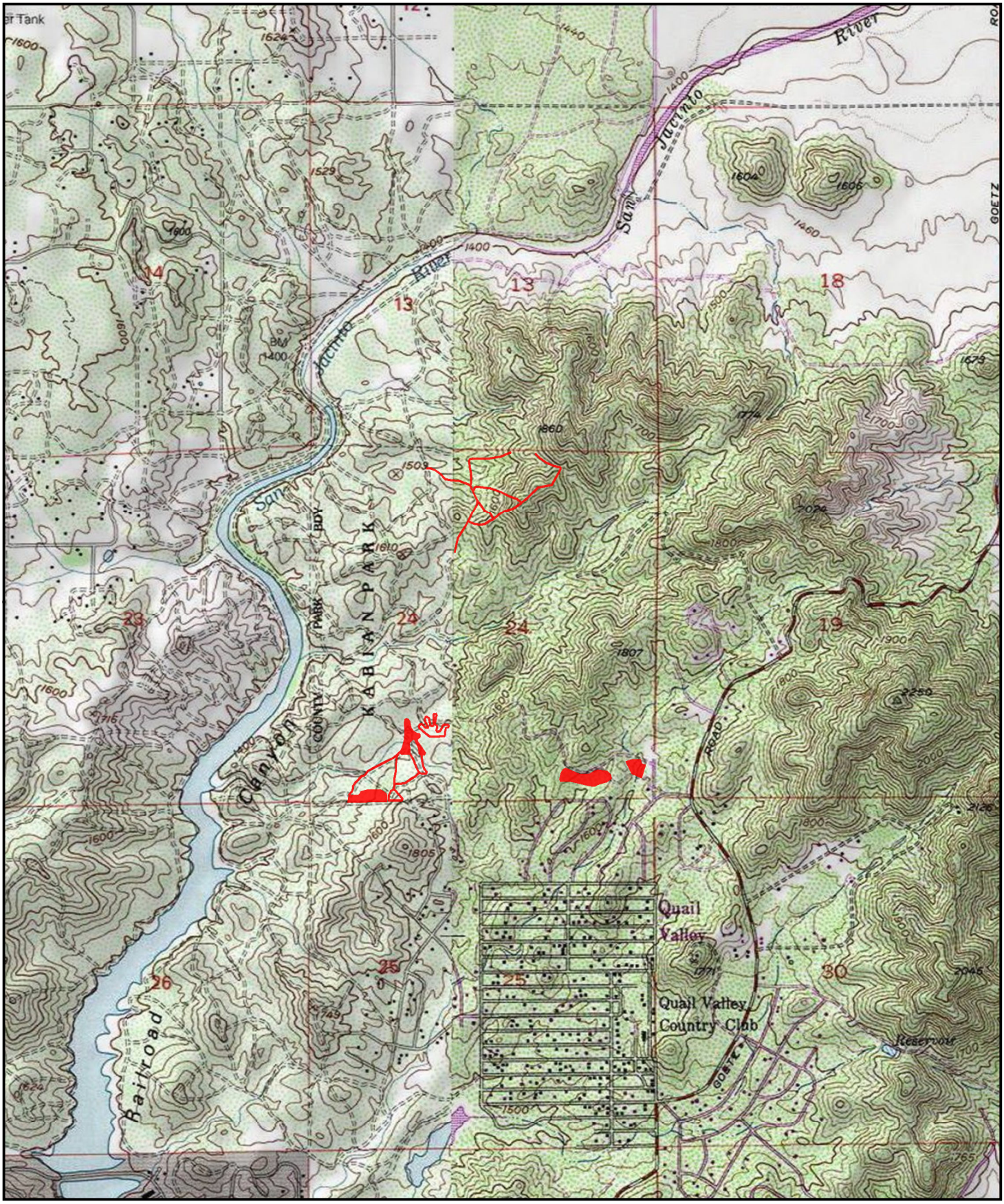
ATTACHMENT 2 – QCB SURVEY AREA ON USGS QUADRANGLE MAP



Attachment 2
Kabian Park Restoration
QCB Survey Area on
USGS Quadrangle Map

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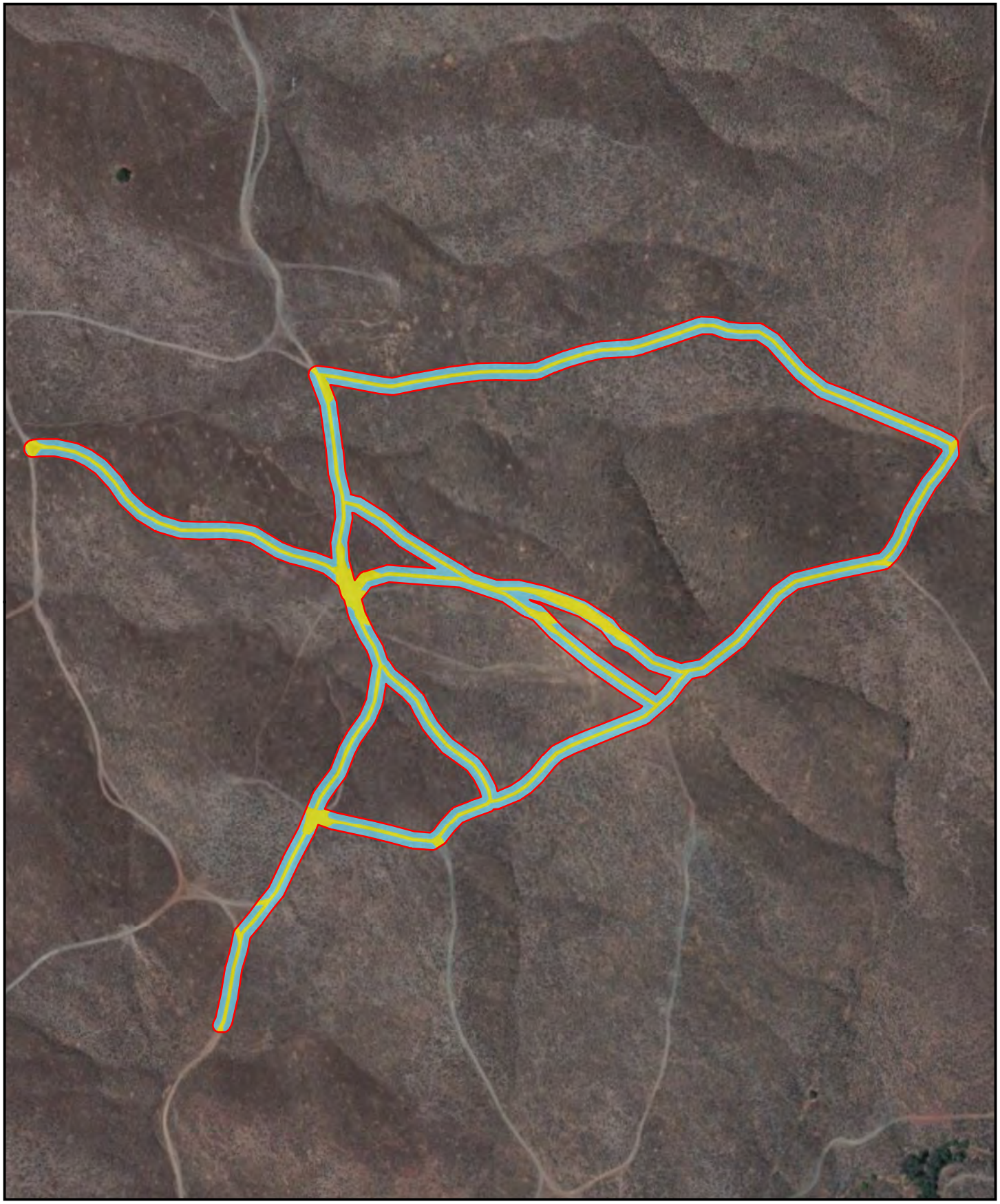
ATTACHMENT 3 –VEGETATION COMMUNITIES MAP



Survey Area

Vegetation Communities

Bare Ground

Riversidean Sage Scrub

N

0 100 200 400

Feet

Attachment 3

Kabian Park Restoration

Vegetation Communities Map

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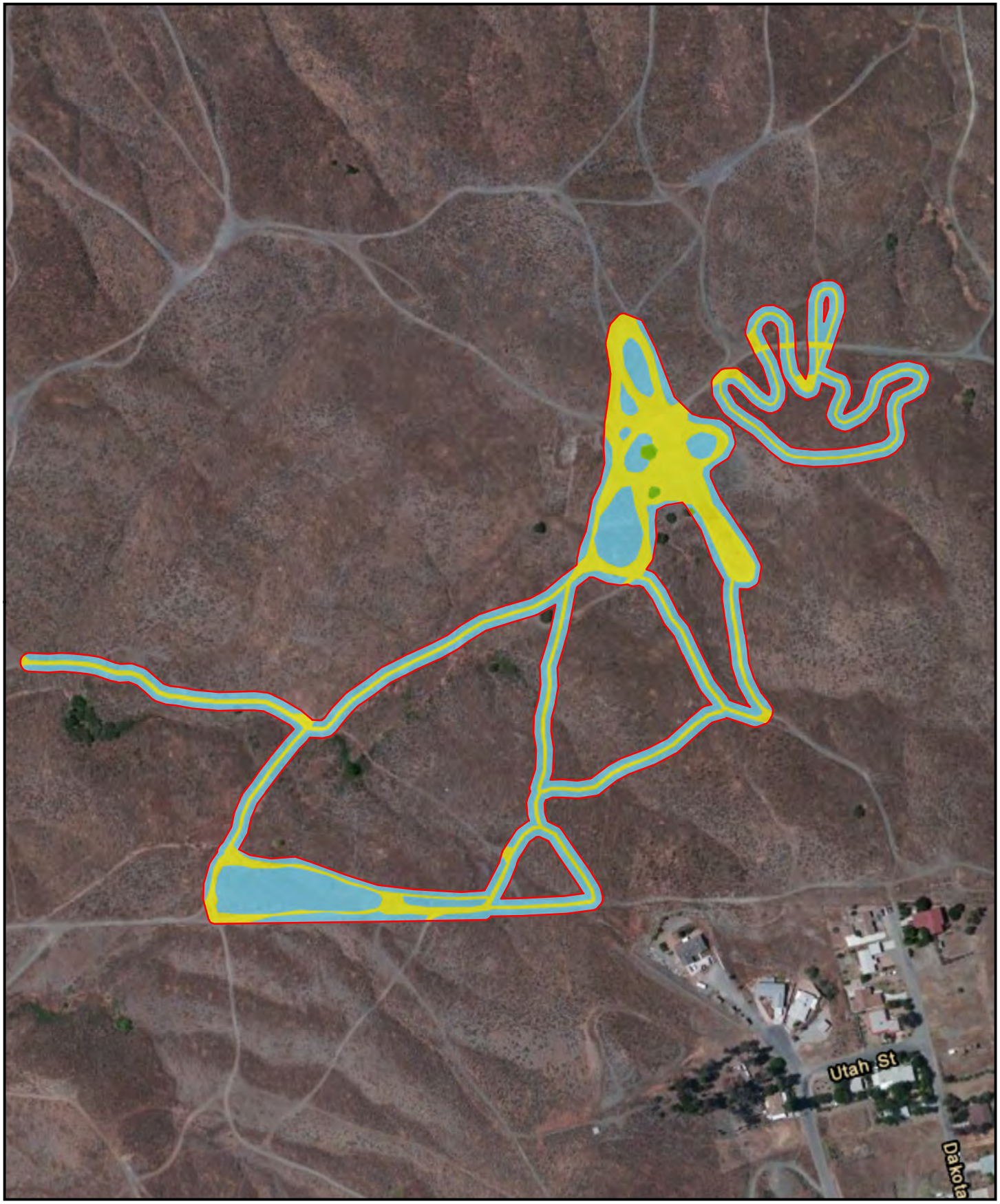

Survey Area

Vegetation Communities

- Bare Ground
- Peninsular Juniper Woodland (Excluded from Surveys)
- Riversidean Sage Scrub

N

0 100 200 400

Feet

Attachment 3

Kabian Park Restoration

Vegetation Communities Map

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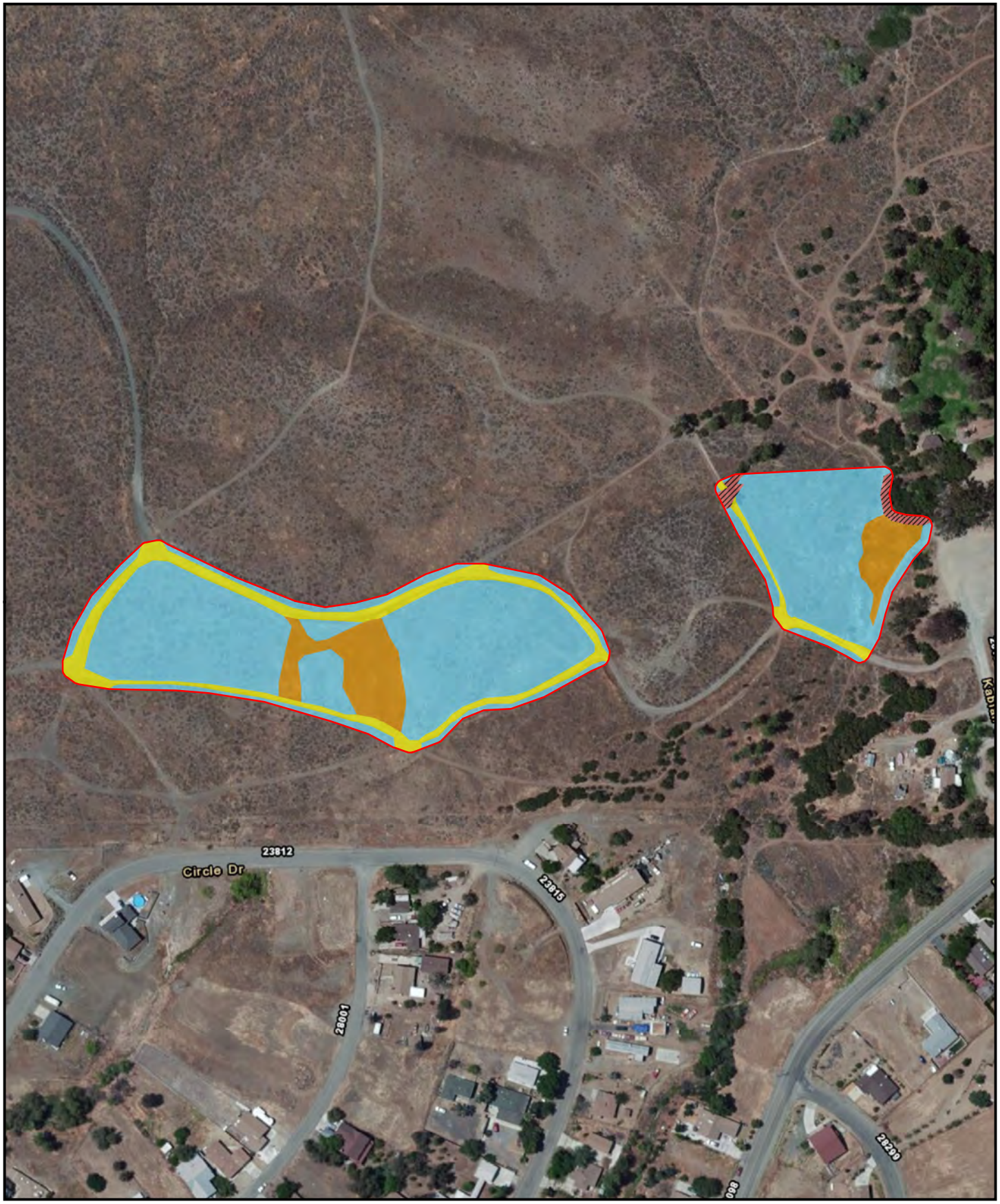

Survey Area

Vegetation Communities

- Bare Ground
- Disturbed
- Non-Native Grassland
- Riversidean Sage Scrub

N

0 100 200 400

Feet

Attachment 3

Kabian Park Restoration

Vegetation Communities Map

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ATTACHMENT 4 – QCB HOST PLANT LOCATION MAP

Survey Area

QCB Host Plant Density

High

Moderate

Low

N

0 100 200 400

Feet

Attachment 4

Kabian Park Restoration

QCB Host Plant Location Map

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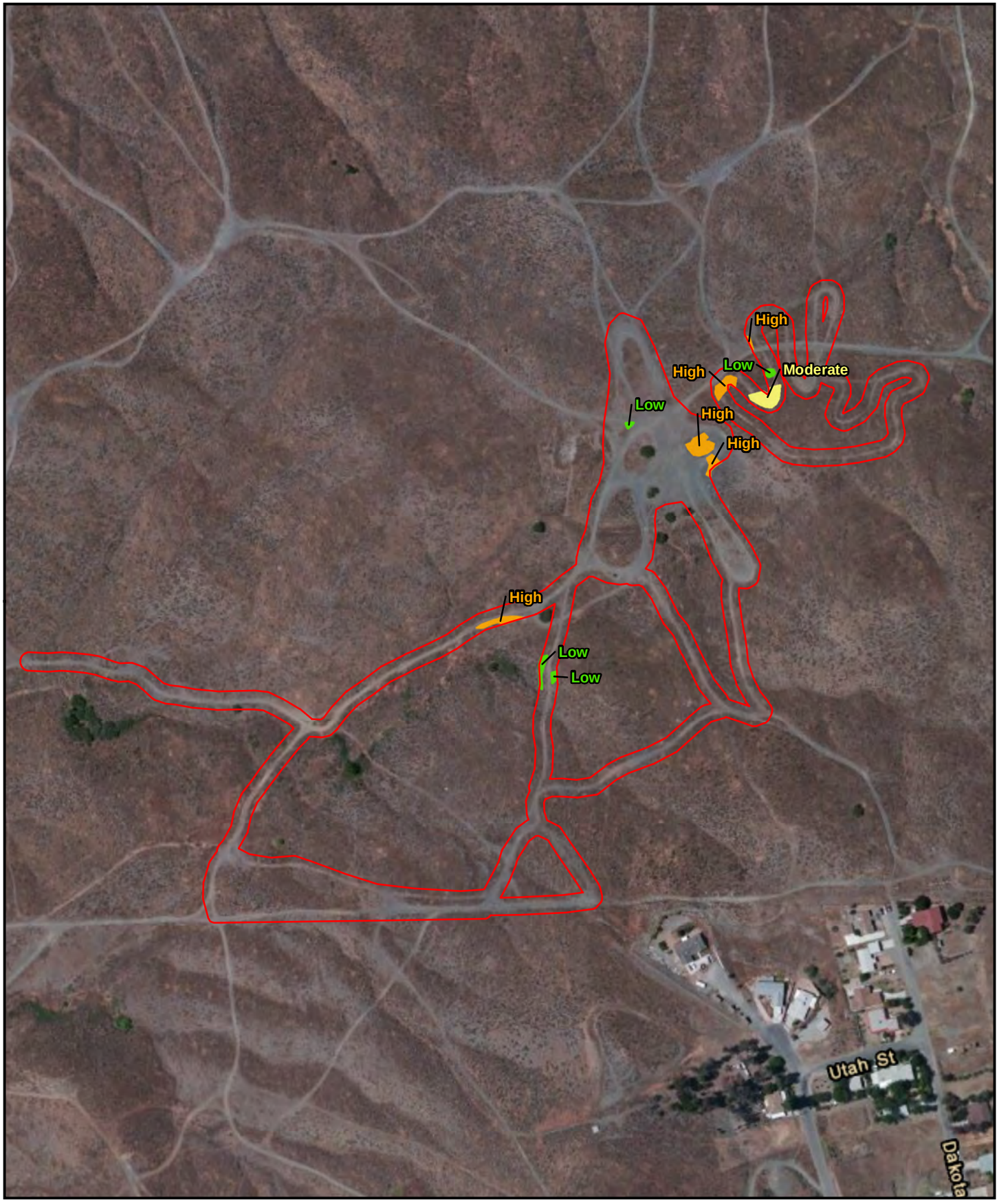

Survey Area

QCB Host Plant Density

- High
- Moderate
- Low

N

0 100 200 400

Feet

Attachment 4

Kabian Park Restoration

QCB Host Location Plant Map

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Print Date: 5/24/2021 2:47:21 PM Author: pcarlos

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Survey Area

QCB Host Plant Density

- High
- Moderate
- Low

N

0 100 200 400

Feet

Attachment 4

Kabian Park Restoration

QCB Host Plant Location Map

Name: 21278 BIO Attach 3 QCB Host Plant Location.Mxd
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ATTACHMENT 5 – SITE PHOTOGRAPHS

ATTACHMENT 5 – SITE PHOTOGRAPHS

Photo 1: Overview of the Proposed Project site, showing Riversidean Sage Scrub. Photo is taken facing southwest down the access road from the northern portion of the Survey Area that is proposed for trail removal/restoration. Canyon Lake is visible in the background. Photo taken on February 19, 2021.

Photo 2: Overview of Site 2 in the southeastern portion of the Survey Area, showing a mosaic of Riversidean Sage Scrub and non-native grassland. This area has low- to high-density patches of the Quino checkerspot butterfly (*Euphydryas editha quino*; QCB) host plant, dwarf plantain (*Plantago erecta*), distributed throughout. Photo taken on February 19, 2021, facing west.

ATTACHMENT 5 – SITE PHOTOGRAPHS

Photo 3: View of a small patch of high-density dwarf plantain further surrounded by Riversidean Sage Scrub within the northern portion of the Survey Area that is proposed for trail removal/restoration. Photo taken on April 20, 2021, facing north.

Photo 4: California goldfields (*Lasthenia californica*) and popcorn flower (*Cryptantha* sp.), potential QCB nectar sources, in bloom within Site 1 in the southwestern portion of the Survey Area. Photo taken on March 31, 2021, facing west.

ATTACHMENT 5 – SITE PHOTOGRAPHS

Photo 5: Overview of Site 4 located in the southwestern portion of the Survey Area, showing patches of Riversidean Sage Scrub within the access road that contain high-density patches of dwarf plantain. Small patches of Peninsula Juniper Woodland (habitat excluded from the QCB focused surveys) are visible. Photo taken on March 31, 2021, facing northwest.

Photo 6: View of a high-density patch of dwarf plantain and California goldfields in bloom within the area proposed for trail removal/restoration in the southwestern portion of the Survey Area. Photo taken on March 31, 2021, facing north.

ATTACHMENT 5 – SITE PHOTOGRAPHS

Photo 7: Dwarf plantain present in high-density within the area proposed for trail removal/restoration in the southwestern portion of the Survey Area. This patch is further surrounded by Riversidean Sage Scrub. Photo taken on March 18, 2021, facing east.

Photo 8: Moderate-density patch of dwarf plantain within Site 2 in the southeastern portion of the Survey Area. Minimal nectar sources other than the dwarf plantain shown were available in this portion of the Survey Area. This patch was further surrounded by Riversidean Sage Scrub, non-native grassland, and disturbed habitat. Photo taken on March 31, 2021, facing south.

ATTACHMENT 5 – SITE PHOTOGRAPHS

Photo 9: High-density patch of dwarf plantain within Site 3 in the southeastern portion of the Survey Area. This patch was further surrounded by Riversidean Sage Scrub, non-native grassland, and disturbed habitat. Photo taken on April 20, 2021, facing northwest.

ATTACHMENT 6 – BUTTERFLY SPECIES DETECTED

ATTACHMENT 6 – BUTTERFLY SPECIES DETECTED

Scientific Name	Common Name
CLASS INSECTA	**INSECTS**
NYMPHALIDAE	**BRUSH FOOTED BUTTERFLIES**
Junonia coenia grisea	Gray Buckeye
Vanessa cardui	Painted Lady
HESPERIDAE	**SKIPPERS**
Erynnis funeralis	Funereal Duskywing
Poanes melane	Umber Skipper
LYCAENIDAE	**HAIRSTREAKS, COPPERS, BLUES**
Glaucopsyche lygdamus australis	Southern Silvery Blue
Plebejus acmon	Acmon Blue
RIODINIDAE	**METALMARKS**
Apodemia virgulti virgulti	Behr's Metalmark
PIERIDAE	**WHITES AND SULPHURS**
Anthocharis sara sara	Sara's Orangetip
Pieris rapae rapae	Cabbage White
Pontia protodice	Checkered White

ATTACHMENT 7 – FLOWERING PLANTS OBSERVED

ATTACHMENT 7 – FLOWERING PLANT SPECIES OBSERVED

Scientific Name	Common Name
ANGIOSPERMS (EUDICOTS)	
ASTERACEAE	**SUNFLOWER FAMILY**
Bebbia juncea var. aspera	sweetbush
Encelia farinosa	brittlebush
*Glebionis coronaria**	garland daisy
Gutierrezia californica	california matchweed
*Hypochaeris glabra**	smooth cat's-ear
Lasthenia californica	California goldfields
Lasthenia spp.	goldfields
Layia platyglossa	tidy-tips
Matricaria discoidea	common pineapple-weed
*Oncosiphon piluliferum**	globe chamomile
Stephanomeria sp.	wreath-plant
Stylocline gnaphaloides	everlasting nest straw
BORAGINACEAE	**BORAGE FAMILY**
Amsinckia intermedia	Rancher's fiddleneck
Amsinckia sp.	fiddlenecks
Cryptantha sp.	cryptantha
Nemophila menziesii	baby blue-eyes
Pectocarya linearis	Slender comb seed
Phacelia sp.	phacelia
Plagiobothrys sp.	popcornflower
BRASSICACEAE	**MUSTARD FAMILY**
*Hirschfeldia incana**	shortpod mustard
Lepidium sp.	peppergrass
Lepidium nitidum	peppergrass
Sisymbrium sp.	Sisymbrium sp.
CLEOMACEAE	**SPIDERFLOWER FAMILY**
Peritoma arborea	bladderpod
CONVOLVULACEAE	**MORNING-GLORY FAMILY**
Calystegia macrostegia	western bindweed
EUPHORBIACEAE	**SPURGE FAMILY**
Chamaesyce sp.	Chamaesyce sp.
FABACEAE	**LEGUME FAMILY**
Acmispon glaber var. glaber	coastal deerweed
Acmispon micranthus	San Diego lotus
Acmispon strigosus	strigose lotus

ATTACHMENT 7 – FLOWERING PLANT SPECIES OBSERVED

Scientific Name	Common Name
Astragalus sp.	locoweed
Lupinus bicolor	bicolored lupine
*Melilotus indicus**	Indian sweetclover
GERANIACEAE	**GERANIUM FAMILY**
*Erodium cicutarium**	red-stemmed filaree
MONTIACEAE	**MINER'S LETTUCE FAMILY**
Calandrinia ciliata	red maids
NYCTAGINACEAE	**FOUR O'CLOCK FAMILY**
Mirabilis laevis var. crassifolia	California wishbone bush
PAPAVERACEAE	**POPPY FAMILY**
Eschscholzia caespitosa	tufted poppy
Eschscholzia californica	California poppy
PLANTAGINACEAE	**PLANTAIN FAMILY**
Plantago erecta	prairie plantain
POLEMONIACEAE	**PHLOX FAMILY**
Gilia sp.	gilia sp.
POLYGONACEAE	**BUCKWHEAT FAMILY**
Eriogonum fasciculatum	California buckwheat
IRIDACEAE	**IRIS FAMILY**
Sisyrinchium bellum	blue-eyed grass
LILIACEAE	**LILY FAMILY**
Calochortus splendens	lilac mariposa lily
THEMIDACEAE	**BRODIAEA FAMILY**
Dichelostemma capitatum	blue dicks
**Non-Native Species*	

ATTACHMENT 8 – WEATHER CONDITIONS

ATTACHMENT 8 – 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
HA*/1	02/19/21	Kris Alberts Laurie Gorman	0940	1500	60	76	0	0-1	2	2	0	0
2	02/26/21	Kris Albers	0950	1445	60	78	0	1-4	0	0	0	0
3	03/02/21	Laurie Gorman	1230	1600	73	79	1-4	1-3	0	0	0	0
4	03/18/21	Laurie Gorman	1100	1618	64	78	1-3	2-5	0	0	0	0
5	03/21/21	Kris Alberts	1140	1640	62	63	0-2	1-3	20	40	0	0
6	03/27/21	Krist Alberts	1105	1625	70	71	0-2	1-3	0	0	0	0
7	03/31/21	Laurie Gorman	1115	1630	78	84	1-4	2-5	0	0	0	0
8	04/09/21	Kris Alberts	1020	1500	70	82	0-2	1-4	0	0	0	0
9	04/16/21	Laurie Gorman	1000	1500	67	81	1-4	1-5	0	0	0	0
10	04/20/21	Laurie Gorman	0900	1539	66	83	4-8	2-5	0	0	0	0
11	04/29/21	Laurie Gorman	0900	1530	72	89	0-1	2-5	0	0	0	0
12	05/07/21	Laurie Gorman	0915	1420	62	80	0-1	2-5	0	0	0	0

*Habitat Assessment

ATTACHMENT 9 – QCB SURVEY PROJECT BIOLOGISTS SIGNATURE PAGE

ATTACHMENT 9 – 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 2021 for proposed Kabian Park Restoration project (Proposed Project) located in Riverside 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 2021 flight season.

	
Laurie Gorman USFWS Permit Number TE-233367-3	Kris Alberts USFWS Permit Number TE-039640-5

ATTACHMENT 10 – FIELD SURVEY FORMS

Quino Checkerspot Butterfly Field Form **Habitat Assessment / Focused Survey (# 1)**

Project Number: 21278 Site: Kabian Restoration Park Date: February 19, 2021 Surveyor(s): Kris Alberts Sites Surveyed: 1,2,3,4

Weather	Time (24 hr)	% Cloud Cover	Wind (range)	Temp (*F*)
Start:	0940	2	0	60
Middle:	1200	2	0-2	74
End:	1500	2	0-1	76

Butterfly Species	U = Uncommon C = Common A = Abundant	Butterfly Species	U = Uncommon C = Common A = Abundant
Nymphalidae (Brush Footed Butterflies)		**Lycaenidae (Hairstreaks, Coppers, Blues)**	
***Euphydryas editha quino* (Quino Checkerspot) *precise count**		*Atlides halesus corcorani* (W. Great Purple Hairstreak)	
Euphydryas chalcedona chalcedona (Chalcedon Checkerspot)		*Callophrys augustinus iroides* (Western Elfin)	
Euphydryas chalcedona hennei (Henne's Checkerspot)		*Callophrys perplexa perplexa* (Perplexing Hairstreak)	
Chlosyne gabbii gabbii (Gabb's Checkerspot)		*Strymon melinus pudica* (Common Gray Hairstreak)	
Phyciodes mylitta mylitta (Mylitta Crescent)		*Glaucopsyche lygdamus australis* (Southern Silvery Blue)	
Chlosyne californica (California Patch)		*Glaucopsyche piasus umbrosa* (Smoky Arrowhead Blue)	
Chlosyne leanira wrightii (Wright's Checkerspot)		*Plebejus acmon* (Acmon Blue)	
Nymphalis antiopa antiopa (Mourning Cloak)		*Plebejus lupini monticola* (Clemence's Blue)	
Nymphalis californica (California Tortoiseshell)		*Plebejus melissa paradoxa* (Orange Margined Blue)	
Adelpha californica (California Sister)		*Euphilotes bernardino bernardino* (San Bernardino Blue)	
Junonia coenia grisea (Gray Buckeye)		*Philotes sonorensis sonorensis* (Sonora blue)	
Vanessa annabella (West Coast Lady)		*Celastrina echo echo* (Echo Azure)	
Vanessa atalanta rubria (American Red Admiral)		*Leptotes marina* (Marine Blue)	
Vanessa cardui (Painted Lady)		*Cupido amyntula amyntula* (Western Tailed Blue)	
Vanessa virginiensis (American Lady)		*Hemiargus ceraunus gyas* (Edward's Blue)	
Polygonia satyrus satyrus (Satyr Comma)		*Echinargus isola* (Reakirt's Blue)	
Limenitis lorquinii powelli (Powell's Admiral)		*Brephidium exilis exilis* (Western Pygmy-Blue)	
Speyeria callippe comstockii (Comstock's Fritillary)		*Calephelis wrighti* (Wright's Metalmark)	
Danaiinae (Milkweed Butterflies)		*Apodemia virgulti virgulti* (Behr's Metalmark)	
Danaus gilippus thersippus (Striated Queen)		*Apodemia virgulti peninsularis* (Peninsular Metalmark)	
Danaus plexippus plexippus (Monarch)		*Lycaena gorgon gorgon* (Gorgon Copper)	
Satyrinae		**Papilionidae (Swallowtails)**	
Coenonympha tullia california (California ringlet)		*Papilio zelicaon* (Anise Swallowtail)	
Cercyonis sthenele behrii (Behr's Wood-nymph)		*Papilio cresphontes* (Giant Swallowtail)	
Hesperidae (Skippers)		*Papilio eurymedon* (Pale Swallowtail)	
Heliopetes ericetorum (Northern White-Skipper)		*Papilio rutulus* (Western Tiger Swallowtail)	
Hylephila phyleus phyleus (Fiery Skipper)		*Papilio polyxenes coloro* (Desert Swallowtail)	
Pyrgus albescens (White Checkered-Skipper)		**Pieridae (Whites and Sulphurs)**	
Erynnis funeralis (Funereal Duskywing)		*Anthocharis sara sara* (Sara's Orangetip)	
Erynnis tristis tristis (Mournful Duskywing)		*Anthocharis cethura cethura* (Desert Orangetip)	
Erynnis brizo lacustra (Lacustra Duskywing)		*Anthocharis lanceolata australis* (Grinnell's Gray Marble)	
Erynnis propertius (Propertius Duskywing)		*Euchloe hyantis* (California Marble)	
Erynnis paucuvius callidus (Artful Duskywing)		*Pieris rapae rapae* (Cabbage White)	
Erynnis afranius (Afranius Duskywing)		*Pontia sisymbrii sisymbrii* (Spring White)	
Pholisora catullus (Common Sootywing)		*Pontia beckerii* (Becker's White)	
Lerodea eufala eufala (Eufala Skipper)		*Pontia protodice* (Checkered White)	
Atalopedes campestris campestris (Sachem)		*Zerene eurydice* (California Dogface)	
Polites sabuleti sabuleti (Sandhill Skipper)		*Phoebis sennae marcellina* (Cloudless Sulphur)	
Hesperia juba (Juba Skipper)		*Colias harfordii* (Harford's Sulphur)	
Hesperia columbia (Columbia Skipper)		*Colias eurytheme* (Orange Sulphur)	
Copaeodes aurantiaca (Orange Skipperling)		*Abaeis nicippe* (Sleepy Orange)	
Ochlodes agricola agricola (Rural Skipper)		*Nathalis iole* (Dainty Sulphur)	
OTHERS:			

Site _Kabian Park Restoration_ Date _February 19, 2021_ Surveyor(s) _Kris Alberts_

Host Plants	Insert "X" If Observed	Nectar/Flowering Plants Cont.	Insert "X" If Observed
Plantago erecta (dot-seed plantain)	X	*Cordylanthus rigidus subsp. setigerus*	
Plantago patagonica (desert plantain)		*Cryptantha intermedia*	
Cordylanthus rigidus (bird's beak)		*Cryptantha* spp. (forget-me-nots)	
Castelleja exserta (purple owl's clover)		*Cylindropuntia sp.*	
Antirrhinum coulterianum (white snapdragon)		*Daucus pusillus*	
Collinsia heterophylla (Chinese houses)		*Deinandra fasciculata*	
*Collinsia concolor (*Purple Chinese Houses*)*		*Dichelostemma capitatum*	
		Diplacus puniceus	
		Encelia californica	
Nectar/Flowering Plants	**Insert "X" If Observed**	*Eriodictyon crassifolium*	
		Eriogonum fasciculatum	X
Acmispon glaber var. glaber		*Eriophyllum confertiflorum*	
Acmispon strigosus		*Erodium botyrs**	
Adenostoma fasciculatum		*Erodium cicutarium**	X
Allium praecox		*Erodium sp.**	
Allium spp. (onions)		*Eschscholzia caespitosa*	
Amsinckia intermedia		*Eschscholzia californica*	
Amsinckia spp. (fiddlenecks)		*Eucrypta chrysanthemifolia var. chrysanthemifolia*	
Amsinckia tessellata		*Galium aparine*	
*Anagallis arvensis**		*Galium nuttallii subsp. nuttallii*	
Antirrhinum coulterianum		*Gilia sp.*	
Antirrhinum nuttallianum		*Glebionis coronaria**	
Astragalus trichopodus var. lonchus		*Hedypnois cretica**	
Baccharis pilularis		*Helianthemum scoparium*	
Baccharis salicifolia subsp. salicifolia		*Hesperoyucca whipplei*	
Bahiopsis laciniata		*Hirschfeldia incana**	
Bloomeria clevelandii		*Hypochaeris glabra**	
Bloomeria crocea var. crocea		*Lasthenia californica*	
Bloomeria spp. (goldenstars)		*Lasthenia gracilis*	
*Brassica nigra**		*Lasthenia* spp. (goldfields)	
Calandrinia ciliata	X	*Lathyrus vestitus*	
Calochortus splendens		*Lathyrus vestitus var. alefeldii*	
Calochortus weedii var. weedii		*Layia platyglossa*	
Calystegia macrostegia		*Lepidium nitidum*	
Camissoniopsis sp.		*Lepidium sp.*	
*Carduus pycnocephalus subsp. pycnocephalus**		*Linanthus dianthiflorus*	
Castilleja densiflora		*Logfia filaginoides*	
Castilleja coccinea		*Logfia gallica**	
Castilleja exserta		*Lonicera subspicata*	
Caulanthus heterophyllus		*Lupinus bicolor*	
Ceanothus tomentosus		*Lupinus concinnus*	
*Centaurea melitensis**		*Lupinus hirsutissimus*	
Chamaesyce sp.	X	*Lupinus* spp. (lupines)	
Chenopodium californicum		*Lupinus succulentus*	
Chorizanthe sp.		*Lupinus truncatus*	
*Cistus incanus**		*Malacothamnus fasciculatus*	
Clarkia purpurea subsp. quadrivulnera		*Marah macrocarpa*	
Claytonia perfoliata		*Medicago polymorpha**	
Claytonia sp.		*Pectocarya linearis*	X
Cneoridium dumosum			
Collinsia heterophylla			

Site _Kabian Park Restoration__ Date _February 19, 2021__ Surveyor(s) _Kris Alberts_

Nectar/Flowering Plants Cont.	Insert "X" If Observed	Nectar/Flowering Plants Cont.	Insert "X" If Observed
*Melilotus indicus**		*Solanum parishii*	
Microseris douglasii subsp. platycarpha		*Solanum xanti*	
Mimulus aurantiacus		*Sonchus asper* subsp. *asper**	
Mimulus brevipes		*Sonchus oleraceus**	
Mirabilis californica		*Stephanomeria sp.*	X
Mirabilis laevis var. crassifolia		*Stylocline gnaphaloides*	
Muilla maritima		*Trichostema lanatum*	
Nuttallanthus texanus		*Trichostema parishii*	
Osmadenia tenella		*Trifolium depauperatum*	
Oxalis californica		*Trifolium hirtum*	
Oxalis sp.		*Trifolium willdenovii*	
Papaver californicum		*Uropappus lindleyi*	
Penstemon spectabilis var. spectabilis		*Verbena* sp.	
Pentachaeta aurea		*Viola pedunculata*	
Peritoma arborea		*Zeltnera venusta*	
Phacelia parryi		*non-native species	
Phacelia spp. (phacelias)		**Notes**	
Pholistoma auritum			
Pholistoma racemosum		(Merge more rows if needed):	
Plagiobothrys spp. (popcorn flowers)	X	Very few flowers overall, and zero butterflies observed all day.	
Plantago erecta			
Plantago ovata			
Plantago patagonica			
Platystemon californicus			
Porophyllum gracile			
Primula clevelandii			
Pseudognaphalium biolettii			
Pseudognaphalium californicum			
Pseudognaphalium sp.			
*Raphanus sativus**			
Rhus integrifolia			
Rhus ovata			
Ribes speciosum			
Salvia apiana			
Salvia columbariae			
Salvia mellifera			
Sambucus nigra subsp. caerulea			
Sanicula arguta			
Sanicula bipinnatifida			
Scutellaria tuberosa			
Sidalcea malviflora			
Sidalcea sparsifolia			
*Silene gallica**			
Silene laciniata			
*Sisymbrium orientale**			
Sisymbrium sp.			
Sisyrinchium bellum			

Quino Checkerspot Butterfly Field Form **Habitat Assessment / Focused Survey (# 1)**

Project Number: 21278 Site: Kabian Restoration Park Date: February 19, 2021 Surveyor(s): Laurie Gorman Sites Surveyed: 1,2,3,4, & trails mapped within "Focus Survey Area"

Weather	Time (24 hr)	% Cloud Cover	Wind (range)	Temp (*F*)
Start:	0940	2	0	60
Middle:	1200	2	0-2	74
End:	1500	2	0-1	76

Butterfly Species	U = Uncommon C = Common A = Abundant	Butterfly Species	U = Uncommon C = Common A = Abundant
Nymphalidae (Brush Footed Butterflies)		**Lycaenidae (Hairstreaks, Coppers, Blues)**	
***Euphydryas editha quino* (Quino Checkerspot) *precise count**		*Atlides halesus corcorani* (W. Great Purple Hairstreak)	
Euphydryas chalcedona chalcedona (Chalcedon Checkerspot)		*Callophrys augustinus iroides* (Western Elfin)	
Euphydryas chalcedona hennei (Henne's Checkerspot)		*Callophrys perplexa perplexa* (Perplexing Hairstreak)	
Chlosyne gabbii gabbii (Gabb's Checkerspot)		*Strymon melinus pudica* (Common Gray Hairstreak)	
Phyciodes mylitta mylitta (Mylitta Crescent)		*Glaucopsyche lygdamus australis* (Southern Silvery Blue)	
Chlosyne californica (California Patch)		*Glaucopsyche piasus umbrosa* (Smoky Arrowhead Blue)	
Chlosyne leanira wrightii (Wright's Checkerspot)		*Plebejus acmon* (Acmon Blue)	
Nymphalis antiopa antiopa (Mourning Cloak)		*Plebejus lupini monticola* (Clemence's Blue)	
Nymphalis californica (California Tortoiseshell)		*Plebejus melissa paradoxa* (Orange Margined Blue)	
Adelpha californica (California Sister)		*Euphilotes bernardino bernardino* (San Bernardino Blue)	
Junonia coenia grisea (Gray Buckeye)		*Philotes sonorensis sonorensis* (Sonora blue)	
Vanessa annabella (West Coast Lady)		*Celastrina echo echo* (Echo Azure)	
Vanessa atalanta rubria (American Red Admiral)		*Leptotes marina* (Marine Blue)	
Vanessa cardui (Painted Lady)		*Cupido amyntula amyntula* (Western Tailed Blue)	
Vanessa virginiensis (American Lady)		*Hemiargus ceraunus gyas* (Edward's Blue)	
Polygonia satyrus satyrus (Satyr Comma)		*Echinargus isola* (Reakirt's Blue)	
Limenitis lorquinii powelli (Powell's Admiral)		*Brephidium exilis exilis* (Western Pygmy-Blue)	
Speyeria callippe comstockii (Comstock's Fritillary)		*Calephelis wrighti* (Wright's Metalmark)	
Danaiinae (Milkweed Butterflies)		*Apodemia virgulti virgulti* (Behr's Metalmark)	
Danaus gilippus thersippus (Striated Queen)		*Apodemia virgulti peninsularis* (Peninsular Metalmark)	
Danaus plexippus plexippus (Monarch)		*Lycaena gorgon gorgon* (Gorgon Copper)	
Satyrinae		**Papilionidae (Swallowtails)**	
Coenonympha tullia california (California ringlet)		*Papilio zelicaon* (Anise Swallowtail)	
Cercyonis sthenele behrii (Behr's Wood-nymph)		*Papilio cresphontes* (Giant Swallowtail)	
Hesperidae (Skippers)		*Papilio eurymedon* (Pale Swallowtail)	
Heliopetes ericetorum (Northern White-Skipper)		*Papilio rutulus* (Western Tiger Swallowtail)	
Hylephila phyleus phyleus (Fiery Skipper)		*Papilio polyxenes coloro* (Desert Swallowtail)	
Pyrgus albescens (White Checkered-Skipper)		**Pieridae (Whites and Sulphurs)**	
Erynnis funeralis (Funereal Duskywing)		*Anthocharis sara sara* (Sara's Orangetip)	
Erynnis tristis tristis (Mournful Duskywing)		*Anthocharis cethura cethura* (Desert Orangetip)	
Erynnis brizo lacustra (Lacustra Duskywing)		*Anthocharis lanceolata australis* (Grinnell's Gray Marble)	
Erynnis propertius (Propertius Duskywing)		*Euchloe hyantis* (California Marble)	
Erynnis paucuvius callidus (Artful Duskywing)		*Pieris rapae rapae* (Cabbage White)	
Erynnis afranius (Afranius Duskywing)		*Pontia sisymbrii sisymbrii* (Spring White)	
Pholisora catullus (Common Sootywing)		*Pontia beckerii* (Becker's White)	
Lerodea eufala eufala (Eufala Skipper)		*Pontia protodice* (Checkered White)	
Atalopedes campestris campestris (Sachem)		*Zerene eurydice* (California Dogface)	
Polites sabuleti sabuleti (Sandhill Skipper)		*Phoebis sennae marcellina* (Cloudless Sulphur)	
Hesperia juba (Juba Skipper)		*Colias harfordii* (Harford's Sulphur)	
Hesperia columbia (Columbia Skipper)		*Colias eurytheme* (Orange Sulphur)	
Copaeodes aurantiaca (Orange Skipperling)		*Abaeis nicippe* (Sleepy Orange)	
Ochlodes agricola agricola (Rural Skipper)		*Nathalis iole* (Dainty Sulphur)	
OTHERS:			

Site _Kabian Restoration Park__ Date _February 19, 2021__ Surveyor(s) _Laurie Gorman_

Host Plants	Insert "X" If Observed	Nectar/Flowering Plants Cont.	Insert "X" If Observed
Plantago erecta (dot-seed plantain)	X	*Cordylanthus rigidus subsp. setigerus*	
Plantago patagonica (desert plantain)		*Cryptantha intermedia*	
Cordylanthus rigidus (bird's beak)		*Cryptantha* spp. (forget-me-nots)	
Castelleja exserta (purple owl's clover)		*Cylindropuntia sp.*	
Antirrhinum coulterianum (white snapdragon)		*Daucus pusillus*	
Collinsia heterophylla (Chinese houses)		*Deinandra fasciculata*	
*Collinsia concolor (*Purple Chinese Houses*)*		*Dichelostemma capitatum*	
		Diplacus puniceus	
		Encelia californica	
Nectar/Flowering Plants	**Insert "X" If Observed**	*Eriodictyon crassifolium*	
		Eriogonum fasciculatum	X
Acmispon glaber var. glaber		*Eriophyllum confertiflorum*	
Acmispon strigosus		*Erodium botyrs**	
Adenostoma fasciculatum		*Erodium cicutarium**	X
Allium praecox		*Erodium sp.**	
Allium spp. (onions)		*Eschscholzia caespitosa*	
Amsinckia intermedia		*Eschscholzia californica*	
Amsinckia spp. (fiddlenecks)		*Eucrypta chrysanthemifolia var. chrysanthemifolia*	
Amsinckia tessellata		*Galium aparine*	
*Anagallis arvensis**		*Galium nuttallii subsp. nuttallii*	
Antirrhinum coulterianum		*Gilia sp.*	
Antirrhinum nuttallianum		*Glebionis coronaria**	
Astragalus trichopodus var. lonchus		*Hedypnois cretica**	
Baccharis pilularis		*Helianthemum scoparium*	
Baccharis salicifolia subsp. salicifolia		*Hesperoyucca whipplei*	
Bahiopsis laciniata		*Hirschfeldia incana**	
Bloomeria clevelandii		*Hypochaeris glabra**	
Bloomeria crocea var. crocea		*Lasthenia californica*	
Bloomeria spp. (goldenstars)		*Lasthenia gracilis*	
*Brassica nigra**		*Lasthenia* spp. (goldfields)	
Calandrinia ciliata	X	*Lathyrus vestitus*	
Calochortus splendens		*Lathyrus vestitus var. alefeldii*	
Calochortus weedii var. weedii		*Layia platyglossa*	
Calystegia macrostegia		*Lepidium nitidum*	
Camissoniopsis sp.		*Lepidium sp.*	
*Carduus pycnocephalus subsp. pycnocephalus**		*Linanthus dianthiflorus*	
Castilleja densiflora		*Logfia filaginoides*	
Castilleja coccinea		*Logfia gallica**	
Castilleja exserta		*Lonicera subspicata*	
Caulanthus heterophyllus		*Lupinus bicolor*	
Ceanothus tomentosus		*Lupinus concinnus*	
*Centaurea melitensis**		*Lupinus hirsutissimus*	
Chamaesyce sp.	X	*Lupinus* spp. (lupines)	
Chenopodium californicum		*Lupinus succulentus*	
Chorizanthe sp.		*Lupinus truncatus*	
*Cistus incanus**		*Malacothamnus fasciculatus*	
Clarkia purpurea subsp. quadrivulnera		*Marah macrocarpa*	
Claytonia perfoliata		*Medicago polymorpha**	
Claytonia sp.		*Pectocarya linearis*	X
Cneoridium dumosum			
Collinsia heterophylla			

Site _Kabian Restoration Park__ Date _February 19, 2021__ Surveyor(s) _Laurie Gorman_

Nectar/Flowering Plants Cont.	Insert "X" If Observed	Nectar/Flowering Plants Cont.	Insert "X" If Observed
*Melilotus indicus**		*Solanum parishii*	
Microseris douglasii subsp. platycarpha		*Solanum xanti*	
Mimulus aurantiacus		*Sonchus asper* subsp. *asper**	
Mimulus brevipes		*Sonchus oleraceus**	
Mirabilis californica		*Stephanomeria sp.*	X
Mirabilis laevis var. crassifolia		*Stylocline gnaphaloides*	
Muilla maritima		*Trichostema lanatum*	
Nuttallanthus texanus		*Trichostema parishii*	
Osmadenia tenella		*Trifolium depauperatum*	
Oxalis californica		*Trifolium hirtum*	
Oxalis sp.		*Trifolium willdenovii*	
Papaver californicum		*Uropappus lindleyi*	
Penstemon spectabilis var. spectabilis		*Verbena* sp.	
Pentachaeta aurea		*Viola pedunculata*	
Peritoma arborea		*Zeltnera venusta*	
Phacelia parryi		*non-native species	
Phacelia spp. (phacelias)		**Notes**	
Pholistoma auritum			
Pholistoma racemosum		(Merge more rows if needed)	
Plagiobothrys spp. (popcorn flowers)		Conducted habitat assessment and first focused survey with Kris Alberts. This year has been a very low rain year. Host plants (*Plantago erecta*) are barely coming up. Open Riverside sage scrub with disturbed and bare ground areas. Prevalent grasses and forbes coming up in open areas. No butterflies were observed during the entire survey period today.	
Plantago erecta			
Plantago ovata			
Plantago patagonica			
Platystemon californicus			
Porophyllum gracile			
Primula clevelandii			
Pseudognaphalium biolettii			
Pseudognaphalium californicum			
Pseudognaphalium sp.			
*Raphanus sativus**			
Rhus integrifolia			
Rhus ovata			
Ribes speciosum			
Salvia apiana			
Salvia columbariae			
Salvia mellifera			
Sambucus nigra subsp. caerulea			
Sanicula arguta			
Sanicula bipinnatifida			
Scutellaria tuberosa			
Sidalcea malviflora			
Sidalcea sparsifolia			
*Silene gallica**			
Silene laciniata			
*Sisymbrium orientale**			
Sisymbrium sp.			
Sisyrinchium bellum			

Quino Checkerspot Butterfly Field Form **Focused Survey (# 2)**

Project Number: 21278 Site: Kabian Restoration Park Date: February 26, 2021 Surveyor(s): Kris Alberts Sites Surveyed: 1,2,3,4

Weather	Time (24 hr)	% Cloud Cover	Wind (range)	Temp (*F*)
Start:	0950	0	0	60
Middle:	1210	0	0-2	75
End:	1445	0	1-4	78

Butterfly Species	U = Uncommon C = Common A = Abundant	Butterfly Species	U = Uncommon C = Common A = Abundant
Nymphalidae (Brush Footed Butterflies)		**Lycaenidae (Hairstreaks, Coppers, Blues)**	
***Euphydryas editha quino* (Quino Checkerspot) *precise count**		*Atlides halesus corcorani* (W. Great Purple Hairstreak)	
Euphydryas chalcedona chalcedona (Chalcedon Checkerspot)		*Callophrys augustinus iroides* (Western Elfin)	
Euphydryas chalcedona hennei (Henne's Checkerspot)		*Callophrys perplexa perplexa* (Perplexing Hairstreak)	
Chlosyne gabbii gabbii (Gabb's Checkerspot)		*Strymon melinus pudica* (Common Gray Hairstreak)	
Phyciodes mylitta mylitta (Mylitta Crescent)		*Glaucopsyche lygdamus australis* (Southern Silvery Blue)	U
Chlosyne californica (California Patch)		*Glaucopsyche piasus umbrosa* (Smoky Arrowhead Blue)	
Chlosyne leanira wrightii (Wright's Checkerspot)		*Plebejus acmon* (Acmon Blue)	
Nymphalis antiopa antiopa (Mourning Cloak)		*Plebejus lupini monticola* (Clemence's Blue)	
Nymphalis californica (California Tortoiseshell)		*Plebejus melissa paradoxa* (Orange Margined Blue)	
Adelpha californica (California Sister)		*Euphilotes bernardino bernardino* (San Bernardino Blue)	
Junonia coenia grisea (Gray Buckeye)	U	*Philotes sonorensis sonorensis* (Sonora blue)	
Vanessa annabella (West Coast Lady)		*Celastrina echo echo* (Echo Azure)	
Vanessa atalanta rubria (American Red Admiral)		*Leptotes marina* (Marine Blue)	
Vanessa cardui (Painted Lady)		*Cupido amyntula amyntula* (Western Tailed Blue)	
Vanessa virginiensis (American Lady)		*Hemiargus ceraunus gyas* (Edward's Blue)	
Polygonia satyrus satyrus (Satyr Comma)		*Echinargus isola* (Reakirt's Blue)	
Limenitis lorquinii powelli (Powell's Admiral)		*Brephidium exilis exilis* (Western Pygmy-Blue)	
Speyeria callippe comstockii (Comstock's Fritillary)		*Calephelis wrighti* (Wright's Metalmark)	
Danaiinae (Milkweed Butterflies)		*Apodemia virgulti virgulti* (Behr's Metalmark)	
Danaus gilippus thersippus (Striated Queen)		*Apodemia virgulti peninsularis* (Peninsular Metalmark)	
Danaus plexippus plexippus (Monarch)		*Lycaena gorgon gorgon* (Gorgon Copper)	
Satyrinae		**Papilionidae (Swallowtails)**	
Coenonympha tullia california (California ringlet)		*Papilio zelicaon* (Anise Swallowtail)	
Cercyonis sthenele behrii (Behr's Wood-nymph)		*Papilio cresphontes* (Giant Swallowtail)	
Hesperidae (Skippers)		*Papilio eurymedon* (Pale Swallowtail)	
Heliopetes ericetorum (Northern White-Skipper)		*Papilio rutulus* (Western Tiger Swallowtail)	
Hylephila phyleus phyleus (Fiery Skipper)		*Papilio polyxenes coloro* (Desert Swallowtail)	
Pyrgus albescens (White Checkered-Skipper)		**Pieridae (Whites and Sulphurs)**	
Erynnis funeralis (Funereal Duskywing)		*Anthocharis sara sara* (Sara's Orangetip)	
Erynnis tristis tristis (Mournful Duskywing)		*Anthocharis cethura cethura* (Desert Orangetip)	
Erynnis brizo lacustra (Lacustra Duskywing)		*Anthocharis lanceolata australis* (Grinnell's Gray Marble)	
Erynnis propertius (Propertius Duskywing)		*Euchloe hyantis* (California Marble)	
Erynnis paucuvius callidus (Artful Duskywing)		*Pieris rapae rapae* (Cabbage White)	
Erynnis afranius (Afranius Duskywing)		*Pontia sisymbrii sisymbrii* (Spring White)	
Pholisora catullus (Common Sootywing)		*Pontia beckerii* (Becker's White)	
Lerodea eufala eufala (Eufala Skipper)		*Pontia protodice* (Checkered White)	
Atalopedes campestris campestris (Sachem)		*Zerene eurydice* (California Dogface)	
Polites sabuleti sabuleti (Sandhill Skipper)		*Phoebis sennae marcellina* (Cloudless Sulphur)	
Hesperia juba (Juba Skipper)		*Colias harfordii* (Harford's Sulphur)	
Hesperia columbia (Columbia Skipper)		*Colias eurytheme* (Orange Sulphur)	
Copaeodes aurantiaca (Orange Skipperling)		*Abaeis nicippe* (Sleepy Orange)	
Ochlodes agricola agricola (Rural Skipper)		*Nathalis iole* (Dainty Sulphur)	
OTHERS:			

Site Kabian Park Restoration Date February 26, 2021 Surveyor(s) Kris Alberts

Host Plants	Insert "X" If Observed
Plantago erecta (dot-seed plantain)	X
Plantago patagonica (desert plantain)	
Cordylanthus rigidus (bird's beak)	
Castelleja exserta (purple owl's clover)	
Antirrhinum coulterianum (white snapdragon)	
Collinsia heterophylla (Chinese houses)	
*Collinsia concolor (*Purple Chinese Houses*)*	

Nectar/Flowering Plants	Insert "X" If Observed
Acmispon glaber var. glaber	X
Acmispon strigosus	
Adenostoma fasciculatum	
Allium praecox	
Allium spp. (onions)	
Amsinckia intermedia	X
Amsinckia spp. (fiddlenecks)	
Amsinckia tessellata	
*Anagallis arvensis**	
Antirrhinum coulterianum	
Antirrhinum nuttallianum	
Astragalus trichopodus var. lonchus	
Baccharis pilularis	
Baccharis salicifolia subsp. salicifolia	
Bahiopsis laciniata	
Bloomeria clevelandii	
Bloomeria crocea var. crocea	
Bloomeria spp. (goldenstars)	
*Brassica nigra**	
Calandrinia ciliata	X
Calochortus splendens	
Calochortus weedii var. weedii	
Calystegia macrostegia	
Camissoniopsis sp.	
*Carduus pycnocephalus subsp. pycnocephalus**	
Castilleja densiflora	
Castilleja coccinea	
Castilleja exserta	
Caulanthus heterophyllus	
Ceanothus tomentosus	
*Centaurea melitensis**	
Chamaesyce sp.	X
Chenopodium californicum	
Chorizanthe sp.	
*Cistus incanus**	
Clarkia purpurea subsp. quadrivulnera	
Claytonia perfoliata	
Claytonia sp.	
Cneoridium dumosum	
Collinsia heterophylla	

Nectar/Flowering Plants Cont.	Insert "X" If Observed
Cordylanthus rigidus subsp. setigerus	
Cryptantha intermedia	
Cryptantha spp. (forget-me-nots)	
Cylindropuntia sp.	
Daucus pusillus	
Deinandra fasciculata	
Dichelostemma capitatum	X
Diplacus puniceus	
Encelia farinosa	X
Eriodictyon crassifolium	
Eriogonum fasciculatum	X
Eriophyllum confertiflorum	
*Erodium botyrs**	
*Erodium cicutarium**	X
*Erodium sp.**	
Eschscholzia caespitosa	
Eschscholzia californica	
Eucrypta chrysanthemifolia var. chrysanthemifolia	
Galium aparine	
Galium nuttallii subsp. nuttallii	
Gilia sp.	
*Glebionis coronaria**	
*Hedypnois cretica**	
Helianthemum scoparium	
Hesperoyucca whipplei	
*Hirschfeldia incana**	X
*Hypochaeris glabra**	
Lasthenia californica	X
Lasthenia gracilis	
Lasthenia spp. (goldfields)	
Lathyrus vestitus	
Lathyrus vestitus var. alefeldii	
Layia platyglossa	
Lepidium nitidum	X
Lepidium sp.	
Linanthus dianthiflorus	
Logfia filaginoides	
*Logfia gallica**	
Lonicera subspicata	
Lupinus bicolor	
Lupinus concinnus	
Lupinus hirsutissimus	
Lupinus spp. (lupines)	
Lupinus succulentus	
Lupinus truncatus	
Malacothamnus fasciculatus	
Marah macrocarpa	
*Medicago polymorpha**	
Pectocarya linearis	X
Gutierrezia californica	X

Site Kabian Park Restoration Date February 26, 2021 Surveyor(s) Kris Alberts

Nectar/Flowering Plants Cont.	Insert "X" If Observed	Nectar/Flowering Plants Cont.	Insert "X" If Observed
*Melilotus indicus**		*Solanum parishii*	
Microseris douglasii subsp. platycarpha		*Solanum xanti*	
Mimulus aurantiacus		*Sonchus asper* subsp. *asper**	
Mimulus brevipes		*Sonchus oleraceus**	
Mirabilis californica		*Stephanomeria sp.*	X
Mirabilis laevis var. crassifolia	X	*Stylocline gnaphaloides*	
Muilla maritima		*Trichostema lanatum*	
Nuttallanthus texanus		*Trichostema parishii*	
Osmadenia tenella		*Trifolium depauperatum*	
Oxalis californica		*Trifolium hirtum*	
Oxalis sp.		*Trifolium willdenovii*	
Papaver californicum		*Uropappus lindleyi*	
Penstemon spectabilis var. spectabilis		*Verbena* sp.	
Pentachaeta aurea		*Viola pedunculata*	
Peritoma arborea		*Zeltnera venusta*	
Phacelia parryi		*non-native species	
Phacelia spp. (phacelias)		**Notes**	
Pholistoma auritum			
Pholistoma racemosum		(Merge more rows if needed):	
Plagiobothrys spp. (popcorn flowers)	X	Very few flowers overall, and only one southern blue and two buckeye butterflies observed all day.	
Plantago erecta	X		
Plantago ovata			
Plantago patagonica			
Platystemon californicus			
Porophyllum gracile			
Primula clevelandii			
Pseudognaphalium biolettii			
Pseudognaphalium californicum			
Pseudognaphalium sp.			
*Raphanus sativus**			
Rhus integrifolia			
Rhus ovata			
Ribes speciosum			
Salvia apiana			
Salvia columbariae			
Salvia mellifera			
Sambucus nigra subsp. caerulea			
Sanicula arguta			
Sanicula bipinnatifida			
Scutellaria tuberosa			
Sidalcea malviflora			
Sidalcea sparsifolia			
*Silene gallica**			
Silene laciniata			
*Sisymbrium orientale**			
Sisymbrium sp.			
Sisyrinchium bellum			

Quino Checkerspot Butterfly Field Form **Habitat Assessment / Focused Survey (# 3)**

Project Number: 21278 Site: Kabian Restoration Park Date: March 2, 2021 Surveyor(s): Laurie Gorman Sites Surveyed: 1,2,3,4, & trails mapped within "Focus Survey Area"

Weather	Time (24 hr)	% Cloud Cover	Wind (range)	Temp (*F*)
Start:	1230	0	1-4	73
Middle:	1400	0	1-3	77
End:	1600	0	1-3	79

Butterfly Species	U = Uncommon C = Common A = Abundant	Butterfly Species	U = Uncommon C = Common A = Abundant
Nymphalidae (Brush Footed Butterflies)		**Lycaenidae (Hairstreaks, Coppers, Blues)**	
***Euphydryas editha quino* (Quino Checkerspot) *precise count**		*Atlides halesus corcorani* (W. Great Purple Hairstreak)	
Euphydryas chalcedona chalcedona (Chalcedon Checkerspot)		*Callophrys augustinus iroides* (Western Elfin)	
Euphydryas chalcedona hennei (Henne's Checkerspot)		*Callophrys perplexa perplexa* (Perplexing Hairstreak)	
Chlosyne gabbii gabbii (Gabb's Checkerspot)		*Strymon melinus pudica* (Common Gray Hairstreak)	
Phyciodes mylitta mylitta (Mylitta Crescent)		*Glaucopsyche lygdamus australis* (Southern Silvery Blue)	
Chlosyne californica (California Patch)		*Glaucopsyche piasus umbrosa* (Smoky Arrowhead Blue)	
Chlosyne leanira wrightii (Wright's Checkerspot)		*Plebejus acmon* (Acmon Blue)	
Nymphalis antiopa antiopa (Mourning Cloak)		*Plebejus lupini monticola* (Clemence's Blue)	
Nymphalis californica (California Tortoiseshell)		*Plebejus melissa paradoxa* (Orange Margined Blue)	
Adelpha californica (California Sister)		*Euphilotes bernardino bernardino* (San Bernardino Blue)	
Junonia coenia grisea (Gray Buckeye)	U	*Philotes sonorensis sonorensis* (Sonora blue)	
Vanessa annabella (West Coast Lady)		*Celastrina echo echo* (Echo Azure)	
Vanessa atalanta rubria (American Red Admiral)		*Leptotes marina* (Marine Blue)	
Vanessa cardui (Painted Lady)		*Cupido amyntula amyntula* (Western Tailed Blue)	
Vanessa virginiensis (American Lady)		*Hemiargus ceraunus gyas* (Edward's Blue)	
Polygonia satyrus satyrus (Satyr Comma)		*Echinargus isola* (Reakirt's Blue)	
Limenitis lorquinii powelli (Powell's Admiral)		*Brephidium exilis exilis* (Western Pygmy-Blue)	
Speyeria callippe comstockii (Comstock's Fritillary)		*Calephelis wrighti* (Wright's Metalmark)	
Danaiinae (Milkweed Butterflies)		*Apodemia virgulti virgulti* (Behr's Metalmark)	
Danaus gilippus thersippus (Striated Queen)		*Apodemia virgulti peninsularis* (Peninsular Metalmark)	
Danaus plexippus plexippus (Monarch)		*Lycaena gorgon gorgon* (Gorgon Copper)	
Satyrinae		**Papilionidae (Swallowtails)**	
Coenonympha tullia california (California ringlet)		*Papilio zelicaon* (Anise Swallowtail)	
Cercyonis sthenele behrii (Behr's Wood-nymph)		*Papilio cresphontes* (Giant Swallowtail)	
Hesperidae (Skippers)		*Papilio eurymedon* (Pale Swallowtail)	
Heliopetes ericetorum (Northern White-Skipper)		*Papilio rutulus* (Western Tiger Swallowtail)	
Hylephila phyleus phyleus (Fiery Skipper)		*Papilio polyxenes coloro* (Desert Swallowtail)	
Pyrgus albescens (White Checkered-Skipper)		**Pieridae (Whites and Sulphurs)**	
Erynnis funeralis (Funereal Duskywing)		*Anthocharis sara sara* (Sara's Orangetip)	U
Erynnis tristis tristis (Mournful Duskywing)		*Anthocharis cethura cethura* (Desert Orangetip)	
Erynnis brizo lacustra (Lacustra Duskywing)		*Anthocharis lanceolata australis* (Grinnell's Gray Marble)	
Erynnis propertius (Propertius Duskywing)		*Euchloe hyantis* (California Marble)	
Erynnis paucuvius callidus (Artful Duskywing)		*Pieris rapae rapae* (Cabbage White)	
Erynnis afranius (Afranius Duskywing)		*Pontia sisymbrii sisymbrii* (Spring White)	
Pholisora catullus (Common Sootywing)		*Pontia beckerii* (Becker's White)	
Lerodea eufala eufala (Eufala Skipper)		*Pontia protodice* (Checkered White)	U
Atalopedes campestris campestris (Sachem)		*Zerene eurydice* (California Dogface)	
Polites sabuleti sabuleti (Sandhill Skipper)		*Phoebis sennae marcellina* (Cloudless Sulphur)	
Hesperia juba (Juba Skipper)		*Colias harfordii* (Harford's Sulphur)	
Hesperia columbia (Columbia Skipper)		*Colias eurytheme* (Orange Sulphur)	
Copaeodes aurantiaca (Orange Skipperling)		*Abaeis nicippe* (Sleepy Orange)	
Ochlodes agricola agricola (Rural Skipper)		*Nathalis iole* (Dainty Sulphur)	
OTHERS:			

Site Kabian Park Restoration Date March 2, 2021 Surveyor(s) Laurie Gorman

Host Plants	Insert "X" If Observed	Nectar/Flowering Plants Cont.	Insert "X" If Observed
Plantago erecta (dot-seed plantain)	X	*Cordylanthus rigidus subsp. setigerus*	
Plantago patagonica (desert plantain)		*Cryptantha intermedia*	
Cordylanthus rigidus (bird's beak)		*Cryptantha* spp. (forget-me-nots)	
Castelleja exserta (purple owl's clover)		*Cylindropuntia sp.*	
Antirrhinum coulterianum (white snapdragon)		*Daucus pusillus*	
Collinsia heterophylla (Chinese houses)		*Deinandra fasciculata*	
*Collinsia concolor (*Purple Chinese Houses*)*		*Dichelostemma capitatum*	X
		Diplacus puniceus	
		Encelia californica	
		Encelia farinosa	X
Nectar/Flowering Plants	**Insert "X" If Observed**	*Eriodictyon crassifolium*	
		Eriogonum fasciculatum	X
Acmispon glaber var. glaber		*Eriophyllum confertiflorum*	
Acmispon strigosus		*Erodium botyrs**	
Adenostoma fasciculatum		*Erodium cicutarium**	X
Allium praecox		*Erodium sp.**	
Allium spp. (onions)		*Eschscholzia caespitosa*	
Amsinckia intermedia	X	*Eschscholzia californica*	
Amsinckia spp. (fiddlenecks)		*Eucrypta chrysanthemifolia var. chrysanthemifolia*	
Amsinckia tessellata		*Galium aparine*	
*Anagallis arvensis**		*Galium nuttallii subsp. nuttallii*	
Antirrhinum coulterianum		*Gilia sp.*	
Antirrhinum nuttallianum		*Glebionis coronaria**	
Astragalus trichopodus var. lonchus		*Hedypnois cretica**	
Baccharis pilularis		*Helianthemum scoparium*	
Baccharis salicifolia subsp. salicifolia		*Hesperoyucca whipplei*	
Bahiopsis laciniata		*Hirschfeldia incana**	X
Bloomeria clevelandii		*Hypochaeris glabra**	
Bloomeria crocea var. crocea		*Lasthenia californica*	
Bloomeria spp. (goldenstars)		*Lasthenia gracilis*	
*Brassica nigra**		*Lasthenia* spp. (goldfields)	
Calandrinia ciliata	X	*Lathyrus vestitus*	
Calochortus splendens		*Lathyrus vestitus var. alefeldii*	
Calochortus weedii var. weedii		*Layia platyglossa*	
Calystegia macrostegia		*Lepidium nitidum*	
Camissoniopsis sp.		*Lepidium sp.*	X
*Carduus pycnocephalus subsp. pycnocephalus**		*Linanthus dianthiflorus*	
Castilleja densiflora		*Logfia filaginoides*	
Castilleja coccinea		*Logfia gallica**	
Castilleja exserta		*Lonicera subspicata*	
Caulanthus heterophyllus		*Lupinus bicolor*	
Ceanothus tomentosus		*Lupinus concinnus*	
*Centaurea melitensis**		*Lupinus hirsutissimus*	
Chamaesyce sp.	X	*Lupinus* spp. (lupines)	
Chenopodium californicum		*Lupinus succulentus*	
Chorizanthe sp.		*Lupinus truncatus*	
*Cistus incanus**		*Malacothamnus fasciculatus*	
Clarkia purpurea subsp. quadrivulnera		*Marah macrocarpa*	
Claytonia perfoliata		*Medicago polymorpha**	
Claytonia sp.		*Pectocarya linearis*	X
Cneoridium dumosum			
Collinsia heterophylla			

Site _Kabian Park Restoration__ Date _March 2, 2021__ Surveyor(s) __Laurie Gorman_

Nectar/Flowering Plants Cont.	Insert "X" If Observed	Nectar/Flowering Plants Cont.	Insert "X" If Observed
*Melilotus indicus**		*Solanum parishii*	
Microseris douglasii subsp. platycarpha		*Solanum xanti*	
Mimulus aurantiacus		*Sonchus asper* subsp. *asper**	
Mimulus brevipes		*Sonchus oleraceus**	
Mirabilis californica		*Stephanomeria sp.*	X
Mirabilis laevis var. crassifolia	X	*Stylocline gnaphaloides*	
Muilla maritima		*Trichostema lanatum*	
Nuttallanthus texanus		*Trichostema parishii*	
Osmadenia tenella		*Trifolium depauperatum*	
Oxalis californica		*Trifolium hirtum*	
Oxalis sp.		*Trifolium willdenovii*	
Papaver californicum		*Uropappus lindleyi*	
Penstemon spectabilis var. spectabilis		*Verbena* sp.	
Pentachaeta aurea		*Viola pedunculata*	
Peritoma arborea		*Zeltnera venusta*	
Phacelia parryi		*non-native species	
Phacelia spp. (phacelias)		**Notes**	
Pholistoma auritum			
Pholistoma racemosum		(Merge more rows if needed):	
Plagiobothrys spp. (popcorn flowers)	X	Not many nectar sources in bloom yet due to low rainfall this season. Host plants are stunted. Very low butterfly activity overall.	
Plantago erecta			
Plantago ovata			
Plantago patagonica			
Platystemon californicus			
Porophyllum gracile			
Primula clevelandii			
Pseudognaphalium biolettii			
Pseudognaphalium californicum			
Pseudognaphalium sp.			
*Raphanus sativus**			
Rhus integrifolia			
Rhus ovata			
Ribes speciosum			
Salvia apiana			
Salvia columbariae			
Salvia mellifera			
Sambucus nigra subsp. caerulea			
Sanicula arguta			
Sanicula bipinnatifida			
Scutellaria tuberosa			
Sidalcea malviflora			
Sidalcea sparsifolia			
*Silene gallica**			
Silene laciniata			
*Sisymbrium orientale**			
Sisymbrium sp.			
Sisyrinchium bellum			

Quino Checkerspot Butterfly Field Form **Habitat Assessment / Focused Survey (# 4)**

Project Number: 21278 Site: Kabian Restoration Park Date: March 18, 2021 Surveyor(s): Laurie Gorman Sites Surveyed: 1,2,3,4, & trails mapped within "Focus Survey Area"

Weather	Time (24 hr)	% Cloud Cover	Wind (range)	Temp (*F*)
Start:	1100	0	1-3	64
Middle:	1300	0	2-6	80
End:	1618	0	2-5	78

Butterfly Species	U = Uncommon C = Common A = Abundant	Butterfly Species	U = Uncommon C = Common A = Abundant
Nymphalidae (Brush Footed Butterflies)		**Lycaenidae (Hairstreaks, Coppers, Blues)**	
***Euphydryas editha quino* (Quino Checkerspot) *precise count**		*Atlides halesus corcorani* (W. Great Purple Hairstreak)	
Euphydryas chalcedona chalcedona (Chalcedon Checkerspot)		*Callophrys augustinus iroides* (Western Elfin)	
Euphydryas chalcedona hennei (Henne's Checkerspot)		*Callophrys perplexa perplexa* (Perplexing Hairstreak)	
Chlosyne gabbii gabbii (Gabb's Checkerspot)		*Strymon melinus pudica* (Common Gray Hairstreak)	
Phyciodes mylitta mylitta (Mylitta Crescent)		*Glaucopsyche lygdamus australis* (Southern Silvery Blue)	
Chlosyne californica (California Patch)		*Glaucopsyche piasus umbrosa* (Smoky Arrowhead Blue)	
Chlosyne leanira wrightii (Wright's Checkerspot)		*Plebejus acmon* (Acmon Blue)	U
Nymphalis antiopa antiopa (Mourning Cloak)		*Plebejus lupini monticola* (Clemence's Blue)	
Nymphalis californica (California Tortoiseshell)		*Plebejus melissa paradoxa* (Orange Margined Blue)	
Adelpha californica (California Sister)		*Euphilotes bernardino bernardino* (San Bernardino Blue)	
Junonia coenia grisea (Gray Buckeye)	U	*Philotes sonorensis sonorensis* (Sonora blue)	
Vanessa annabella (West Coast Lady)		*Celastrina echo echo* (Echo Azure)	
Vanessa atalanta rubria (American Red Admiral)		*Leptotes marina* (Marine Blue)	
Vanessa cardui (Painted Lady)		*Cupido amyntula amyntula* (Western Tailed Blue)	
Vanessa virginiensis (American Lady)		*Hemiargus ceraunus gyas* (Edward's Blue)	
Polygonia satyrus satyrus (Satyr Comma)		*Echinargus isola* (Reakirt's Blue)	
Limenitis lorquinii powelli (Powell's Admiral)		*Brephidium exilis exilis* (Western Pygmy-Blue)	
Speyeria callippe comstockii (Comstock's Fritillary)		*Calephelis wrighti* (Wright's Metalmark)	
Danaiinae (Milkweed Butterflies)		*Apodemia virgulti virgulti* (Behr's Metalmark)	U
Danaus gilippus thersippus (Striated Queen)		*Apodemia virgulti peninsularis* (Peninsular Metalmark)	
Danaus plexippus plexippus (Monarch)		*Lycaena gorgon gorgon* (Gorgon Copper)	
Satyrinae		**Papilionidae (Swallowtails)**	
Coenonympha tullia california (California ringlet)		*Papilio zelicaon* (Anise Swallowtail)	
Cercyonis sthenele behrii (Behr's Wood-nymph)		*Papilio cresphontes* (Giant Swallowtail)	
Hesperidae (Skippers)		*Papilio eurymedon* (Pale Swallowtail)	
Heliopetes ericetorum (Northern White-Skipper)		*Papilio rutulus* (Western Tiger Swallowtail)	
Hylephila phyleus phyleus (Fiery Skipper)		*Papilio polyxenes coloro* (Desert Swallowtail)	
Pyrgus albescens (White Checkered-Skipper)		**Pieridae (Whites and Sulphurs)**	
Erynnis funeralis (Funereal Duskywing)		*Anthocharis sara sara* (Sara's Orangetip)	U
Erynnis tristis tristis (Mournful Duskywing)		*Anthocharis cethura cethura* (Desert Orangetip)	
Erynnis brizo lacustra (Lacustra Duskywing)		*Anthocharis lanceolata australis* (Grinnell's Gray Marble)	
Erynnis propertius (Propertius Duskywing)		*Euchloe hyantis* (California Marble)	
Erynnis paucuvius callidus (Artful Duskywing)		*Pieris rapae rapae* (Cabbage White)	
Erynnis afranius (Afranius Duskywing)		*Pontia sisymbrii sisymbrii* (Spring White)	
Pholisora catullus (Common Sootywing)		*Pontia beckerii* (Becker's White)	
Lerodea eufala eufala (Eufala Skipper)		*Pontia protodice* (Checkered White)	U
Atalopedes campestris campestris (Sachem)		*Zerene eurydice* (California Dogface)	
Polites sabuleti sabuleti (Sandhill Skipper)		*Phoebis sennae marcellina* (Cloudless Sulphur)	
Hesperia juba (Juba Skipper)		*Colias harfordii* (Harford's Sulphur)	
Hesperia columbia (Columbia Skipper)		*Colias eurytheme* (Orange Sulphur)	
Copaeodes aurantiaca (Orange Skipperling)		*Abaeis nicippe* (Sleepy Orange)	
Ochlodes agricola agricola (Rural Skipper)		*Nathalis iole* (Dainty Sulphur)	
OTHERS:			

Site Kabian Park Restoration Date March 18, 2021 Surveyor(s) Laurie Gorman

Host Plants	Insert "X" If Observed	Nectar/Flowering Plants Cont.	Insert "X" If Observed
Plantago erecta (dot-seed plantain)	X	*Cordylanthus rigidus subsp. setigerus*	
Plantago patagonica (desert plantain)		*Cryptantha intermedia*	
Cordylanthus rigidus (bird's beak)		*Cryptantha* spp. (forget-me-nots)	X
Castelleja exserta (purple owl's clover)		*Cylindropuntia sp.*	
Antirrhinum coulterianum (white snapdragon)		*Daucus pusillus*	
Collinsia heterophylla (Chinese houses)		*Deinandra fasciculata*	
*Collinsia concolor (*Purple Chinese Houses*)*		*Dichelostemma capitatum*	X
		Diplacus puniceus	
		Encelia californica	
		Encelia farinosa	X
Nectar/Flowering Plants	**Insert "X" If Observed**	*Eriodictyon crassifolium*	
		Eriogonum fasciculatum	X
Acmispon glaber var. glaber		*Eriophyllum confertiflorum*	
Acmispon strigosus		*Erodium botyrs**	
Adenostoma fasciculatum		*Erodium cicutarium**	X
Allium praecox		*Erodium sp.**	
Allium spp. (onions)		*Eschscholzia caespitosa*	X
Amsinckia intermedia	X	*Eschscholzia californica*	
Amsinckia spp. (fiddlenecks)		*Eucrypta chrysanthemifolia var. chrysanthemifolia*	
Amsinckia tessellata		*Galium aparine*	
*Anagallis arvensis**		*Galium nuttallii subsp. nuttallii*	
Antirrhinum coulterianum		*Gilia sp.*	
Antirrhinum nuttallianum		*Glebionis coronaria**	
Astragalus trichopodus var. lonchus		*Hedypnois cretica**	
Baccharis pilularis		*Helianthemum scoparium*	
Baccharis salicifolia subsp. salicifolia		*Hesperoyucca whipplei*	
Bahiopsis laciniata		*Hirschfeldia incana**	X
Bloomeria clevelandii		*Hypochaeris glabra**	
Bloomeria crocea var. crocea		*Lasthenia californica*	
Bloomeria spp. (goldenstars)		*Lasthenia gracilis*	
*Brassica nigra**		*Lasthenia* spp. (goldfields)	X
Calandrinia ciliata	X	*Lathyrus vestitus*	
Calochortus splendens		*Lathyrus vestitus var. alefeldii*	
Calochortus weedii var. weedii		*Layia platyglossa*	
Calystegia macrostegia		*Lepidium nitidum*	
Camissoniopsis sp.		*Lepidium sp.*	
*Carduus pycnocephalus subsp. pycnocephalus**		*Linanthus dianthiflorus*	
Castilleja densiflora		*Logfia filaginoides*	
Castilleja coccinea		*Logfia gallica**	
Castilleja exserta		*Lonicera subspicata*	
Caulanthus heterophyllus		*Lupinus bicolor*	
Ceanothus tomentosus		*Lupinus concinnus*	
*Centaurea melitensis**		*Lupinus hirsutissimus*	
Chamaesyce sp.	X	*Lupinus* spp. (lupines)	
Chenopodium californicum		*Lupinus succulentus*	
Chorizanthe sp.		*Lupinus truncatus*	
*Cistus incanus**		*Malacothamnus fasciculatus*	
Clarkia purpurea subsp. quadrivulnera		*Marah macrocarpa*	
Claytonia perfoliata		*Medicago polymorpha**	
Claytonia sp.		*Pectocarya linearis*	X
Cneoridium dumosum			
Collinsia heterophylla			

Site _Kabian Park Restoration__ Date _March 18, 2021__ Surveyor(s) _Laurie Gorman_

Nectar/Flowering Plants Cont.	Insert "X" If Observed	Nectar/Flowering Plants Cont.	Insert "X" If Observed
*Melilotus indicus**	X	*Solanum parishii*	
Microseris douglasii subsp. platycarpha		*Solanum xanti*	
Mimulus aurantiacus		*Sonchus asper* subsp. *asper**	
Mimulus brevipes		*Sonchus oleraceus**	
Mirabilis californica		*Stephanomeria sp.*	X
Mirabilis laevis var. crassifolia	X	*Stylocline gnaphaloides*	
Muilla maritima		*Trichostema lanatum*	
Nuttallanthus texanus		*Trichostema parishii*	
Osmadenia tenella		*Trifolium depauperatum*	
Oxalis californica		*Trifolium hirtum*	
Oxalis sp.		*Trifolium willdenovii*	
Papaver californicum		*Uropappus lindleyi*	
Penstemon spectabilis var. spectabilis		*Verbena* sp.	
Pentachaeta aurea		*Viola pedunculata*	
Peritoma arborea		*Zeltnera venusta*	
Phacelia parryi		*non-native species	
Phacelia spp. (phacelias)		**Notes**	
Pholistoma auritum			
Pholistoma racemosum		(Merge more rows if needed):	
Plagiobothrys spp. (popcorn flowers)	X	More nectar sources are now in bloom, including *Lasthenia* prevalent. Host plants are stunted and in bloom. Very low butterfly activity overall.	
Plantago erecta			
Plantago ovata			
Plantago patagonica			
Platystemon californicus			
Porophyllum gracile			
Primula clevelandii			
Pseudognaphalium biolettii			
Pseudognaphalium californicum			
Pseudognaphalium sp.			
*Raphanus sativus**			
Rhus integrifolia			
Rhus ovata			
Ribes speciosum			
Salvia apiana			
Salvia columbariae			
Salvia mellifera			
Sambucus nigra subsp. caerulea			
Sanicula arguta			
Sanicula bipinnatifida			
Scutellaria tuberosa			
Sidalcea malviflora			
Sidalcea sparsifolia			
*Silene gallica**			
Silene laciniata			
*Sisymbrium orientale**			
Sisymbrium sp.			
Sisyrinchium bellum	X		

Quino Checkerspot Butterfly Field Form **Focused Survey (# 5)**

Project Number: 21278 Site: Kabian Restoration Park Date: March 21, 2021 Surveyor(s): Kris Alberts Sites Surveyed: 1,2,3,4, & trails mapped within "Focus Survey Area"

Weather	Time (24 hr)	% Cloud Cover	Wind (range)	Temp (*F*)
Start:	1140	20	0-2	62
Middle:	1445	30	1-6	66
End:	1640	40	1-3	63

Butterfly Species	U = Uncommon C = Common A = Abundant	Butterfly Species	U = Uncommon C = Common A = Abundant
Nymphalidae (Brush Footed Butterflies)		**Lycaenidae (Hairstreaks, Coppers, Blues)**	
***Euphydryas editha quino* (Quino Checkerspot) *precise count**		*Atlides halesus corcorani* (W. Great Purple Hairstreak)	
Euphydryas chalcedona chalcedona (Chalcedon Checkerspot)		*Callophrys augustinus iroides* (Western Elfin)	
Euphydryas chalcedona hennei (Henne's Checkerspot)		*Callophrys perplexa perplexa* (Perplexing Hairstreak)	
Chlosyne gabbii gabbii (Gabb's Checkerspot)		*Strymon melinus pudica* (Common Gray Hairstreak)	
Phyciodes mylitta mylitta (Mylitta Crescent)		*Glaucopsyche lygdamus australis* (Southern Silvery Blue)	
Chlosyne californica (California Patch)		*Glaucopsyche piasus umbrosa* (Smoky Arrowhead Blue)	
Chlosyne leanira wrightii (Wright's Checkerspot)		*Plebejus acmon* (Acmon Blue)	
Nymphalis antiopa antiopa (Mourning Cloak)		*Plebejus lupini monticola* (Clemence's Blue)	
Nymphalis californica (California Tortoiseshell)		*Plebejus melissa paradoxa* (Orange Margined Blue)	
Adelpha californica (California Sister)		*Euphilotes bernardino bernardino* (San Bernardino Blue)	
Junonia coenia grisea (Gray Buckeye)	U	*Philotes sonorensis sonorensis* (Sonora blue)	
Vanessa annabella (West Coast Lady)		*Celastrina echo echo* (Echo Azure)	
Vanessa atalanta rubria (American Red Admiral)		*Leptotes marina* (Marine Blue)	
Vanessa cardui (Painted Lady)	U	*Cupido amyntula amyntula* (Western Tailed Blue)	
Vanessa virginiensis (American Lady)		*Hemiargus ceraunus gyas* (Edward's Blue)	
Polygonia satyrus satyrus (Satyr Comma)		*Echinargus isola* (Reakirt's Blue)	
Limenitis lorquinii powelli (Powell's Admiral)		*Brephidium exilis exilis* (Western Pygmy-Blue)	
Speyeria callippe comstockii (Comstock's Fritillary)		*Calephelis wrighti* (Wright's Metalmark)	
Danaiinae (Milkweed Butterflies)		*Apodemia virgulti virgulti* (Behr's Metalmark)	U
Danaus gilippus thersippus (Striated Queen)		*Apodemia virgulti peninsularis* (Peninsular Metalmark)	
Danaus plexippus plexippus (Monarch)		*Lycaena gorgon gorgon* (Gorgon Copper)	
Satyrinae		**Papilionidae (Swallowtails)**	
Coenonympha tullia california (California ringlet)		*Papilio zelicaon* (Anise Swallowtail)	
Cercyonis sthenele behrii (Behr's Wood-nymph)		*Papilio cresphontes* (Giant Swallowtail)	
Hesperidae (Skippers)		*Papilio eurymedon* (Pale Swallowtail)	
Heliopetes ericetorum (Northern White-Skipper)		*Papilio rutulus* (Western Tiger Swallowtail)	
Hylephila phyleus phyleus (Fiery Skipper)		*Papilio polyxenes coloro* (Desert Swallowtail)	
Pyrgus albescens (White Checkered-Skipper)		**Pieridae (Whites and Sulphurs)**	
Erynnis funeralis (Funereal Duskywing)	U	*Anthocharis sara sara* (Sara's Orangetip)	U
Erynnis tristis tristis (Mournful Duskywing)		*Anthocharis cethura cethura* (Desert Orangetip)	
Erynnis brizo lacustra (Lacustra Duskywing)		*Anthocharis lanceolata australis* (Grinnell's Gray Marble)	
Erynnis propertius (Propertius Duskywing)		*Euchloe hyantis* (California Marble)	
Erynnis paucuvius callidus (Artful Duskywing)		*Pieris rapae rapae* (Cabbage White)	
Erynnis afranius (Afranius Duskywing)		*Pontia sisymbrii sisymbrii* (Spring White)	
Pholisora catullus (Common Sootywing)		*Pontia beckerii* (Becker's White)	
Lerodea eufala eufala (Eufala Skipper)		*Pontia protodice* (Checkered White)	
Atalopedes campestris campestris (Sachem)		*Zerene eurydice* (California Dogface)	
Polites sabuleti sabuleti (Sandhill Skipper)		*Phoebis sennae marcellina* (Cloudless Sulphur)	
Hesperia juba (Juba Skipper)		*Colias harfordii* (Harford's Sulphur)	
Hesperia columbia (Columbia Skipper)		*Colias eurytheme* (Orange Sulphur)	
Copaeodes aurantiaca (Orange Skipperling)		*Abaeis nicippe* (Sleepy Orange)	
Ochlodes agricola agricola (Rural Skipper)		*Nathalis iole* (Dainty Sulphur)	
OTHERS:			

Site _Kabian Park Restoration_ Date _March 21, 2021_ Surveyor(s) _Kris Alberts_

Host Plants	Insert "X" If Observed
Plantago erecta (dot-seed plantain)	X
Plantago patagonica (desert plantain)	
Cordylanthus rigidus (bird's beak)	
Castelleja exserta (purple owl's clover)	
Antirrhinum coulterianum (white snapdragon)	
Collinsia heterophylla (Chinese houses)	
*Collinsia concolor (*Purple Chinese Houses*)*	

Nectar/Flowering Plants	Insert "X" If Observed
Acmispon glaber var. glaber	X
Acmispon strigosus	
Adenostoma fasciculatum	
Allium praecox	
Allium spp. (onions)	
Amsinckia intermedia	X
Amsinckia spp. (fiddlenecks)	
Amsinckia tessellata	
*Anagallis arvensis**	
Antirrhinum coulterianum	
Antirrhinum nuttallianum	
Astragalus trichopodus var. lonchus	
Baccharis pilularis	
Baccharis salicifolia subsp. salicifolia	
Bahiopsis laciniata	
Bloomeria clevelandii	
Bloomeria crocea var. crocea	
Bloomeria spp. (goldenstars)	
*Brassica nigra**	
Calandrinia ciliata	X
Calochortus splendens	
Calochortus weedii var. weedii	
Calystegia macrostegia	X
Camissoniopsis sp.	
*Carduus pycnocephalus subsp. pycnocephalus**	
Castilleja densiflora	
Castilleja coccinea	
Castilleja exserta	
Caulanthus heterophyllus	
Ceanothus tomentosus	
*Centaurea melitensis**	
Chamaesyce sp.	X
Chenopodium californicum	
Chorizanthe sp.	
*Cistus incanus**	
Clarkia purpurea subsp. quadrivulnera	
Claytonia perfoliata	
Claytonia sp.	
Cneoridium dumosum	
Collinsia heterophylla	

Nectar/Flowering Plants Cont.	Insert "X" If Observed
Cordylanthus rigidus subsp. setigerus	
Cryptantha intermedia	
Cryptantha spp. (forget-me-nots)	
Cylindropuntia sp.	
Daucus pusillus	
Deinandra fasciculata	
Dichelostemma capitatum	X
Diplacus puniceus	
Encelia farinosa	X
Eriodictyon crassifolium	
Eriogonum fasciculatum	X
Eriophyllum confertiflorum	
*Erodium botyrs**	
*Erodium cicutarium**	X
*Erodium sp.**	
Eschscholzia caespitosa	
Eschscholzia californica	X
Eucrypta chrysanthemifolia var. chrysanthemifolia	
Galium aparine	
Galium nuttallii subsp. nuttallii	
Gilia sp.	X
*Glebionis coronaria**	
*Hedypnois cretica**	
Helianthemum scoparium	
Hesperoyucca whipplei	
*Hirschfeldia incana**	X
*Hypochaeris glabra**	X
Lasthenia californica	X
Lasthenia gracilis	
Lasthenia spp. (goldfields)	
Lathyrus vestitus	
Lathyrus vestitus var. alefeldii	
Layia platyglossa	X
Lepidium nitidum	
Lepidium sp.	
Linanthus dianthiflorus	
Logfia filaginoides	
*Logfia gallica**	
Lonicera subspicata	
Lupinus bicolor	
Lupinus concinnus	
Lupinus hirsutissimus	
Lupinus spp. (lupines)	
Lupinus succulentus	
Lupinus truncatus	
Malacothamnus fasciculatus	
Marah macrocarpa	
*Medicago polymorpha**	
Pectocarya linearis	X
Gutierrezia californica	X
Nemophila menziesii	X

Site _Kabian Park Restoration__ Date _March 21, 2021__ Surveyor(s) _Kris Alberts_

Nectar/Flowering Plants Cont.	Insert "X" If Observed	Nectar/Flowering Plants Cont.	Insert "X" If Observed
*Melilotus indicus**		*Solanum parishii*	
Microseris douglasii subsp. platycarpha		*Solanum xanti*	
Mimulus aurantiacus		*Sonchus asper* subsp. *asper**	
Mimulus brevipes		*Sonchus oleraceus**	
Mirabilis californica		*Stephanomeria sp.*	
Mirabilis laevis var. crassifolia	X	*Stylocline gnaphaloides*	
Muilla maritima		*Trichostema lanatum*	
Nuttallanthus texanus		*Trichostema parishii*	
Osmadenia tenella		*Trifolium depauperatum*	
Oxalis californica		*Trifolium hirtum*	
Oxalis sp.		*Trifolium willdenovii*	
Papaver californicum		*Uropappus lindleyi*	
Penstemon spectabilis var. spectabilis		*Verbena* sp.	
Pentachaeta aurea		*Viola pedunculata*	
Peritoma arborea		*Zeltnera venusta*	
Phacelia parryi		*non-native species	
Phacelia spp. (phacelias)	X	**Notes**	
Pholistoma auritum			
Pholistoma racemosum		(Merge more rows if needed):	
Plagiobothrys spp. (popcorn flowers)	X	Still relatively few flowers overall, and only 11 total butterflies observed all day.	
Plantago erecta	X		
Plantago ovata			
Plantago patagonica			
Platystemon californicus			
Porophyllum gracile			
Primula clevelandii			
Pseudognaphalium biolettii			
Pseudognaphalium californicum			
Pseudognaphalium sp.			
*Raphanus sativus**			
Rhus integrifolia			
Rhus ovata			
Ribes speciosum			
Salvia apiana			
Salvia columbariae			
Salvia mellifera			
Sambucus nigra subsp. caerulea			
Sanicula arguta			
Sanicula bipinnatifida			
Scutellaria tuberosa			
Sidalcea malviflora			
Sidalcea sparsifolia			
*Silene gallica**			
Silene laciniata			
*Sisymbrium orientale**			
Sisymbrium sp.	X		
Sisyrinchium bellum			
Astragalus sp.	X		

Quino Checkerspot Butterfly Field Form **Focused Survey (# 6)**

Project Number: 21278 Site: Kabian Restoration Park Date: March 27, 2021 Surveyor(s): Kris Alberts Sites Surveyed: 1,2,3,4, & trails mapped within "Focus Survey Area"

Weather	Time (24 hr)	% Cloud Cover	Wind (range)	Temp (*F*)
Start:	1105	0	0-2	70
Middle:	1445	0	1-3	74
End:	1625	0	1-3	71

Butterfly Species	U = Uncommon C = Common A = Abundant	Butterfly Species	U = Uncommon C = Common A = Abundant
Nymphalidae (Brush Footed Butterflies)		**Lycaenidae (Hairstreaks, Coppers, Blues)**	
***Euphydryas editha quino* (Quino Checkerspot) *precise count**		*Atlides halesus corcorani* (W. Great Purple Hairstreak)	
Euphydryas chalcedona chalcedona (Chalcedon Checkerspot)		*Callophrys augustinus iroides* (Western Elfin)	
Euphydryas chalcedona hennei (Henne's Checkerspot)		*Callophrys perplexa perplexa* (Perplexing Hairstreak)	
Chlosyne gabbii gabbii (Gabb's Checkerspot)		*Strymon melinus pudica* (Common Gray Hairstreak)	
Phyciodes mylitta mylitta (Mylitta Crescent)		*Glaucopsyche lygdamus australis* (Southern Silvery Blue)	U
Chlosyne californica (California Patch)		*Glaucopsyche piasus umbrosa* (Smoky Arrowhead Blue)	
Chlosyne leanira wrightii (Wright's Checkerspot)		*Plebejus acmon* (Acmon Blue)	U
Nymphalis antiopa antiopa (Mourning Cloak)		*Plebejus lupini monticola* (Clemence's Blue)	
Nymphalis californica (California Tortoiseshell)		*Plebejus melissa paradoxa* (Orange Margined Blue)	
Adelpha californica (California Sister)		*Euphilotes bernardino bernardino* (San Bernardino Blue)	
Junonia coenia grisea (Gray Buckeye)		*Philotes sonorensis sonorensis* (Sonora blue)	
Vanessa annabella (West Coast Lady)		*Celastrina echo echo* (Echo Azure)	
Vanessa atalanta rubria (American Red Admiral)		*Leptotes marina* (Marine Blue)	
Vanessa cardui (Painted Lady)	U	*Cupido amyntula amyntula* (Western Tailed Blue)	
Vanessa virginiensis (American Lady)		*Hemiargus ceraunus gyas* (Edward's Blue)	
Polygonia satyrus satyrus (Satyr Comma)		*Echinargus isola* (Reakirt's Blue)	
Limenitis lorquinii powelli (Powell's Admiral)		*Brephidium exilis exilis* (Western Pygmy-Blue)	
Speyeria callippe comstockii (Comstock's Fritillary)		*Calephelis wrighti* (Wright's Metalmark)	
Danaiinae (Milkweed Butterflies)		*Apodemia virgulti virgulti* (Behr's Metalmark)	C
Danaus gilippus thersippus (Striated Queen)		*Apodemia virgulti peninsularis* (Peninsular Metalmark)	
Danaus plexippus plexippus (Monarch)		*Lycaena gorgon gorgon* (Gorgon Copper)	
Satyrinae		**Papilionidae (Swallowtails)**	
Coenonympha tullia california (California ringlet)		*Papilio zelicaon* (Anise Swallowtail)	
Cercyonis sthenele behrii (Behr's Wood-nymph)		*Papilio cresphontes* (Giant Swallowtail)	
Hesperidae (Skippers)		*Papilio eurymedon* (Pale Swallowtail)	
Heliopetes ericetorum (Northern White-Skipper)		*Papilio rutulus* (Western Tiger Swallowtail)	
Hylephila phyleus phyleus (Fiery Skipper)		*Papilio polyxenes coloro* (Desert Swallowtail)	
Pyrgus albescens (White Checkered-Skipper)		**Pieridae (Whites and Sulphurs)**	
Erynnis funeralis (Funereal Duskywing)		*Anthocharis sara sara* (Sara's Orangetip)	C
Erynnis tristis tristis (Mournful Duskywing)		*Anthocharis cethura cethura* (Desert Orangetip)	
Erynnis brizo lacustra (Lacustra Duskywing)		*Anthocharis lanceolata australis* (Grinnell's Gray Marble)	
Erynnis propertius (Propertius Duskywing)		*Euchloe hyantis* (California Marble)	
Erynnis paucuvius callidus (Artful Duskywing)		*Pieris rapae rapae* (Cabbage White)	
Erynnis afranius (Afranius Duskywing)		*Pontia sisymbrii sisymbrii* (Spring White)	
Pholisora catullus (Common Sootywing)		*Pontia beckerii* (Becker's White)	
Lerodea eufala eufala (Eufala Skipper)		*Pontia protodice* (Checkered White)	
Atalopedes campestris campestris (Sachem)		*Zerene eurydice* (California Dogface)	
Polites sabuleti sabuleti (Sandhill Skipper)		*Phoebis sennae marcellina* (Cloudless Sulphur)	
Hesperia juba (Juba Skipper)		*Colias harfordii* (Harford's Sulphur)	
Hesperia columbia (Columbia Skipper)		*Colias eurytheme* (Orange Sulphur)	
Copaeodes aurantiaca (Orange Skipperling)		*Abaeis nicippe* (Sleepy Orange)	
Ochlodes agricola agricola (Rural Skipper)		*Nathalis iole* (Dainty Sulphur)	
OTHERS:			

Site _Kabian Park Restoration_ Date _March 27, 2021_ Surveyor(s) _Kris Alberts_

Host Plants	Insert "X" If Observed
Plantago erecta (dot-seed plantain)	X
Plantago patagonica (desert plantain)	
Cordylanthus rigidus (bird's beak)	
Castelleja exserta (purple owl's clover)	
Antirrhinum coulterianum (white snapdragon)	
Collinsia heterophylla (Chinese houses)	
*Collinsia concolor (*Purple Chinese Houses*)*	

Nectar/Flowering Plants	Insert "X" If Observed
Acmispon glaber var. glaber	X
Acmispon strigosus	
Adenostoma fasciculatum	
Allium praecox	
Allium spp. (onions)	
Amsinckia intermedia	X
Amsinckia spp. (fiddlenecks)	
Amsinckia tessellata	
*Anagallis arvensis**	
Antirrhinum coulterianum	
Antirrhinum nuttallianum	
Astragalus trichopodus var. lonchus	
Baccharis pilularis	
Baccharis salicifolia subsp. salicifolia	
Bahiopsis laciniata	
Bloomeria clevelandii	
Bloomeria crocea var. crocea	
Bloomeria spp. (goldenstars)	
*Brassica nigra**	
Calandrinia ciliata	X
Calochortus splendens	
Calochortus weedii var. weedii	
Calystegia macrostegia	X
Camissoniopsis sp.	
*Carduus pycnocephalus subsp. pycnocephalus**	
Castilleja densiflora	
Castilleja coccinea	
Castilleja exserta	
Caulanthus heterophyllus	
Ceanothus tomentosus	
*Centaurea melitensis**	
Chamaesyce sp.	X
Chenopodium californicum	
Chorizanthe sp.	
*Cistus incanus**	
Clarkia purpurea subsp. quadrivulnera	
Claytonia perfoliata	
Claytonia sp.	
Cneoridium dumosum	
Collinsia heterophylla	

Nectar/Flowering Plants Cont.	Insert "X" If Observed
Cordylanthus rigidus subsp. setigerus	
Cryptantha intermedia	
Cryptantha spp. (forget-me-nots)	
Cylindropuntia sp.	
Daucus pusillus	
Deinandra fasciculata	
Dichelostemma capitatum	X
Diplacus puniceus	
Encelia farinosa	X
Eriodictyon crassifolium	
Eriogonum fasciculatum	X
Eriophyllum confertiflorum	
*Erodium botyrs**	
*Erodium cicutarium**	X
*Erodium sp.**	
Eschscholzia caespitosa	
Eschscholzia californica	X
Eucrypta chrysanthemifolia var. chrysanthemifolia	
Galium aparine	
Galium nuttallii subsp. nuttallii	
Gilia sp.	X
*Glebionis coronaria**	
*Hedypnois cretica**	
Helianthemum scoparium	
Hesperoyucca whipplei	
*Hirschfeldia incana**	X
*Hypochaeris glabra**	X
Lasthenia californica	X
Lasthenia gracilis	
Lasthenia spp. (goldfields)	
Lathyrus vestitus	
Lathyrus vestitus var. alefeldii	
Layia platyglossa	X
Lepidium nitidum	
Lepidium sp.	
Linanthus dianthiflorus	
Logfia filaginoides	
*Logfia gallica**	
Lonicera subspicata	
Lupinus bicolor	X
Lupinus concinnus	
Lupinus hirsutissimus	
Lupinus spp. (lupines)	
Lupinus succulentus	
Lupinus truncatus	
Malacothamnus fasciculatus	
Marah macrocarpa	
*Medicago polymorpha**	
Pectocarya linearis	X
Gutierrezia californica	
Nemophila menziesii	X

Site _Kabian Park Restoration__ Date _February 26, 2021__ Surveyor(s) _Kris Alberts_

Nectar/Flowering Plants Cont.	Insert "X" If Observed	Nectar/Flowering Plants Cont.	Insert "X" If Observed
*Melilotus indicus**		*Solanum parishii*	
Microseris douglasii subsp. platycarpha		*Solanum xanti*	
Mimulus aurantiacus		*Sonchus asper* subsp. *asper**	
Mimulus brevipes		*Sonchus oleraceus**	
Mirabilis californica		*Stephanomeria sp.*	
Mirabilis laevis var. crassifolia	X	*Stylocline gnaphaloides*	
Muilla maritima		*Trichostema lanatum*	
Nuttallanthus texanus		*Trichostema parishii*	
Osmadenia tenella		*Trifolium depauperatum*	
Oxalis californica		*Trifolium hirtum*	
Oxalis sp.		*Trifolium willdenovii*	
Papaver californicum		*Uropappus lindleyi*	
Penstemon spectabilis var. spectabilis		*Verbena* sp.	
Pentachaeta aurea		*Viola pedunculata*	
Peritoma arborea		*Zeltnera venusta*	
Phacelia parryi		*non-native species	
Phacelia spp. (phacelias)	X	**Notes**	
Pholistoma auritum			
Pholistoma racemosum		(Merge more rows if needed):	
Plagiobothrys spp. (popcorn flowers)	X	Still relatively few flowers overall, and only 11 total butterflies observed all day.	
Plantago erecta	X		
Plantago ovata			
Plantago patagonica			
Platystemon californicus			
Porophyllum gracile			
Primula clevelandii			
Pseudognaphalium biolettii			
Pseudognaphalium californicum			
Pseudognaphalium sp.			
*Raphanus sativus**			
Rhus integrifolia			
Rhus ovata			
Ribes speciosum			
Salvia apiana			
Salvia columbariae			
Salvia mellifera			
Sambucus nigra subsp. caerulea			
Sanicula arguta			
Sanicula bipinnatifida			
Scutellaria tuberosa			
Sidalcea malviflora			
Sidalcea sparsifolia			
*Silene gallica**			
Silene laciniata			
*Sisymbrium orientale**			
Sisymbrium sp.	X		
Sisyrinchium bellum			
Astragalus sp.			
Matricaria discoidea	X		

Quino Checkerspot Butterfly Field Form **Habitat Assessment / Focused Survey (# 7)**

Project Number: 21278 Site: Kabian Restoration Park Date: March 31, 2021 Surveyor(s): Laurie Gorman Sites Surveyed: 1,2,3,4, & trails mapped within "Focus Survey Area"

Weather	Time (24 hr)	% Cloud Cover	Wind (range)	Temp (*F*)
Start:	1115	0	1-4	78
Middle:	1400	0	1-3	91
End:	1630	0	2-5	84

Butterfly Species	U = Uncommon C = Common A = Abundant	Butterfly Species	U = Uncommon C = Common A = Abundant
Nymphalidae (Brush Footed Butterflies)		**Lycaenidae (Hairstreaks, Coppers, Blues)**	
***Euphydryas editha quino* (Quino Checkerspot) *precise count**		*Atlides halesus corcorani* (W. Great Purple Hairstreak)	
Euphydryas chalcedona chalcedona (Chalcedon Checkerspot)		*Callophrys augustinus iroides* (Western Elfin)	
Euphydryas chalcedona hennei (Henne's Checkerspot)		*Callophrys perplexa perplexa* (Perplexing Hairstreak)	
Chlosyne gabbii gabbii (Gabb's Checkerspot)		*Strymon melinus pudica* (Common Gray Hairstreak)	
Phyciodes mylitta mylitta (Mylitta Crescent)		*Glaucopsyche lygdamus australis* (Southern Silvery Blue)	U
Chlosyne californica (California Patch)		*Glaucopsyche piasus umbrosa* (Smoky Arrowhead Blue)	
Chlosyne leanira wrightii (Wright's Checkerspot)		*Plebejus acmon* (Acmon Blue)	U
Nymphalis antiopa antiopa (Mourning Cloak)		*Plebejus lupini monticola* (Clemence's Blue)	
Nymphalis californica (California Tortoiseshell)		*Plebejus melissa paradoxa* (Orange Margined Blue)	
Adelpha californica (California Sister)		*Euphilotes bernardino bernardino* (San Bernardino Blue)	
Junonia coenia grisea (Gray Buckeye)		*Philotes sonorensis sonorensis* (Sonora blue)	
Vanessa annabella (West Coast Lady)		*Celastrina echo echo* (Echo Azure)	
Vanessa atalanta rubria (American Red Admiral)		*Leptotes marina* (Marine Blue)	
Vanessa cardui (Painted Lady)		*Cupido amyntula amyntula* (Western Tailed Blue)	
Vanessa virginiensis (American Lady)		*Hemiargus ceraunus gyas* (Edward's Blue)	
Polygonia satyrus satyrus (Satyr Comma)		*Echinargus isola* (Reakirt's Blue)	
Limenitis lorquinii powelli (Powell's Admiral)		*Brephidium exilis exilis* (Western Pygmy-Blue)	
Speyeria callippe comstockii (Comstock's Fritillary)		*Calephelis wrighti* (Wright's Metalmark)	
Danaiinae (Milkweed Butterflies)		*Apodemia virgulti virgulti* (Behr's Metalmark)	U
Danaus gilippus thersippus (Striated Queen)		*Apodemia virgulti peninsularis* (Peninsular Metalmark)	
Danaus plexippus plexippus (Monarch)		*Lycaena gorgon gorgon* (Gorgon Copper)	
Satyrinae		**Papilionidae (Swallowtails)**	
Coenonympha tullia california (California ringlet)		*Papilio zelicaon* (Anise Swallowtail)	
Cercyonis sthenele behrii (Behr's Wood-nymph)		*Papilio cresphontes* (Giant Swallowtail)	
Hesperidae (Skippers)		*Papilio eurymedon* (Pale Swallowtail)	
Heliopetes ericetorum (Northern White-Skipper)		*Papilio rutulus* (Western Tiger Swallowtail)	
Hylephila phyleus phyleus (Fiery Skipper)		*Papilio polyxenes coloro* (Desert Swallowtail)	
Pyrgus albescens (White Checkered-Skipper)		**Pieridae (Whites and Sulphurs)**	
Erynnis funeralis (Funereal Duskywing)		*Anthocharis sara sara* (Sara's Orangetip)	U
Erynnis tristis tristis (Mournful Duskywing)		*Anthocharis cethura cethura* (Desert Orangetip)	
Erynnis brizo lacustra (Lacustra Duskywing)		*Anthocharis lanceolata australis* (Grinnell's Gray Marble)	
Erynnis propertius (Propertius Duskywing)		*Euchloe hyantis* (California Marble)	
Erynnis paucuvius callidus (Artful Duskywing)		*Pieris rapae rapae* (Cabbage White)	
Erynnis afranius (Afranius Duskywing)		*Pontia sisymbrii sisymbrii* (Spring White)	
Pholisora catullus (Common Sootywing)		*Pontia beckerii* (Becker's White)	
Lerodea eufala eufala (Eufala Skipper)		*Pontia protodice* (Checkered White)	U
Atalopedes campestris campestris (Sachem)		*Zerene eurydice* (California Dogface)	
Polites sabuleti sabuleti (Sandhill Skipper)		*Phoebis sennae marcellina* (Cloudless Sulphur)	
Hesperia juba (Juba Skipper)		*Colias harfordii* (Harford's Sulphur)	
Hesperia columbia (Columbia Skipper)		*Colias eurytheme* (Orange Sulphur)	
Copaeodes aurantiaca (Orange Skipperling)		*Abaeis nicippe* (Sleepy Orange)	
Ochlodes agricola agricola (Rural Skipper)		*Nathalis iole* (Dainty Sulphur)	
OTHERS:			

Site _Kabian Park Restoration_ Date _March 31, 2021_ Surveyor(s) _Laurie Gorman_

Host Plants	Insert "X" If Observed	Nectar/Flowering Plants Cont.	Insert "X" If Observed
Plantago erecta (dot-seed plantain)	X	*Cordylanthus rigidus subsp. setigerus*	
Plantago patagonica (desert plantain)		*Cryptantha intermedia*	
Cordylanthus rigidus (bird's beak)		*Cryptantha* spp. (forget-me-nots)	X
Castelleja exserta (purple owl's clover)		*Cylindropuntia sp.*	
Antirrhinum coulterianum (white snapdragon)		*Daucus pusillus*	
Collinsia heterophylla (Chinese houses)		*Deinandra fasciculata*	
*Collinsia concolor (*Purple Chinese Houses*)*		*Dichelostemma capitatum*	X
		Diplacus puniceus	
		Encelia californica	
		Encelia farinosa	X
Nectar/Flowering Plants	**Insert "X" If Observed**	*Eriodictyon crassifolium*	
		Eriogonum fasciculatum	
Acmispon glaber var. glaber	X	*Eriophyllum confertiflorum*	
Acmispon strigosus		*Erodium botyrs**	
Adenostoma fasciculatum		*Erodium cicutarium**	X
Allium praecox		*Erodium sp.**	
Allium spp. (onions)		*Eschscholzia caespitosa*	X
Amsinckia intermedia	X	*Eschscholzia californica*	
Amsinckia spp. (fiddlenecks)	X	*Eucrypta chrysanthemifolia var. chrysanthemifolia*	
Amsinckia tessellata		*Galium aparine*	
*Anagallis arvensis**		*Galium nuttallii subsp. nuttallii*	
Antirrhinum coulterianum		*Gilia sp.*	
Antirrhinum nuttallianum		*Glebionis coronaria**	X
Astragalus trichopodus var. lonchus		*Hedypnois cretica**	
Baccharis pilularis		*Helianthemum scoparium*	
Baccharis salicifolia subsp. salicifolia		*Hesperoyucca whipplei*	
Bahiopsis laciniata		*Hirschfeldia incana**	
Bloomeria clevelandii		*Hypochaeris glabra**	
Bloomeria crocea var. crocea		*Lasthenia californica*	
Bloomeria spp. (goldenstars)		*Lasthenia gracilis*	
*Brassica nigra**		*Lasthenia* spp. (goldfields)	X
Calandrinia ciliata	X	*Lathyrus vestitus*	
Calochortus splendens		*Lathyrus vestitus var. alefeldii*	
Calochortus weedii var. weedii		*Layia platyglossa*	X
Calystegia macrostegia		*Lepidium nitidum*	
Camissoniopsis sp.		*Lepidium sp.*	
*Carduus pycnocephalus subsp. pycnocephalus**		*Linanthus dianthiflorus*	
Castilleja densiflora		*Logfia filaginoides*	
Castilleja coccinea		*Logfia gallica**	
Castilleja exserta		*Lonicera subspicata*	
Caulanthus heterophyllus		*Lupinus bicolor*	
Ceanothus tomentosus		*Lupinus concinnus*	
*Centaurea melitensis**		*Lupinus hirsutissimus*	
Chamaesyce sp.	X	*Lupinus* spp. (lupines)	
Chenopodium californicum		*Lupinus succulentus*	
Chorizanthe sp.		*Lupinus truncatus*	
*Cistus incanus**		*Malacothamnus fasciculatus*	
Clarkia purpurea subsp. quadrivulnera		*Marah macrocarpa*	
Claytonia perfoliata		*Medicago polymorpha**	
Claytonia sp.		*Pectocarya linearis*	X
Cneoridium dumosum		*Nemophila menziesii*	X
Collinsia heterophylla			

Site _Kabian Park Restoration__ Date _March 31, 2021__ Surveyor(s) _Laurie Gorman_

Nectar/Flowering Plants Cont.	Insert "X" If Observed	Nectar/Flowering Plants Cont.	Insert "X" If Observed
*Melilotus indicus**		*Solanum parishii*	
Microseris douglasii subsp. platycarpha		*Solanum xanti*	
Mimulus aurantiacus		*Sonchus asper* subsp. *asper**	
Mimulus brevipes		*Sonchus oleraceus**	
Mirabilis californica		*Stephanomeria sp.*	X
Mirabilis laevis var. crassifolia	X	*Stylocline gnaphaloides*	
Muilla maritima		*Trichostema lanatum*	
Nuttallanthus texanus		*Trichostema parishii*	
Osmadenia tenella		*Trifolium depauperatum*	
Oxalis californica		*Trifolium hirtum*	
Oxalis sp.		*Trifolium willdenovii*	
Papaver californicum		*Uropappus lindleyi*	
Penstemon spectabilis var. spectabilis		*Verbena* sp.	
Pentachaeta aurea		*Viola pedunculata*	
Peritoma arborea		*Zeltnera venusta*	
Phacelia parryi		*non-native species	
Phacelia spp. (phacelias)	X	**Notes**	
Pholistoma auritum			
Pholistoma racemosum		(Merge more rows if needed):	
Plagiobothrys spp. (popcorn flowers)	X	Many nectar sources in bloom, except for the two southeastern sites, which are overrun by grasses and do not contain many nectar sources. Host plants are stunted and in bloom. Still very low butterfly activity overall.	
Plantago erecta			
Plantago ovata			
Plantago patagonica			
Platystemon californicus			
Porophyllum gracile			
Primula clevelandii			
Pseudognaphalium biolettii			
Pseudognaphalium californicum			
Pseudognaphalium sp.			
*Raphanus sativus**			
Rhus integrifolia			
Rhus ovata			
Ribes speciosum			
Salvia apiana			
Salvia columbariae			
Salvia mellifera			
Sambucus nigra subsp. caerulea			
Sanicula arguta			
Sanicula bipinnatifida			
Scutellaria tuberosa			
Sidalcea malviflora			
Sidalcea sparsifolia			
*Silene gallica**			
Silene laciniata			
*Sisymbrium orientale**			
Sisymbrium sp.			
Sisyrinchium bellum	X		

Quino Checkerspot Butterfly Field Form **Focused Survey (# 8)**

Project Number: 21278 Site: Kabian Restoration Park Date: April 9, 2021 Surveyor(s): Kris Alberts Sites Surveyed: 1,2,3,4, & trails mapped within "Focus Survey Area"

Weather	Time (24 hr)	% Cloud Cover	Wind (range)	Temp (*F*)
Start:	1020	0	0-2	70
Middle:	1300	0	1-4	79
End:	1500	0	1-4	82

Butterfly Species	U = Uncommon C = Common A = Abundant	Butterfly Species	U = Uncommon C = Common A = Abundant
Nymphalidae (Brush Footed Butterflies)		**Lycaenidae (Hairstreaks, Coppers, Blues)**	
***Euphydryas editha quino* (Quino Checkerspot) *precise count**		*Atlides halesus corcorani* (W. Great Purple Hairstreak)	
Euphydryas chalcedona chalcedona (Chalcedon Checkerspot)		*Callophrys augustinus iroides* (Western Elfin)	
Euphydryas chalcedona hennei (Henne's Checkerspot)		*Callophrys perplexa perplexa* (Perplexing Hairstreak)	
Chlosyne gabbii gabbii (Gabb's Checkerspot)		*Strymon melinus pudica* (Common Gray Hairstreak)	
Phyciodes mylitta mylitta (Mylitta Crescent)		*Glaucopsyche lygdamus australis* (Southern Silvery Blue)	
Chlosyne californica (California Patch)		*Glaucopsyche piasus umbrosa* (Smoky Arrowhead Blue)	
Chlosyne leanira wrightii (Wright's Checkerspot)		*Plebejus acmon* (Acmon Blue)	
Nymphalis antiopa antiopa (Mourning Cloak)		*Plebejus lupini monticola* (Clemence's Blue)	
Nymphalis californica (California Tortoiseshell)		*Plebejus melissa paradoxa* (Orange Margined Blue)	
Adelpha californica (California Sister)		*Euphilotes bernardino bernardino* (San Bernardino Blue)	
Junonia coenia grisea (Gray Buckeye)	U	*Philotes sonorensis sonorensis* (Sonora blue)	
Vanessa annabella (West Coast Lady)		*Celastrina echo echo* (Echo Azure)	
Vanessa atalanta rubria (American Red Admiral)		*Leptotes marina* (Marine Blue)	
Vanessa cardui (Painted Lady)		*Cupido amyntula amyntula* (Western Tailed Blue)	
Vanessa virginiensis (American Lady)		*Hemiargus ceraunus gyas* (Edward's Blue)	
Polygonia satyrus satyrus (Satyr Comma)		*Echinargus isola* (Reakirt's Blue)	
Limenitis lorquinii powelli (Powell's Admiral)		*Brephidium exilis exilis* (Western Pygmy-Blue)	
Speyeria callippe comstockii (Comstock's Fritillary)		*Calephelis wrighti* (Wright's Metalmark)	
Danaiinae (Milkweed Butterflies)		*Apodemia virgulti virgulti* (Behr's Metalmark)	C
Danaus gilippus thersippus (Striated Queen)		*Apodemia virgulti peninsularis* (Peninsular Metalmark)	
Danaus plexippus plexippus (Monarch)		*Lycaena gorgon gorgon* (Gorgon Copper)	
Satyrinae		**Papilionidae (Swallowtails)**	
Coenonympha tullia california (California ringlet)		*Papilio zelicaon* (Anise Swallowtail)	
Cercyonis sthenele behrii (Behr's Wood-nymph)		*Papilio cresphontes* (Giant Swallowtail)	
Hesperidae (Skippers)		*Papilio eurymedon* (Pale Swallowtail)	
Heliopetes ericetorum (Northern White-Skipper)		*Papilio rutulus* (Western Tiger Swallowtail)	
Hylephila phyleus phyleus (Fiery Skipper)		*Papilio polyxenes coloro* (Desert Swallowtail)	
Pyrgus albescens (White Checkered-Skipper)		**Pieridae (Whites and Sulphurs)**	
Erynnis funeralis (Funereal Duskywing)		*Anthocharis sara sara* (Sara's Orangetip)	U
Erynnis tristis tristis (Mournful Duskywing)		*Anthocharis cethura cethura* (Desert Orangetip)	
Erynnis brizo lacustra (Lacustra Duskywing)		*Anthocharis lanceolata australis* (Grinnell's Gray Marble)	
Erynnis propertius (Propertius Duskywing)		*Euchloe hyantis* (California Marble)	
Erynnis paucuvius callidus (Artful Duskywing)		*Pieris rapae rapae* (Cabbage White)	
Erynnis afranius (Afranius Duskywing)		*Pontia sisymbrii sisymbrii* (Spring White)	
Pholisora catullus (Common Sootywing)		*Pontia beckerii* (Becker's White)	
Lerodea eufala eufala (Eufala Skipper)		*Pontia protodice* (Checkered White)	
Atalopedes campestris campestris (Sachem)		*Zerene eurydice* (California Dogface)	
Polites sabuleti sabuleti (Sandhill Skipper)		*Phoebis sennae marcellina* (Cloudless Sulphur)	
Hesperia juba (Juba Skipper)		*Colias harfordii* (Harford's Sulphur)	
Hesperia columbia (Columbia Skipper)		*Colias eurytheme* (Orange Sulphur)	
Copaeodes aurantiaca (Orange Skipperling)		*Abaeis nicippe* (Sleepy Orange)	
Ochlodes agricola agricola (Rural Skipper)		*Nathalis iole* (Dainty Sulphur)	
OTHERS:			

Site _Kabian Park Restoration_ Date _April 9, 2021_ Surveyor(s) _Kris Alberts_

Host Plants	Insert "X" If Observed	Nectar/Flowering Plants Cont.	Insert "X" If Observed
Plantago erecta (dot-seed plantain)	X	*Cordylanthus rigidus subsp. setigerus*	
Plantago patagonica (desert plantain)		*Cryptantha intermedia*	
Cordylanthus rigidus (bird's beak)		*Cryptantha* spp. (forget-me-nots)	
Castelleja exserta (purple owl's clover)		*Cylindropuntia sp.*	
Antirrhinum coulterianum (white snapdragon)		*Daucus pusillus*	
Collinsia heterophylla (Chinese houses)		*Deinandra fasciculata*	
*Collinsia concolor (*Purple Chinese Houses*)*		*Dichelostemma capitatum*	X
		Diplacus puniceus	
		Encelia farinosa	X
Nectar/Flowering Plants	**Insert "X" If Observed**	*Eriodictyon crassifolium*	
		Eriogonum fasciculatum	X
Acmispon glaber var. glaber	X	*Eriophyllum confertiflorum*	
Acmispon strigosus	X	*Erodium botyrs**	
Adenostoma fasciculatum		*Erodium cicutarium**	X
Allium praecox		*Erodium sp.**	
Allium spp. (onions)		*Eschscholzia caespitosa*	
Amsinckia intermedia	X	*Eschscholzia californica*	X
Amsinckia spp. (fiddlenecks)		*Eucrypta chrysanthemifolia var. chrysanthemifolia*	
Amsinckia tessellata		*Galium aparine*	
*Anagallis arvensis**		*Galium nuttallii subsp. nuttallii*	
Antirrhinum coulterianum		*Gilia sp.*	
Antirrhinum nuttallianum		*Glebionis coronaria**	
Astragalus trichopodus var. lonchus		*Hedypnois cretica**	
Baccharis pilularis		*Helianthemum scoparium*	
Baccharis salicifolia subsp. salicifolia		*Hesperoyucca whipplei*	
Bahiopsis laciniata		*Hirschfeldia incana**	X
Bloomeria clevelandii		*Hypochaeris glabra**	
Bloomeria crocea var. crocea		*Lasthenia californica*	X
Bloomeria spp. (goldenstars)		*Lasthenia gracilis*	
*Brassica nigra**		*Lasthenia* spp. (goldfields)	
Calandrinia ciliata	X	*Lathyrus vestitus*	
Calochortus splendens	X	*Lathyrus vestitus var. alefeldii*	
Calochortus weedii var. weedii		*Layia platyglossa*	X
Calystegia macrostegia	X	*Lepidium nitidum*	
Camissoniopsis sp.		*Lepidium sp.*	
*Carduus pycnocephalus subsp. pycnocephalus**		*Linanthus dianthiflorus*	
Castilleja densiflora		*Logfia filaginoides*	
Castilleja coccinea		*Logfia gallica**	
Castilleja exserta		*Lonicera subspicata*	
Caulanthus heterophyllus		*Lupinus bicolor*	
Ceanothus tomentosus		*Lupinus concinnus*	
*Centaurea melitensis**		*Lupinus hirsutissimus*	
Chamaesyce sp.	X	*Lupinus* spp. (lupines)	
Chenopodium californicum		*Lupinus succulentus*	
Chorizanthe sp.		*Lupinus truncatus*	
*Cistus incanus**		*Malacothamnus fasciculatus*	
Clarkia purpurea subsp. quadrivulnera		*Marah macrocarpa*	
Claytonia perfoliata		*Medicago polymorpha**	
Claytonia sp.		*Pectocarya linearis*	
Cneoridium dumosum		*Gutierrezia californica*	X
Collinsia heterophylla		*Nemophila menziesii*	X

Site _Kabian Park Restoration_ Date _April 9, 2021_ Surveyor(s) _Kris Alberts_

Nectar/Flowering Plants Cont.	Insert "X" If Observed	Nectar/Flowering Plants Cont.	Insert "X" If Observed
*Melilotus indicus**	X	*Solanum parishii*	
Microseris douglasii subsp. platycarpha		*Solanum xanti*	
Mimulus aurantiacus		*Sonchus asper* subsp. *asper**	
Mimulus brevipes		*Sonchus oleraceus**	
Mirabilis californica		*Stephanomeria sp.*	
Mirabilis laevis var. crassifolia	X	*Stylocline gnaphaloides*	X
Muilla maritima		*Trichostema lanatum*	
Nuttallanthus texanus		*Trichostema parishii*	
Osmadenia tenella		*Trifolium depauperatum*	
Oxalis californica		*Trifolium hirtum*	
Oxalis sp.		*Trifolium willdenovii*	
Papaver californicum		*Uropappus lindleyi*	
Penstemon spectabilis var. spectabilis		*Verbena* sp.	
Pentachaeta aurea		*Viola pedunculata*	
Peritoma arborea		*Zeltnera venusta*	
Phacelia parryi		*non-native species	
Phacelia spp. (phacelias)		**Notes**	
Pholistoma auritum			
Pholistoma racemosum		(Merge more rows if needed):	
Plagiobothrys spp. (popcorn flowers)	X	1 gulf fritillary was also observed nectaring on a blue dicks.	
Plantago erecta			
Plantago ovata			
Plantago patagonica			
Platystemon californicus			
Porophyllum gracile			
Primula clevelandii			
Pseudognaphalium biolettii			
Pseudognaphalium californicum			
Pseudognaphalium sp.			
*Raphanus sativus**			
Rhus integrifolia			
Rhus ovata			
Ribes speciosum			
Salvia apiana			
Salvia columbariae			
Salvia mellifera			
Sambucus nigra subsp. caerulea			
Sanicula arguta			
Sanicula bipinnatifida			
Scutellaria tuberosa			
Sidalcea malviflora			
Sidalcea sparsifolia			
*Silene gallica**			
Silene laciniata			
*Sisymbrium orientale**			
Sisymbrium sp.	X		
Sisyrinchium bellum			
Astragalus sp.	X		
Oncosiphon pilulifer	X		
Acmispon micranthus	X		

Quino Checkerspot Butterfly Field Form **Habitat Assessment / Focused Survey (# 9)**

Project Number: 21278 Site: Kabian Restoration Park Date: April 16, 2021 Surveyor(s): Laurie Gorman Sites Surveyed: 1,2,3,4, & trails mapped within "Focus Survey Area"

Weather	Time (24 hr)	% Cloud Cover	Wind (range)	Temp (*F*)
Start:	1000	0	1-4	67
Middle:	--	--	--	--
End:	1500	0	1-5	81

Butterfly Species	U = Uncommon C = Common A = Abundant	Butterfly Species	U = Uncommon C = Common A = Abundant
Nymphalidae (Brush Footed Butterflies)		**Lycaenidae (Hairstreaks, Coppers, Blues)**	
***Euphydryas editha quino* (Quino Checkerspot) *precise count**		*Atlides halesus corcorani* (W. Great Purple Hairstreak)	
Euphydryas chalcedona chalcedona (Chalcedon Checkerspot)		*Callophrys augustinus iroides* (Western Elfin)	
Euphydryas chalcedona hennei (Henne's Checkerspot)		*Callophrys perplexa perplexa* (Perplexing Hairstreak)	
Chlosyne gabbii gabbii (Gabb's Checkerspot)		*Strymon melinus pudica* (Common Gray Hairstreak)	
Phyciodes mylitta mylitta (Mylitta Crescent)		*Glaucopsyche lygdamus australis* (Southern Silvery Blue)	
Chlosyne californica (California Patch)		*Glaucopsyche piasus umbrosa* (Smoky Arrowhead Blue)	
Chlosyne leanira wrightii (Wright's Checkerspot)		*Plebejus acmon* (Acmon Blue)	U
Nymphalis antiopa antiopa (Mourning Cloak)		*Plebejus lupini monticola* (Clemence's Blue)	
Nymphalis californica (California Tortoiseshell)		*Plebejus melissa paradoxa* (Orange Margined Blue)	
Adelpha californica (California Sister)		*Euphilotes bernardino bernardino* (San Bernardino Blue)	
Junonia coenia grisea (Gray Buckeye)	U	*Philotes sonorensis sonorensis* (Sonora blue)	
Vanessa annabella (West Coast Lady)		*Celastrina echo echo* (Echo Azure)	
Vanessa atalanta rubria (American Red Admiral)		*Leptotes marina* (Marine Blue)	
Vanessa cardui (Painted Lady)		*Cupido amyntula amyntula* (Western Tailed Blue)	
Vanessa virginiensis (American Lady)		*Hemiargus ceraunus gyas* (Edward's Blue)	
Polygonia satyrus satyrus (Satyr Comma)		*Echinargus isola* (Reakirt's Blue)	
Limenitis lorquinii powelli (Powell's Admiral)		*Brephidium exilis exilis* (Western Pygmy-Blue)	
Speyeria callippe comstockii (Comstock's Fritillary)		*Calephelis wrighti* (Wright's Metalmark)	
Danaiinae (Milkweed Butterflies)		*Apodemia virgulti virgulti* (Behr's Metalmark)	C
Danaus gilippus thersippus (Striated Queen)		*Apodemia virgulti peninsularis* (Peninsular Metalmark)	
Danaus plexippus plexippus (Monarch)		*Lycaena gorgon gorgon* (Gorgon Copper)	
Satyrinae		**Papilionidae (Swallowtails)**	
Coenonympha tullia california (California ringlet)		*Papilio zelicaon* (Anise Swallowtail)	
Cercyonis sthenele behrii (Behr's Wood-nymph)		*Papilio cresphontes* (Giant Swallowtail)	
Hesperidae (Skippers)		*Papilio eurymedon* (Pale Swallowtail)	
Heliopetes ericetorum (Northern White-Skipper)		*Papilio rutulus* (Western Tiger Swallowtail)	
Hylephila phyleus phyleus (Fiery Skipper)		*Papilio polyxenes coloro* (Desert Swallowtail)	
Pyrgus albescens (White Checkered-Skipper)		**Pieridae (Whites and Sulphurs)**	
Erynnis funeralis (Funereal Duskywing)	U	*Anthocharis sara sara* (Sara's Orangetip)	U
Erynnis tristis tristis (Mournful Duskywing)		*Anthocharis cethura cethura* (Desert Orangetip)	
Erynnis brizo lacustra (Lacustra Duskywing)		*Anthocharis lanceolata australis* (Grinnell's Gray Marble)	
Erynnis propertius (Propertius Duskywing)		*Euchloe hyantis* (California Marble)	
Erynnis paucuvius callidus (Artful Duskywing)		*Pieris rapae rapae* (Cabbage White)	
Erynnis afranius (Afranius Duskywing)		*Pontia sisymbrii sisymbrii* (Spring White)	
Pholisora catullus (Common Sootywing)		*Pontia beckerii* (Becker's White)	
Lerodea eufala eufala (Eufala Skipper)		*Pontia protodice* (Checkered White)	
Atalopedes campestris campestris (Sachem)		*Zerene eurydice* (California Dogface)	
Polites sabuleti sabuleti (Sandhill Skipper)		*Phoebis sennae marcellina* (Cloudless Sulphur)	
Hesperia juba (Juba Skipper)		*Colias harfordii* (Harford's Sulphur)	
Hesperia columbia (Columbia Skipper)		*Colias eurytheme* (Orange Sulphur)	
Copaeodes aurantiaca (Orange Skipperling)		*Abaeis nicippe* (Sleepy Orange)	
Ochlodes agricola agricola (Rural Skipper)		*Nathalis iole* (Dainty Sulphur)	
OTHERS:			

Site _Kabian Park Restoration__ Date _April 16, 2021__ Surveyor(s) _Laurie Gorman_

Host Plants	Insert "X" If Observed	Nectar/Flowering Plants Cont.	Insert "X" If Observed
Plantago erecta (dot-seed plantain)	X	*Cordylanthus rigidus subsp. setigerus*	
Plantago patagonica (desert plantain)		*Cryptantha intermedia*	
Cordylanthus rigidus (bird's beak)		*Cryptantha* spp. (forget-me-nots)	X
Castelleja exserta (purple owl's clover)		*Cylindropuntia sp.*	
Antirrhinum coulterianum (white snapdragon)		*Daucus pusillus*	
Collinsia heterophylla (Chinese houses)		*Deinandra fasciculata*	
*Collinsia concolor (*Purple Chinese Houses*)*		*Dichelostemma capitatum*	X
		Diplacus puniceus	
		Encelia californica	
		Encelia farinosa	X
Nectar/Flowering Plants	**Insert "X" If Observed**	*Eriodictyon crassifolium*	
		Eriogonum fasciculatum	X
Acmispon glaber var. glaber	X	*Eriophyllum confertiflorum*	
Acmispon strigosus	X	*Erodium botyrs**	
Adenostoma fasciculatum		*Erodium cicutarium**	X
Allium praecox		*Erodium sp.**	
Allium spp. (onions)		*Eschscholzia caespitosa*	X
Amsinckia intermedia	X	*Eschscholzia californica*	
Amsinckia spp. (fiddlenecks)	X	*Eucrypta chrysanthemifolia var. chrysanthemifolia*	
Amsinckia tessellata		*Galium aparine*	
*Anagallis arvensis**		*Galium nuttallii subsp. nuttallii*	
Antirrhinum coulterianum		*Gilia sp.*	
Antirrhinum nuttallianum		*Glebionis coronaria**	
Astragalus trichopodus var. lonchus		*Hedypnois cretica**	
Baccharis pilularis		*Helianthemum scoparium*	
Baccharis salicifolia subsp. salicifolia		*Hesperoyucca whipplei*	
Bahiopsis laciniata		*Hirschfeldia incana**	X
Bloomeria clevelandii		*Hypochaeris glabra**	
Bloomeria crocea var. crocea		*Lasthenia californica*	
Bloomeria spp. (goldenstars)		*Lasthenia gracilis*	
*Brassica nigra**		*Lasthenia* spp. (goldfields)	X
Calandrinia ciliata	X	*Lathyrus vestitus*	
Calochortus splendens	X	*Lathyrus vestitus var. alefeldii*	
Calochortus weedii var. weedii		*Layia platyglossa*	X
Calystegia macrostegia	X	*Lepidium nitidum*	
Camissoniopsis sp.		*Leptosiphon liniflorus*	X
*Carduus pycnocephalus subsp. pycnocephalus**		*Linanthus dianthiflorus*	
Castilleja densiflora		*Logfia filaginoides*	
Castilleja coccinea		*Logfia gallica**	
Castilleja exserta		*Lonicera subspicata*	
Caulanthus heterophyllus		*Lupinus bicolor*	
Ceanothus tomentosus		*Lupinus concinnus*	
*Centaurea melitensis**		*Lupinus hirsutissimus*	
Chamaesyce sp.	X	*Lupinus* spp. (lupines)	
Chenopodium californicum		*Lupinus succulentus*	
Chorizanthe sp.		*Lupinus truncatus*	
*Cistus incanus**		*Malacothamnus fasciculatus*	
Clarkia purpurea subsp. quadrivulnera		*Marah macrocarpa*	
Claytonia perfoliata		*Medicago polymorpha**	
Claytonia sp.		*Pectocarya linearis*	
Cneoridium dumosum		*Nemophila menziesii*	X
Collinsia heterophylla		*Gutierrezia californica*	X

Site _Kabian Park Restoration__ Date _April 16, 2021__ Surveyor(s) _Laurie Gorman_

Nectar/Flowering Plants Cont.	Insert "X" If Observed	Nectar/Flowering Plants Cont.	Insert "X" If Observed
*Melilotus indicus**		*Solanum parishii*	
Microseris douglasii subsp. platycarpha		*Solanum xanti*	
Mimulus aurantiacus		*Sonchus asper* subsp. *asper**	
Mimulus brevipes		*Sonchus oleraceus**	
Mirabilis californica		*Stephanomeria sp.*	X
Mirabilis laevis var. crassifolia	X	*Stylocline gnaphaloides*	
Muilla maritima		*Trichostema lanatum*	
Nuttallanthus texanus		*Trichostema parishii*	
Oncosiphon pilulifer	X	*Trifolium depauperatum*	
Oxalis californica		*Trifolium hirtum*	
Oxalis sp.		*Trifolium willdenovii*	
Papaver californicum		*Uropappus lindleyi*	
Penstemon spectabilis var. spectabilis		*Verbena* sp.	
Pentachaeta aurea		*Viola pedunculata*	
Peritoma arborea		*Zeltnera venusta*	
Phacelia parryi		*non-native species	
Phacelia spp. (phacelias)	X	**Notes**	
Pholistoma auritum			
Pholistoma racemosum		(Merge more rows if needed):	
Plagiobothrys spp. (popcorn flowers)	X	Many nectar sources out, although a lot of the Plantago erecta has gone to seed. Still very low butterfly activity overall.	
Plantago erecta	X		
Plantago ovata			
Plantago patagonica			
Platystemon californicus			
Porophyllum gracile			
Primula clevelandii			
Pseudognaphalium biolettii			
Pseudognaphalium californicum			
Pseudognaphalium sp.			
*Raphanus sativus**			
Rhus integrifolia			
Rhus ovata			
Ribes speciosum			
Salvia apiana			
Salvia columbariae			
Salvia mellifera			
Sambucus nigra subsp. caerulea			
Sanicula arguta			
Sanicula bipinnatifida			
Scutellaria tuberosa			
Sidalcea malviflora			
Sidalcea sparsifolia			
*Silene gallica**			
Silene laciniata			
*Sisymbrium orientale**			
Sisymbrium sp.			
Sisyrinchium bellum			

Quino Checkerspot Butterfly Field Form **Habitat Assessment / Focused Survey (# 10)**

Project Number: 21278 Site: Kabian Restoration Park Date: April 20, 2021 Surveyor(s): Laurie Gorman Sites Surveyed: 1,2,3,4, & trails mapped within "Focus Survey Area"

Weather	Time (24 hr)	% Cloud Cover	Wind (range)	Temp (*F*)
Start:	0900	0	4-8	66
Middle:	1145	0	7-14	73
End:	1500	0	2-5	83

Butterfly Species	U = Uncommon C = Common A = Abundant	Butterfly Species	U = Uncommon C = Common A = Abundant
Nymphalidae (Brush Footed Butterflies)		**Lycaenidae (Hairstreaks, Coppers, Blues)**	
***Euphydryas editha quino* (Quino Checkerspot) *precise count**		*Atlides halesus corcorani* (W. Great Purple Hairstreak)	
Euphydryas chalcedona chalcedona (Chalcedon Checkerspot)		*Callophrys augustinus iroides* (Western Elfin)	
Euphydryas chalcedona hennei (Henne's Checkerspot)		*Callophrys perplexa perplexa* (Perplexing Hairstreak)	
Chlosyne gabbii gabbii (Gabb's Checkerspot)		*Strymon melinus pudica* (Common Gray Hairstreak)	
Phyciodes mylitta mylitta (Mylitta Crescent)		*Glaucopsyche lygdamus australis* (Southern Silvery Blue)	
Chlosyne californica (California Patch)		*Glaucopsyche piasus umbrosa* (Smoky Arrowhead Blue)	
Chlosyne leanira wrightii (Wright's Checkerspot)		*Plebejus acmon* (Acmon Blue)	
Nymphalis antiopa antiopa (Mourning Cloak)		*Plebejus lupini monticola* (Clemence's Blue)	
Nymphalis californica (California Tortoiseshell)		*Plebejus melissa paradoxa* (Orange Margined Blue)	
Adelpha californica (California Sister)		*Euphilotes bernardino bernardino* (San Bernardino Blue)	
Junonia coenia grisea (Gray Buckeye)		*Philotes sonorensis sonorensis* (Sonora blue)	
Vanessa annabella (West Coast Lady)		*Celastrina echo echo* (Echo Azure)	
Vanessa atalanta rubria (American Red Admiral)		*Leptotes marina* (Marine Blue)	
Vanessa cardui (Painted Lady)		*Cupido amyntula amyntula* (Western Tailed Blue)	
Vanessa virginiensis (American Lady)		*Hemiargus ceraunus gyas* (Edward's Blue)	
Polygonia satyrus satyrus (Satyr Comma)		*Echinargus isola* (Reakirt's Blue)	
Limenitis lorquinii powelli (Powell's Admiral)		*Brephidium exilis exilis* (Western Pygmy-Blue)	
Speyeria callippe comstockii (Comstock's Fritillary)		*Calephelis wrighti* (Wright's Metalmark)	
Danaiinae (Milkweed Butterflies)		*Apodemia virgulti virgulti* (Behr's Metalmark)	C
Danaus gilippus thersippus (Striated Queen)		*Apodemia virgulti peninsularis* (Peninsular Metalmark)	
Danaus plexippus plexippus (Monarch)		*Lycaena gorgon gorgon* (Gorgon Copper)	
Satyrinae		**Papilionidae (Swallowtails)**	
Coenonympha tullia california (California ringlet)		*Papilio zelicaon* (Anise Swallowtail)	
Cercyonis sthenele behrii (Behr's Wood-nymph)		*Papilio cresphontes* (Giant Swallowtail)	
Hesperidae (Skippers)		*Papilio eurymedon* (Pale Swallowtail)	
Heliopetes ericetorum (Northern White-Skipper)		*Papilio rutulus* (Western Tiger Swallowtail)	
Hylephila phyleus phyleus (Fiery Skipper)		*Papilio polyxenes coloro* (Desert Swallowtail)	
Pyrgus albescens (White Checkered-Skipper)		**Pieridae (Whites and Sulphurs)**	
Erynnis funeralis (Funereal Duskywing)		*Anthocharis sara sara* (Sara's Orangetip)	
Erynnis tristis tristis (Mournful Duskywing)		*Anthocharis cethura cethura* (Desert Orangetip)	
Erynnis brizo lacustra (Lacustra Duskywing)		*Anthocharis lanceolata australis* (Grinnell's Gray Marble)	
Erynnis propertius (Propertius Duskywing)		*Euchloe hyantis* (California Marble)	
Erynnis paucuvius callidus (Artful Duskywing)		*Pieris rapae rapae* (Cabbage White)	U
Erynnis afranius (Afranius Duskywing)		*Pontia sisymbrii sisymbrii* (Spring White)	
Pholisora catullus (Common Sootywing)		*Pontia beckerii* (Becker's White)	
Lerodea eufala eufala (Eufala Skipper)		*Pontia protodice* (Checkered White)	
Atalopedes campestris campestris (Sachem)		*Zerene eurydice* (California Dogface)	
Polites sabuleti sabuleti (Sandhill Skipper)		*Phoebis sennae marcellina* (Cloudless Sulphur)	
Hesperia juba (Juba Skipper)		*Colias harfordii* (Harford's Sulphur)	
Hesperia columbia (Columbia Skipper)		*Colias eurytheme* (Orange Sulphur)	
Copaeodes aurantiaca (Orange Skipperling)		*Abaeis nicippe* (Sleepy Orange)	
Ochlodes agricola agricola (Rural Skipper)		*Nathalis iole* (Dainty Sulphur)	
OTHERS:			

Site _Kabian Park Restoration__ Date _April 20, 2021__ Surveyor(s) _Laurie Gorman_

Host Plants	Insert "X" If Observed	Nectar/Flowering Plants Cont.	Insert "X" If Observed
Plantago erecta (dot-seed plantain)	X	*Cordylanthus rigidus subsp. setigerus*	
Plantago patagonica (desert plantain)		*Cryptantha intermedia*	
Cordylanthus rigidus (bird's beak)		*Cryptantha* spp. (forget-me-nots)	X
Castelleja exserta (purple owl's clover)		*Cylindropuntia sp.*	
Antirrhinum coulterianum (white snapdragon)		*Daucus pusillus*	
Collinsia heterophylla (Chinese houses)		*Deinandra fasciculata*	
*Collinsia concolor (*Purple Chinese Houses*)*		*Dichelostemma capitatum*	X
		Diplacus puniceus	
		Encelia californica	
		Encelia farinosa	X
Nectar/Flowering Plants	**Insert "X" If Observed**	*Eriodictyon crassifolium*	
		Eriogonum fasciculatum	X
Acmispon glaber var. glaber	X	*Eriophyllum confertiflorum*	
Acmispon strigosus	X	*Erodium botyrs**	
Adenostoma fasciculatum		*Erodium cicutarium**	X
Allium praecox		*Erodium sp.**	
Allium spp. (onions)		*Eschscholzia caespitosa*	
Amsinckia intermedia	X	*Eschscholzia californica*	
Amsinckia spp. (fiddlenecks)	X	*Eucrypta chrysanthemifolia var. chrysanthemifolia*	
Amsinckia tessellata		*Galium aparine*	
*Anagallis arvensis**		*Galium nuttallii subsp. nuttallii*	
Antirrhinum coulterianum		*Gilia sp.*	
Antirrhinum nuttallianum		*Glebionis coronaria**	
Astragalus trichopodus var. lonchus		*Hedypnois cretica**	
Baccharis pilularis		*Helianthemum scoparium*	
Baccharis salicifolia subsp. salicifolia		*Hesperoyucca whipplei*	
Bahiopsis laciniata		*Hirschfeldia incana**	X
Bloomeria clevelandii		*Hypochaeris glabra**	
Bloomeria crocea var. crocea		*Lasthenia californica*	
Bloomeria spp. (goldenstars)		*Lasthenia gracilis*	
*Brassica nigra**		*Lasthenia* spp. (goldfields)	X
Calandrinia ciliata		*Lathyrus vestitus*	
Calochortus splendens	X	*Lathyrus vestitus var. alefeldii*	
Calochortus weedii var. weedii		*Layia platyglossa*	
Calystegia macrostegia		*Lepidium nitidum*	
Camissoniopsis sp.		*Leptosiphon liniflorus*	
*Carduus pycnocephalus subsp. pycnocephalus**		*Linanthus dianthiflorus*	
Castilleja densiflora		*Logfia filaginoides*	
Castilleja coccinea		*Logfia gallica**	
Castilleja exserta		*Lonicera subspicata*	
Caulanthus heterophyllus		*Lupinus bicolor*	
Ceanothus tomentosus		*Lupinus concinnus*	
*Centaurea melitensis**		*Lupinus hirsutissimus*	
Chamaesyce sp.	X	*Lupinus* spp. (lupines)	
Chenopodium californicum		*Lupinus succulentus*	
Chorizanthe sp.		*Lupinus truncatus*	
*Cistus incanus**		*Malacothamnus fasciculatus*	
Clarkia purpurea subsp. quadrivulnera		*Marah macrocarpa*	
Claytonia perfoliata		*Medicago polymorpha**	
Claytonia sp.		*Pectocarya linearis*	
Cneoridium dumosum		*Nemophila menziesii*	
Collinsia heterophylla		*Gutierrezia californica*	

Site _Kabian Park Restoration__ Date _April 20, 2021__ Surveyor(s) _Laurie Gorman_

Nectar/Flowering Plants Cont.	Insert "X" If Observed	Nectar/Flowering Plants Cont.	Insert "X" If Observed
*Melilotus indicus**		*Solanum parishii*	
Microseris douglasii subsp. platycarpha		*Solanum xanti*	
Mimulus aurantiacus		*Sonchus asper* subsp. *asper**	
Mimulus brevipes		*Sonchus oleraceus**	
Mirabilis californica		*Stephanomeria sp.*	
Mirabilis laevis var. crassifolia	X	*Stylocline gnaphaloides*	
Muilla maritima		*Trichostema lanatum*	
Nuttallanthus texanus		*Trichostema parishii*	
Oncosiphon pilulifer	X	*Trifolium depauperatum*	
Oxalis californica		*Trifolium hirtum*	
Oxalis sp.		*Trifolium willdenovii*	
Papaver californicum		*Uropappus lindleyi*	
Penstemon spectabilis var. spectabilis		*Verbena* sp.	
Pentachaeta aurea		*Viola pedunculata*	
Peritoma arborea		*Zeltnera venusta*	
Phacelia parryi		*non-native species	
Phacelia spp. (phacelias)		**Notes**	
Pholistoma auritum			
Pholistoma racemosum		(Merge more rows if needed):	
Plagiobothrys spp. (popcorn flowers)	X	Fewer nectar sources out, a lot of the Plantago erecta has gone to seed. Still very low butterfly activity overall.	
Plantago erecta	X		
Plantago ovata			
Plantago patagonica			
Platystemon californicus			
Porophyllum gracile			
Primula clevelandii			
Pseudognaphalium biolettii			
Pseudognaphalium californicum			
Pseudognaphalium sp.			
*Raphanus sativus**			
Rhus integrifolia			
Rhus ovata			
Ribes speciosum			
Salvia apiana			
Salvia columbariae			
Salvia mellifera			
Sambucus nigra subsp. caerulea			
Sanicula arguta			
Sanicula bipinnatifida			
Scutellaria tuberosa			
Sidalcea malviflora			
Sidalcea sparsifolia			
*Silene gallica**			
Silene laciniata			
*Sisymbrium orientale**			
Sisymbrium sp.			
Sisyrinchium bellum			

Quino Checkerspot Butterfly Field Form **Habitat Assessment / Focused Survey (# 11)**

Project Number: 21278 Site: Kabian Restoration Park__ Date: April 29, 2021_Surveyor(s): Laurie Gorman_Sites Surveyed: 1,2,3,4, & trails mapped within "Focus Survey Area"

Weather	Time (24 hr)	% Cloud Cover	Wind (range)	Temp (*F*)
Start:	0900	0	0-1	72
Middle:	1200	0	2-4	87
End:	1530	0	2-5	89

Butterfly Species	U = Uncommon C = Common A = Abundant	Butterfly Species	U = Uncommon C = Common A = Abundant
Nymphalidae (Brush Footed Butterflies)		**Lycaenidae (Hairstreaks, Coppers, Blues)**	
***Euphydryas editha quino* (Quino Checkerspot) *precise count**		*Atlides halesus corcorani* (W. Great Purple Hairstreak)	
Euphydryas chalcedona chalcedona (Chalcedon Checkerspot)		*Callophrys augustinus iroides* (Western Elfin)	
Euphydryas chalcedona hennei (Henne's Checkerspot)		*Callophrys perplexa perplexa* (Perplexing Hairstreak)	
Chlosyne gabbii gabbii (Gabb's Checkerspot)		*Strymon melinus pudica* (Common Gray Hairstreak)	
Phyciodes mylitta mylitta (Mylitta Crescent)		*Glaucopsyche lygdamus australis* (Southern Silvery Blue)	
Chlosyne californica (California Patch)		*Glaucopsyche piasus umbrosa* (Smoky Arrowhead Blue)	
Chlosyne leanira wrightii (Wright's Checkerspot)		*Plebejus acmon* (Acmon Blue)	U
Nymphalis antiopa antiopa (Mourning Cloak)		*Plebejus lupini monticola* (Clemence's Blue)	
Nymphalis californica (California Tortoiseshell)		*Plebejus melissa paradoxa* (Orange Margined Blue)	
Adelpha californica (California Sister)		*Euphilotes bernardino bernardino* (San Bernardino Blue)	
Junonia coenia grisea (Gray Buckeye)	U	*Philotes sonorensis sonorensis* (Sonora blue)	
Vanessa annabella (West Coast Lady)		*Celastrina echo echo* (Echo Azure)	
Vanessa atalanta rubria (American Red Admiral)		*Leptotes marina* (Marine Blue)	
Vanessa cardui (Painted Lady)		*Cupido amyntula amyntula* (Western Tailed Blue)	
Vanessa virginiensis (American Lady)		*Hemiargus ceraunus gyas* (Edward's Blue)	
Polygonia satyrus satyrus (Satyr Comma)		*Echinargus isola* (Reakirt's Blue)	
Limenitis lorquinii powelli (Powell's Admiral)		*Brephidium exilis exilis* (Western Pygmy-Blue)	
Speyeria callippe comstockii (Comstock's Fritillary)		*Calephelis wrighti* (Wright's Metalmark)	
Danaiinae (Milkweed Butterflies)		*Apodemia virgulti virgulti* (Behr's Metalmark)	C
Danaus gilippus thersippus (Striated Queen)		*Apodemia virgulti peninsularis* (Peninsular Metalmark)	
Danaus plexippus plexippus (Monarch)		*Lycaena gorgon gorgon* (Gorgon Copper)	
Satyrinae		**Papilionidae (Swallowtails)**	
Coenonympha tullia california (California ringlet)		*Papilio zelicaon* (Anise Swallowtail)	
Cercyonis sthenele behrii (Behr's Wood-nymph)		*Papilio cresphontes* (Giant Swallowtail)	
Hesperidae (Skippers)		*Papilio eurymedon* (Pale Swallowtail)	
Heliopetes ericetorum (Northern White-Skipper)		*Papilio rutulus* (Western Tiger Swallowtail)	
Hylephila phyleus phyleus (Fiery Skipper)		*Papilio polyxenes coloro* (Desert Swallowtail)	
Pyrgus albescens (White Checkered-Skipper)		**Pieridae (Whites and Sulphurs)**	
Erynnis funeralis (Funereal Duskywing)		*Anthocharis sara sara* (Sara's Orangetip)	
Erynnis tristis tristis (Mournful Duskywing)		*Anthocharis cethura cethura* (Desert Orangetip)	
Erynnis brizo lacustra (Lacustra Duskywing)		*Anthocharis lanceolata australis* (Grinnell's Gray Marble)	
Erynnis propertius (Propertius Duskywing)		*Euchloe hyantis* (California Marble)	
Erynnis paucuvius callidus (Artful Duskywing)		*Pieris rapae rapae* (Cabbage White)	U
Erynnis afranius (Afranius Duskywing)		*Pontia sisymbrii sisymbrii* (Spring White)	
Pholisora catullus (Common Sootywing)		*Pontia beckerii* (Becker's White)	
Lerodea eufala eufala (Eufala Skipper)		*Pontia protodice* (Checkered White)	
Atalopedes campestris campestris (Sachem)		*Zerene eurydice* (California Dogface)	
Polites sabuleti sabuleti (Sandhill Skipper)		*Phoebis sennae marcellina* (Cloudless Sulphur)	
Hesperia juba (Juba Skipper)		*Colias harfordii* (Harford's Sulphur)	
Hesperia columbia (Columbia Skipper)		*Colias eurytheme* (Orange Sulphur)	
Copaeodes aurantiaca (Orange Skipperling)		*Abaeis nicippe* (Sleepy Orange)	
Ochlodes agricola agricola (Rural Skipper)		*Nathalis iole* (Dainty Sulphur)	
OTHERS:			

Site _Kabian Park Restoration__ Date _April 29, 2021__ Surveyor(s) _Laurie Gorman_

Host Plants	Insert "X" If Observed	Nectar/Flowering Plants Cont.	Insert "X" If Observed
Plantago erecta (dot-seed plantain)	X	*Cordylanthus rigidus subsp. setigerus*	
Plantago patagonica (desert plantain)		*Cryptantha intermedia*	
Cordylanthus rigidus (bird's beak)		*Cryptantha* spp. (forget-me-nots)	X
Castelleja exserta (purple owl's clover)		*Cylindropuntia sp.*	
Antirrhinum coulterianum (white snapdragon)		*Daucus pusillus*	
Collinsia heterophylla (Chinese houses)		*Deinandra fasciculata*	
*Collinsia concolor (*Purple Chinese Houses*)*		*Dichelostemma capitatum*	
		Diplacus puniceus	
		Encelia californica	
		Encelia farinosa	X
Nectar/Flowering Plants	**Insert "X" If Observed**	*Eriodictyon crassifolium*	
		Eriogonum fasciculatum	X
Acmispon glaber var. glaber	X	*Eriophyllum confertiflorum*	
Acmispon strigosus	X	*Erodium botyrs**	
Adenostoma fasciculatum		*Erodium cicutarium**	X
Allium praecox		*Erodium sp.**	
Allium spp. (onions)		*Eschscholzia caespitosa*	
Amsinckia intermedia	X	*Eschscholzia californica*	
Amsinckia spp. (fiddlenecks)	X	*Eucrypta chrysanthemifolia var. chrysanthemifolia*	
Amsinckia tessellata		*Galium aparine*	
*Anagallis arvensis**		*Galium nuttallii subsp. nuttallii*	
Antirrhinum coulterianum		*Gilia sp.*	
Antirrhinum nuttallianum		*Glebionis coronaria**	
Astragalus trichopodus var. lonchus		*Hedypnois cretica**	
Baccharis pilularis		*Helianthemum scoparium*	
Baccharis salicifolia subsp. salicifolia		*Hesperoyucca whipplei*	
Bahiopsis laciniata		*Hirschfeldia incana**	X
Bloomeria clevelandii		*Hypochaeris glabra**	
Bloomeria crocea var. crocea		*Lasthenia californica*	
Bloomeria spp. (goldenstars)		*Lasthenia gracilis*	
*Brassica nigra**		*Lasthenia* spp. (goldfields)	
Calandrinia ciliata		*Lathyrus vestitus*	
Calochortus splendens	X	*Lathyrus vestitus var. alefeldii*	
Calochortus weedii var. weedii		*Layia platyglossa*	
Calystegia macrostegia		*Lepidium nitidum*	
Camissoniopsis sp.		*Leptosiphon liniflorus*	
*Carduus pycnocephalus subsp. pycnocephalus**		*Linanthus dianthiflorus*	
Castilleja densiflora		*Logfia filaginoides*	
Castilleja coccinea		*Logfia gallica**	
Castilleja exserta		*Lonicera subspicata*	
Caulanthus heterophyllus		*Lupinus bicolor*	
Ceanothus tomentosus		*Lupinus concinnus*	
*Centaurea melitensis**		*Lupinus hirsutissimus*	
Chamaesyce sp.	X	*Lupinus* spp. (lupines)	
Chenopodium californicum		*Lupinus succulentus*	
Chorizanthe sp.		*Lupinus truncatus*	
*Cistus incanus**		*Malacothamnus fasciculatus*	
Clarkia purpurea subsp. quadrivulnera		*Marah macrocarpa*	
Claytonia perfoliata		*Medicago polymorpha**	
Claytonia sp.		*Pectocarya linearis*	
Cneoridium dumosum		*Nemophila menziesii*	
Collinsia heterophylla		*Gutierrezia californica*	

Site _Kabian Park Restoration__ Date _April 29, 2021__ Surveyor(s) _Laurie Gorman_

Nectar/Flowering Plants Cont.	Insert "X" If Observed	Nectar/Flowering Plants Cont.	Insert "X" If Observed
*Melilotus indicus**		*Solanum parishii*	
Microseris douglasii subsp. platycarpha		*Solanum xanti*	
Mimulus aurantiacus		*Sonchus asper* subsp. *asper**	
Mimulus brevipes		*Sonchus oleraceus**	
Mirabilis californica		*Stephanomeria sp.*	X
Mirabilis laevis var. crassifolia		*Stylocline gnaphaloides*	
Muilla maritima		*Trichostema lanatum*	
Nuttallanthus texanus		*Trichostema parishii*	
Oncosiphon pilulifer	X	*Trifolium depauperatum*	
Oxalis californica		*Trifolium hirtum*	
Oxalis sp.		*Trifolium willdenovii*	
Papaver californicum		*Uropappus lindleyi*	
Penstemon spectabilis var. spectabilis		*Verbena* sp.	
Pentachaeta aurea		*Viola pedunculata*	
Peritoma arborea		*Zeltnera venusta*	
Phacelia parryi		*non-native species	
Phacelia spp. (phacelias)	X	**Notes**	
Pholistoma auritum			
Pholistoma racemosum		(Merge more rows if needed):	
Plagiobothrys spp. (popcorn flowers)			
Plantago erecta	X	Fewer nectar sources out. Much of *Plantago erecta* has gone to seed. Very low butterfly activity overall.	
Plantago ovata			
Plantago patagonica			
Platystemon californicus			
Porophyllum gracile			
Primula clevelandii			
Pseudognaphalium biolettii			
Pseudognaphalium californicum			
Pseudognaphalium sp.			
*Raphanus sativus**			
Rhus integrifolia			
Rhus ovata			
Ribes speciosum			
Salvia apiana			
Salvia columbariae			
Salvia mellifera			
Sambucus nigra subsp. caerulea			
Sanicula arguta			
Sanicula bipinnatifida			
Scutellaria tuberosa			
Sidalcea malviflora			
Sidalcea sparsifolia			
*Silene gallica**			
Silene laciniata			
*Sisymbrium orientale**			
Sisymbrium sp.			
Sisyrinchium bellum			

Quino Checkerspot Butterfly Field Form **Habitat Assessment / Focused Survey (# 12)**

Project Number: 21278 Site: Kabian Restoration Park__ Date: May 7, 2021_Surveyor(s): Laurie Gorman_Sites Surveyed: 1,2,3,4, & trails mapped within "Focus Survey Area"

Weather	Time (24 hr)	% Cloud Cover	Wind (range)	Temp (*F*)
Start:	0915	0	0-1	62
Middle:	1200	0	1-3	72
End:	1420	0	2-5	80

Butterfly Species	U = Uncommon C = Common A = Abundant	Butterfly Species	U = Uncommon C = Common A = Abundant
Nymphalidae (Brush Footed Butterflies)		**Lycaenidae (Hairstreaks, Coppers, Blues)**	
***Euphydryas editha quino* (Quino Checkerspot) *precise count**		*Atlides halesus corcorani* (W. Great Purple Hairstreak)	
Euphydryas chalcedona chalcedona (Chalcedon Checkerspot)		*Callophrys augustinus iroides* (Western Elfin)	
Euphydryas chalcedona hennei (Henne's Checkerspot)		*Callophrys perplexa perplexa* (Perplexing Hairstreak)	
Chlosyne gabbii gabbii (Gabb's Checkerspot)		*Strymon melinus pudica* (Common Gray Hairstreak)	
Phyciodes mylitta mylitta (Mylitta Crescent)		*Glaucopsyche lygdamus australis* (Southern Silvery Blue)	
Chlosyne californica (California Patch)		*Glaucopsyche piasus umbrosa* (Smoky Arrowhead Blue)	
Chlosyne leanira wrightii (Wright's Checkerspot)		*Plebejus acmon* (Acmon Blue)	U
Nymphalis antiopa antiopa (Mourning Cloak)		*Plebejus lupini monticola* (Clemence's Blue)	
Nymphalis californica (California Tortoiseshell)		*Plebejus melissa paradoxa* (Orange Margined Blue)	
Adelpha californica (California Sister)		*Euphilotes bernardino bernardino* (San Bernardino Blue)	
Junonia coenia grisea (Gray Buckeye)		*Philotes sonorensis sonorensis* (Sonora blue)	
Vanessa annabella (West Coast Lady)		*Celastrina echo echo* (Echo Azure)	
Vanessa atalanta rubria (American Red Admiral)		*Leptotes marina* (Marine Blue)	
Vanessa cardui (Painted Lady)		*Cupido amyntula amyntula* (Western Tailed Blue)	
Vanessa virginiensis (American Lady)		*Hemiargus ceraunus gyas* (Edward's Blue)	
Polygonia satyrus satyrus (Satyr Comma)		*Echinargus isola* (Reakirt's Blue)	
Limenitis lorquinii powelli (Powell's Admiral)		*Brephidium exilis exilis* (Western Pygmy-Blue)	
Speyeria callippe comstockii (Comstock's Fritillary)		*Calephelis wrighti* (Wright's Metalmark)	
Danaiinae (Milkweed Butterflies)		*Apodemia virgulti virgulti* (Behr's Metalmark)	U
Danaus gilippus thersippus (Striated Queen)		*Apodemia virgulti peninsularis* (Peninsular Metalmark)	
Danaus plexippus plexippus (Monarch)		*Lycaena gorgon gorgon* (Gorgon Copper)	
Satyrinae		**Papilionidae (Swallowtails)**	
Coenonympha tullia california (California ringlet)		*Papilio zelicaon* (Anise Swallowtail)	
Cercyonis sthenele behrii (Behr's Wood-nymph)		*Papilio cresphontes* (Giant Swallowtail)	
Hesperidae (Skippers)		*Papilio eurymedon* (Pale Swallowtail)	
Heliopetes ericetorum (Northern White-Skipper)		*Papilio rutulus* (Western Tiger Swallowtail)	
Hylephila phyleus phyleus (Fiery Skipper)		*Papilio polyxenes coloro* (Desert Swallowtail)	
Pyrgus albescens (White Checkered-Skipper)		**Pieridae (Whites and Sulphurs)**	
Erynnis funeralis (Funereal Duskywing)		*Anthocharis sara sara* (Sara's Orangetip)	
Erynnis tristis tristis (Mournful Duskywing)		*Anthocharis cethura cethura* (Desert Orangetip)	
Erynnis brizo lacustra (Lacustra Duskywing)		*Anthocharis lanceolata australis* (Grinnell's Gray Marble)	
Erynnis propertius (Propertius Duskywing)		*Euchloe hyantis* (California Marble)	
Erynnis paucuvius callidus (Artful Duskywing)		*Pieris rapae rapae* (Cabbage White)	U
Erynnis afranius (Afranius Duskywing)		*Pontia sisymbrii sisymbrii* (Spring White)	
Pholisora catullus (Common Sootywing)		*Pontia beckerii* (Becker's White)	
Lerodea eufala eufala (Eufala Skipper)		*Pontia protodice* (Checkered White)	
Atalopedes campestris campestris (Sachem)		*Zerene eurydice* (California Dogface)	
Polites sabuleti sabuleti (Sandhill Skipper)		*Phoebis sennae marcellina* (Cloudless Sulphur)	
Hesperia juba (Juba Skipper)		*Colias harfordii* (Harford's Sulphur)	
Hesperia columbia (Columbia Skipper)		*Colias eurytheme* (Orange Sulphur)	
Copaeodes aurantiaca (Orange Skipperling)		*Abaeis nicippe* (Sleepy Orange)	
Ochlodes agricola agricola (Rural Skipper)		*Nathalis iole* (Dainty Sulphur)	
OTHERS:			

Site _Kabian Park Restoration_ Date _May 7, 2021_ Surveyor(s) _Laurie Gorman_

Host Plants	Insert "X" If Observed	Nectar/Flowering Plants Cont.	Insert "X" If Observed
Plantago erecta (dot-seed plantain)	X	*Cordylanthus rigidus subsp. setigerus*	
Plantago patagonica (desert plantain)		*Cryptantha intermedia*	
Cordylanthus rigidus (bird's beak)		*Cryptantha* spp. (forget-me-nots)	
Castelleja exserta (purple owl's clover)		*Cylindropuntia sp.*	
Antirrhinum coulterianum (white snapdragon)		*Daucus pusillus*	
Collinsia heterophylla (Chinese houses)		*Deinandra fasciculata*	
*Collinsia concolor (*Purple Chinese Houses*)*		*Dichelostemma capitatum*	
		Diplacus puniceus	
		Encelia californica	
		Encelia farinosa	X
Nectar/Flowering Plants	**Insert "X" If Observed**	*Eriodictyon crassifolium*	
		Eriogonum fasciculatum	X
Acmispon glaber var. glaber	X	*Eriophyllum confertiflorum*	
Acmispon strigosus	X	*Erodium botyrs**	
Adenostoma fasciculatum		*Erodium cicutarium**	X
Allium praecox		*Erodium sp.**	
Allium spp. (onions)		*Eschscholzia caespitosa*	
Amsinckia intermedia		*Eschscholzia californica*	
Amsinckia spp. (fiddlenecks)		*Eucrypta chrysanthemifolia var. chrysanthemifolia*	
Amsinckia tessellata		*Galium aparine*	
*Anagallis arvensis**		*Galium nuttallii subsp. nuttallii*	
Antirrhinum coulterianum		*Gilia sp.*	
Antirrhinum nuttallianum		*Glebionis coronaria**	
Astragalus trichopodus var. lonchus		*Hedypnois cretica**	
Baccharis pilularis		*Helianthemum scoparium*	
Baccharis salicifolia subsp. salicifolia		*Hesperoyucca whipplei*	
Bebbia juncea	X	*Hirschfeldia incana**	X
Bloomeria clevelandii		*Hypochaeris glabra**	
Bloomeria crocea var. crocea		*Lasthenia californica*	
Bloomeria spp. (goldenstars)		*Lasthenia gracilis*	
*Brassica nigra**		*Lasthenia* spp. (goldfields)	
Calandrinia ciliata		*Lathyrus vestitus*	
Calochortus splendens	X	*Lathyrus vestitus var. alefeldii*	
Calochortus weedii var. weedii		*Layia platyglossa*	
Calystegia macrostegia		*Lepidium nitidum*	
Camissoniopsis sp.		*Leptosiphon liniflorus*	
*Carduus pycnocephalus subsp. pycnocephalus**		*Linanthus dianthiflorus*	
Castilleja densiflora		*Logfia filaginoides*	
Castilleja coccinea		*Logfia gallica**	
Castilleja exserta		*Lonicera subspicata*	
Caulanthus heterophyllus		*Lupinus bicolor*	
Ceanothus tomentosus		*Lupinus concinnus*	
*Centaurea melitensis**		*Lupinus hirsutissimus*	
Chamaesyce sp.	X	*Lupinus* spp. (lupines)	
Chenopodium californicum		*Lupinus succulentus*	
Chorizanthe sp.		*Lupinus truncatus*	
*Cistus incanus**		*Malacothamnus fasciculatus*	
Clarkia purpurea subsp. quadrivulnera		*Marah macrocarpa*	
Claytonia perfoliata		*Medicago polymorpha**	
Claytonia sp.		*Pectocarya linearis*	
Cneoridium dumosum		*Nemophila menziesii*	
Collinsia heterophylla		*Gutierrezia californica*	

Site _Kabian Park Restoration__ Date _May 7, 2021__ Surveyor(s) __Laurie Gorman_

Nectar/Flowering Plants Cont.	Insert "X" If Observed	Nectar/Flowering Plants Cont.	Insert "X" If Observed
*Melilotus indicus**		*Solanum parishii*	
Microseris douglasii subsp. platycarpha		*Solanum xanti*	
Mimulus aurantiacus		*Sonchus asper* subsp. *asper**	
Mimulus brevipes		*Sonchus oleraceus**	
Mirabilis californica		*Stephanomeria sp.*	X
Mirabilis laevis var. crassifolia	X	*Stylocline gnaphaloides*	
Muilla maritima		*Trichostema lanatum*	
Nuttallanthus texanus		*Trichostema parishii*	
Oncosiphon pilulifer	X	*Trifolium depauperatum*	
Oxalis californica		*Trifolium hirtum*	
Oxalis sp.		*Trifolium willdenovii*	
Papaver californicum		*Uropappus lindleyi*	
Penstemon spectabilis var. spectabilis		*Verbena* sp.	
Pentachaeta aurea		*Viola pedunculata*	
Peritoma arborea		*Zeltnera venusta*	
Phacelia parryi		*non-native species	
Phacelia spp. (phacelias)	X	**Notes**	
Pholistoma auritum			
Pholistoma racemosum		(Merge more rows if needed):	
Plagiobothrys spp. (popcorn flowers)		Fewer annual nectar sources out. *Plantago erecta* has gone to seed. Very low butterfly activity overall.	
Plantago erecta			
Plantago ovata			
Plantago patagonica			
Platystemon californicus			
Porophyllum gracile			
Primula clevelandii			
Pseudognaphalium biolettii			
Pseudognaphalium californicum			
Pseudognaphalium sp.			
*Raphanus sativus**			
Rhus integrifolia			
Rhus ovata			
Ribes speciosum			
Salvia apiana			
Salvia columbariae			
Salvia mellifera			
Sambucus nigra subsp. caerulea			
Sanicula arguta			
Sanicula bipinnatifida			
Scutellaria tuberosa			
Sidalcea malviflora			
Sidalcea sparsifolia			
*Silene gallica**			
Silene laciniata			
*Sisymbrium orientale**			
Sisymbrium sp.			
Sisyrinchium bellum			

APPENDIX B – Coastal California Gnatcatcher (CAGN) Focused Survey Report

July 8, 2021
21278

Ms. Stacey Love
Recovery Permit Coordination
United States Fish and Wildlife Service
2177 Salk Avenue, Suite 250
Carlsbad, CA 92008

SUBJECT: **RESULTS OF THE 2021 COASTAL CALIFORNIA GNATCATCHER (*POLIOPTILA CALIFORNICA CALIFORNICA*) FOCUSED SURVEYS FOR THE PROPOSED KABIAN PARK RESTORATION PROJECT, RIVERSIDE COUNTY, CALIFORNIA**

Dear Ms. Love:

Chambers Group, Inc. (Chambers Group) was contracted by the Riverside County Regional Park and Open-Space District (RivCo Parks, District) to conduct focused surveys for coastal California gnatcatcher (*Polioptila californica californica;* CAGN) during the spring season of 2021 for the proposed Kabian Park Restoration project (Proposed Project) located in Riverside County, California. Six breeding season CAGN surveys were conducted within suitable habitat in order to determine presence or absence of CAGN.

Project Location and Background

Roy W. Kabian Memorial Park (Kabian Park or Park) is a 640.42-acre reserve located at 28001 Goetz Road in the City of Perris (City) within the western region of Riverside County (County), California (Attachment 1: Project Location and Vicinity Map). The Park is located within a corridor of open space contiguous with San Jacinto River to the west that feeds into Canyon Lake, and with connectivity to Lake Elsinore approximately 5 miles to the southwest; this connectivity is constrained by a bottleneck of residential development between Interstate 15 and Lake Elsinore. Perris Reservoir is located approximately 9 miles to the northeast, past a network of agricultural fields. The Park is further surrounded by residential development.

The Park includes approximately one acre of developed space and 639 acres of hiking and equestrian trails owned and managed by the RivCo Parks. The Park provides a variety of trails for hiking, running, mountain biking, and equestrian use, as well as wildlife viewing and nature photography. Additional amenities within the Park include gazebos with barbeque grills, drinking fountains, and playground facilities.

The main entrance to the Park is located north along Kabian Park Road in the southeastern corner of the Park, with an unpaved gravel pad to provide parking. However, a number of unofficial access points currently exist along all borders of the Park. These access points have led to unauthorized Off-Highway Vehicle (OHV) entry to and use within the Park, leading to the deterioration of native habitat in the area. RivCo Parks was granted funds by the California Resources Agency Department of Parks and Recreation, Off-Highway Motor Vehicle Recreation Division, for restoration activities within the Park. The Proposed Project involves installation of new fencing, gates, and signage; removal of unauthorized trails; and restoration of native habitat (Attachment 1). Focused surveys for CAGN were conducted within these Proposed Project features, plus a 500-foot buffer (Attachment 2: CAGN Survey Area on United States Geographical Survey [USGS] Quadrangle Map).

CAGN Natural History

The CAGN is a federally listed threatened subspecies of California gnatcatcher, and a California Species of Special Concern. The range of this species extends from southern California west of the Peninsular and Transverse ranges south into

northwestern Baja California, Mexico. The CAGN has a short and slender bill, a tail that is mostly black with white edges, grayish plumage overall, a back and wings that are gray with brown tinge, and a white eye ring. Breeding males have a black cap. It is a permanent resident of Diegan, Riversidian, and Venturan sage scrub sub-associations found from sea level to 2,500 feet (765 meters) in elevation. This species lives and breeds within California sagebrush (*Artemisia californica*) dominated habitats and also occurs in mixed scrub habitats with lesser percentages of this favored shrub (Atwood and Bontrager 2001). The largest threat to the species is a loss of habitat. Other threats include wildfires and nest parasitism.

Methods

Habitat Assessment

The Survey Area for CAGN was determined by conducting a habitat assessment within the Proposed Project and includes a 500-foot buffer surrounding the Proposed Project site. Suitable habitat for CAGN was mapped within this Survey Area.

Prior to entering the field, a literature search was performed of the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB; CDFW 2021) and the USFWS Species Occurrence database (USFWS 2021) for CAGN records of occurrence within 5 miles of the Survey Area. In addition, Google Earth satellite images were reviewed to identify coastal scrub habitat potentially suitable for CAGN. These areas were then ground-truthed and refined during the first CAGN focused survey by United States Fish and Wildlife Service (USFWS)-permitted biologist Heather Franklin (TE 53787B-1). Handheld Global Positioning System (GPS) units and aerial maps were used to outline portions of the Proposed Project area that would be surveyed during the 2021 CAGN focused surveys.

The biologist noted the general vegetation types, species observed, and the potential for CAGN to occur within the Survey Area. Plant communities and associations were determined in accordance with the categories set forth in Sawyer et al. (2009). Plant nomenclature follows that of Hickman (1993).

Focused Surveys

Focused surveys were conducted within habitat that was determined to be suitable for CAGN in 2021. A total of six breeding season CAGN surveys were conducted by USFWS-permitted biologist Heather Franklin. Austin Burke, Kendall Blackmon, and Jessica Calvillo accompanied Heather during the surveys under supervised status. Survey methodology followed current protocol (USFWS 1997) and the conditions of the permitted biologists' species recovery permit. Each survey was conducted during favorable weather conditions to maximize detection probability.

Survey periods generally occurred between 0600 and 1200 hours. All surveys were conducted on foot by looking and listening for the target species in suitable habitat within the Survey Area for CAGN.

Observations of the songs, scolds, whisper calls, flight patterns, behaviors, and plumage characteristics were used in conjunction to ascertain presence/absence of CAGN. The biologists conducted the surveys from optimal stationary locations to see and hear the target species without harming any other wildlife species in the area.

The permitted biologist used prerecorded CAGN vocalizations to elicit CAGN within and/or adjacent to all suitable habitat. After a brief and silent acclimation period of one to two minutes, the biologist broadcasted the prerecorded CAGN vocalizations at intervals, mimicking natural vocalization conditions while walking meandering transects through the Survey Area (i.e., broadcast at natural volume occurring for approximately 15 seconds followed by 1 to 2 minutes of silence). The distance between broadcast locations varied from 60 to 100 feet (20 to 30 meters), depending on topography, vegetation, and other factors. If a CAGN was detected, the taped vocalization broadcast was ceased at that location; and the location, numbers, status, and demographic data of the target species were recorded.

The locations of any detected CAGN and other sensitive species incidentally detected were recorded using hand-held GPS units and photo-documented when possible. In addition, numbers and locations of any brown-headed cowbirds (*Molothrus ater*; BHCO) observed were recorded.

Survey conditions including the date, time, surveyors, and weather was recorded for each CAGN focused survey. Chambers Group biologists compiled all wildlife species observed or detected during each survey day into a single comprehensive species list for the combined survey effort.

Results

Habitat Assessment

Based on the literature search, a total of 31 CNDDB and 487 USFWS historical records of occurrence for CAGN are documented within 5 miles of the Proposed Project Survey Area.

Based on the CAGN habitat assessment, the Proposed Project and Survey Area contains CAGN suitable habitat ranging from low to moderate quality. A total of 209.69 acres of CAGN suitable habitat was mapped as the 2021 Survey Area for CAGN (Attachment 3), with a total of 14.67 acres occurring within the Proposed Project Site. The suitable habitat occurring within the Survey Area is primarily moderate quality with low-lying shrubs vegetated throughout. The other portions of the Survey Area that were not considered suitable habitat consisted of bare ground, with grassland intermixed, and a few small patches of disturbed habitat and peninsular Juniper woodland. The suitable habitat within the Survey Area is composed open Riversidean sage scrub. Photographs of the Survey Area are provided in Attachment 5.

Focused Surveys

Permitted biologist Heather Franklin conducted a total of six CAGN focused surveys within the Survey Area from March 18 to April 30, 2021. Survey conditions are presented in Table 1.

Table 1: Survey Conditions

Date	Surveyor	Time		Temperature*		Wind**		Cloud Cover		Precipitation	
		Start	End	Start	End	Start	End	Start	End	Start	End
03/18/21	Heather Franklin	0700	1315	50	70	1-2	1-2	20	0	0	0
03/25/21	H. Franklin and Austin Burke	0730	1330	48	57	4-7	8-13	95	40	0	0
04/08/21	H. Franklin	0700	1230	53	76	0-1	2-6	0	0	0	0
04/16/21	H. Franklin, Kendall Blackmon	0730	1210	50	70	0-1	2-4	0	0	0	0
04/23/21	H. Franklin, Jessica Calvillo	0700	1230	52	73	1-3	2-4	100	0	0	0
04/30/21	H. Franklin, A. Burke	0700	1145	66	88	0-1	0-1	0	0	0	0

*All temperature readings are in degrees Fahrenheit
**All wind readings are in miles per hour

Two adult CAGN pairs, and two solitary males were observed throughout the surveys. One adult male and female were observed during the March 18 survey just outside the southeast boundaries of Site 1. The pair were observed foraging

and calling throughout the southeast portion of the site. During the April 8 survey, the male approached in response to a playback, scolded several times and then flew back to the area the pair was observed during the March 18 survey. The male was observed again in the same general area during the April 16 survey. An additional solitary male was observed during the April 8 and April 23 surveys near the western portion of the trail restoration area between Site 1 and Site 4. The male was observed quietly foraging during both surveys. No female was observed with the male during either survey. In the northern trail restoration site, one adult pair were initially observed foraging and calling during the March 18 survey near the northern portion of the Survey area. The pair were again observed foraging during the March 25 and April 30 surveys. The pair were foraging quietly and calling to each other throughout the surveys. During the April 8 and April 16 surveys, only the male was observed foraging quietly, before flying into the drainage and disappearing. While no nest was located, it is likely this pair was nesting within the Survey area based off the behavior observed. In addition to the pair, one adult solitary male was observed within the northern trail restoration site. One adult male approached in response to a playback near the southeastern portion of the site during the March 18 survey. The male called and scolded several times before flying east and disappearing. The male was not observed again during subsequent surveys. Locations of the CAGN observed are provided in Attachment 4. No individuals were observed in Site 2 or Site 3.

In addition to the CAGN observed, three other special status species were observed during the surveys. Northern harrier (*Circus cyaneus*) and white-tailed kite (*Elanus leucurus*) were observed foraging and flying over the northern trail restoration site. The white-tailed kite was also observed perched within a large tree within Site 3. A golden eagle (*Aquila chrysaetos*) was observed foraging on the ground just outside Site 1. All three species are California Species of Concern (nesting). Locations of these species are provided in Attachment 4.

Other wildlife species detected during the surveys were typical of scrub habitat in Riverside County and included northern mockingbird (*Mimus polyglottos*), Bewick's wren (*Thryomanes bewickii*), wrentit (*Chamaea fasciata*), California towhee (*Melozone crissalis*), bushtit (*Psaltriparus minimus*), and lesser goldfinch (*Spinus psaltria*). A complete list of wildlife species detected during the surveys is provided as Attachment 6.

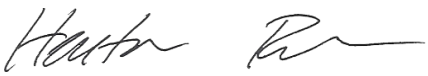
Discussion

No active nests were observed during any of the surveys. However, two pairs were observed throughout the surveys and based on the timing of the surveys and behavior observed, it is likely both pairs are nesting within the Survey area. The suitable habitat that occurs within the 500-foot buffer consists of moderate quality habitat throughout the Project area. Low quality nesting habitat occurs within Site 2 and Site 3 and moderate to high quality nesting habitat occurs within Site 1 and Site 4, and within the trail restoration areas. Therefore, CAGN are anticipated to utilize the habitat within 450-feet of the Project area for nesting and foraging and impacts to CAGN may occur as a result of Proposed Project activities. Therefore, if work activities will occur during breeding season (February 15 to August 31), a pre-construction survey is recommended prior to the start of work activities. If CAGN are found nesting within the Project area, a qualified biological monitor is recommended during all work activities occurring within 500 feet of an active nest.

Please call me at (949) 261-5414 or email me at hfranklin@chambersgroupinc.com if you have any questions or comments regarding this letter report.

Sincerely,

CHAMBERS GROUP, INC.



Heather Franklin
Project Biologist

Attachments

Attachment 1 – Project Location and Vicinity Map
Attachment 2 – CAGN Survey Area on USGS Quadrangle Map
Attachment 3 – CAGN Suitable Habitat Map
Attachment 4 – CAGN Occurrences Map
Attachment 5 – Site Photographs
Attachment 6 – Wildlife Species Detected

Biologist Signature Page

July 2021

The undersigned certify this report to be a complete and accurate account of the findings and conclusions of focused surveys for coastal California gnatcatcher conducted during the breeding bird season of year 2021, within suitable habitat at the Kabian Park Restoration Project, Riverside County, California

July 8, 2021

Heather Franklin

Date

FWS Permit # TE 53787B-1

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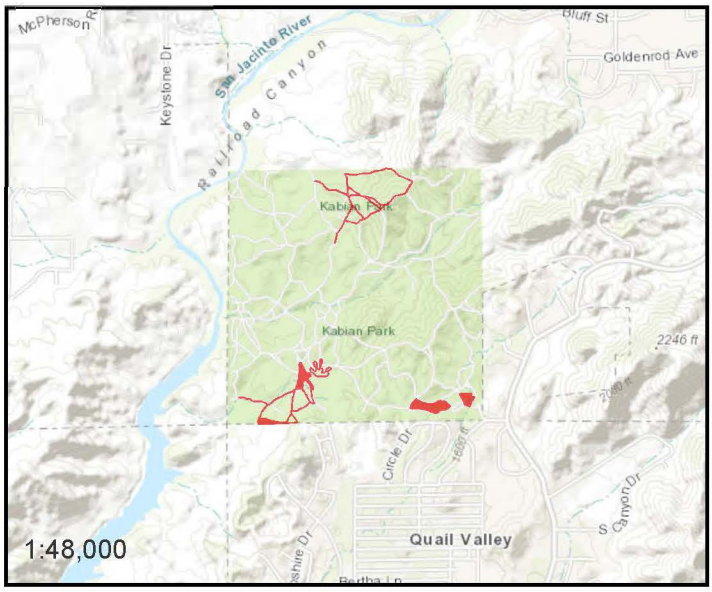

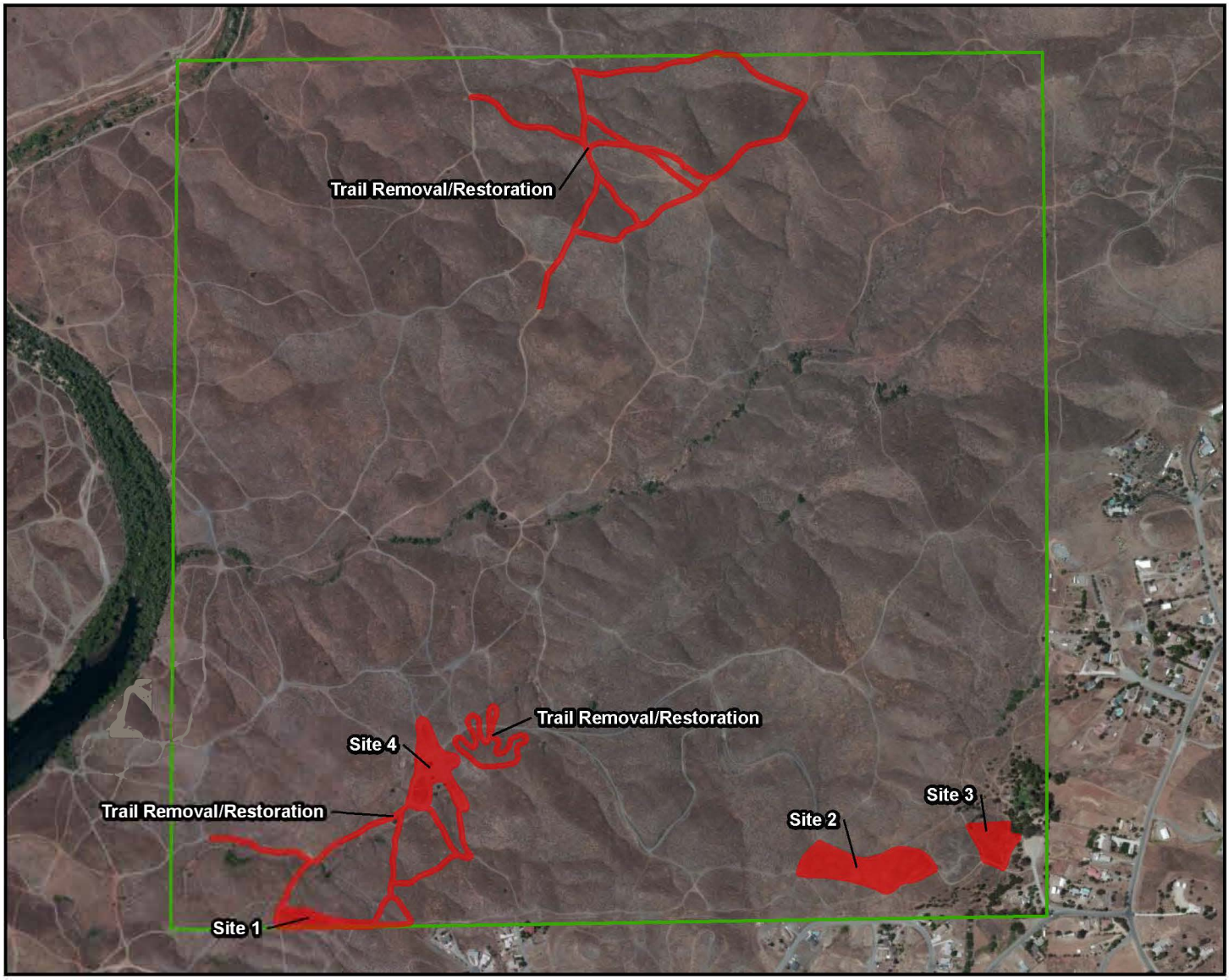

Survey Area

Kabian Reserve Boundary

N

0 400 800 1,600

Feet

Attachment 1

Kabian Park Restoration

Project Location and Vicinity Map

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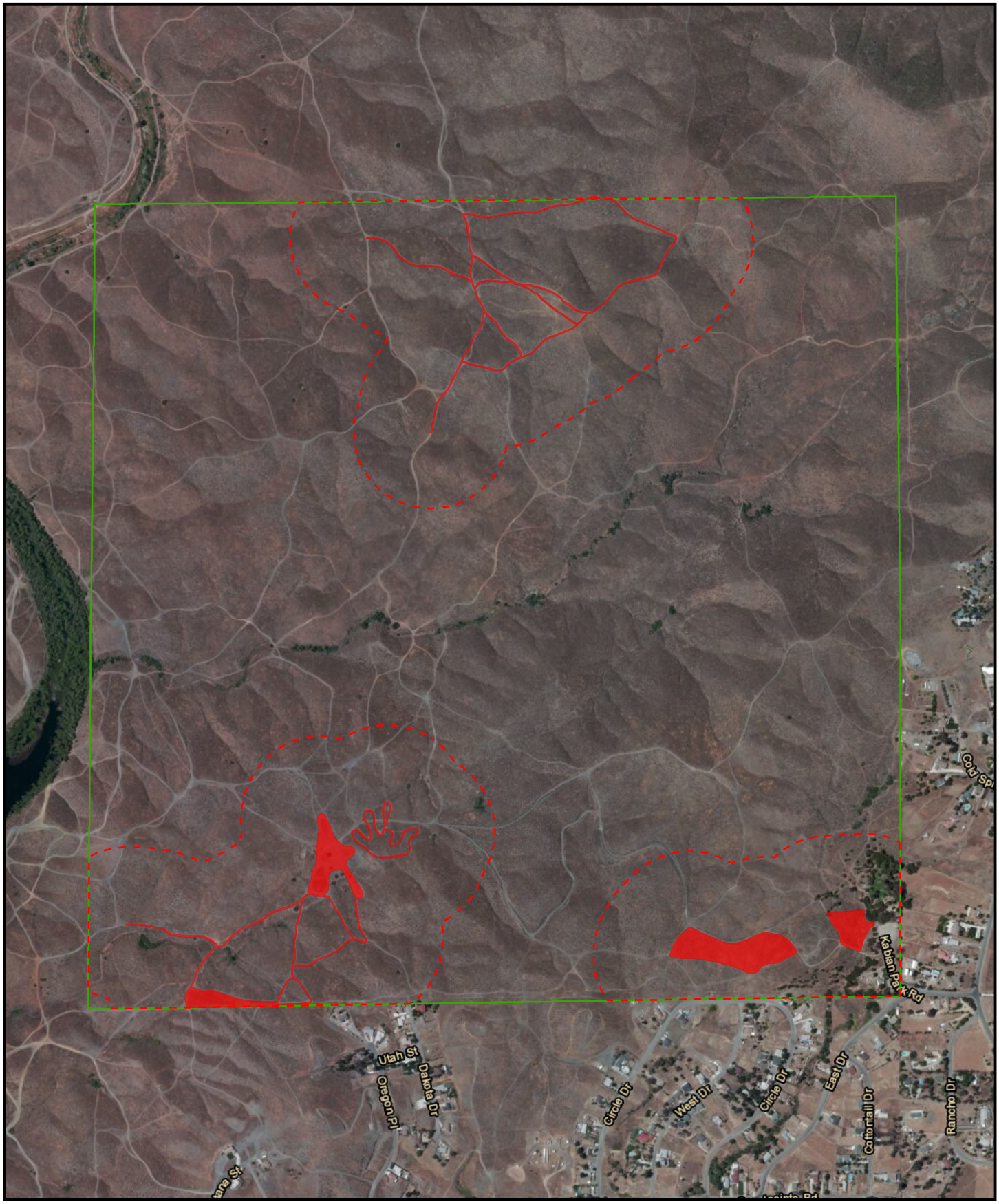

Survey Area
Project Location
Kabian Park Boundary

N

0 250 500 1,000
Feet

Attachment 2
Kabian Park Restoration
CAGN Survey Area

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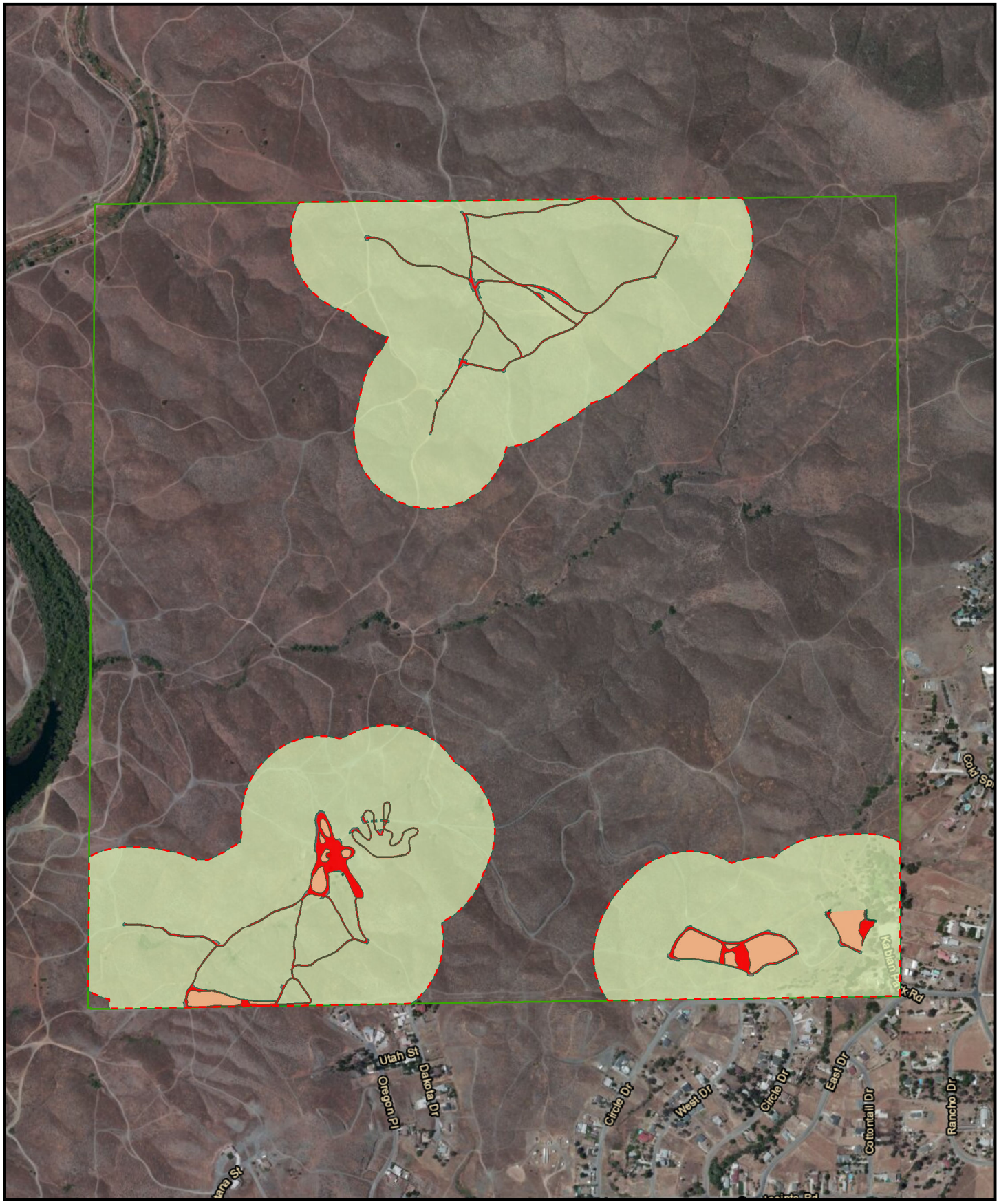

Survey Area
Project Location
Kabian Park Boundary
Suitable Habitat

N

0 300 600 1,200
Feet

Attachment 3
Kabian Park Restoration
CAGN Suitable Habitat

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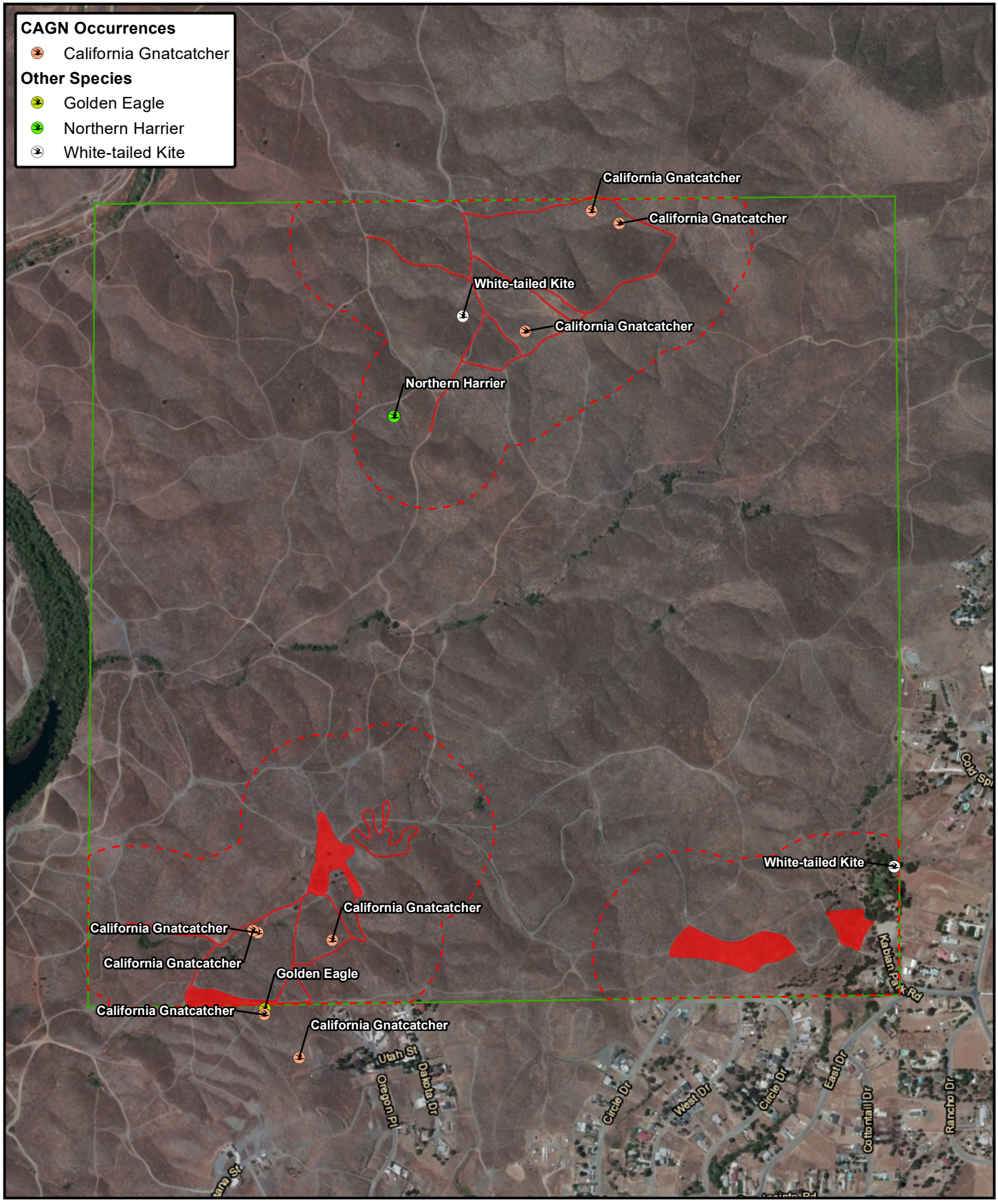

Attachment 4
Kabian Park Restoration
CAGAN Occurrences
Page of

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ATTACHMENT 5 – SITE PHOTOGRAPHS

Photo 1.

Overview of the Proposed Project site, showing Riversidean Sage Scrub. Photo is taken facing southwest down the access road from the northern of the Survey Area that is proposed for trail removal/restoration. Canyon Lake is visible in the background.

Photo 2.

Photo showing suitable habitat within Site 3 near the southeast corner of the Project boundary. The habitat consists of low lying, sparsely vegetated shrubs, providing low to moderate quality nesting habitat. Photo is facing south.

ATTACHMENT 5 – SITE PHOTOGRAPHS

Photo 3.

Overview of Site 2. Low quality suitable habitat with sparse low-lying shrubs occurs in this area. Photo is facing west.

Photo 4.

Overview of Site 4 near the southwest Project boundary. Moderate to high quality suitable habitat occurs throughout Site 4. Photo is facing west.

ATTACHMENT 5 – SITE PHOTOGRAPHS

Photo 5.

Overview of Site 1 from the southern portion of the site. Moderate to quality habitat occurs throughout this area. Photo is facing north.

Photo 6.

Overview of the trail restoration area located near the northern portion of the Project site. Moderate to high quality habitat occurs throughout the site. Photo facing east.

ATTACHMENT 5 – SITE PHOTOGRAPHS

Photo 7.

Overview of northern portion of trail restoration area near the northern boundary. Photo facing north.

Photo 8.

Overview of southern portion of the trail restoration area near the northern boundary. Photo facing south.

ATTACHMENT 6 – WILDLIFE SPECIES DETECTED

Scientific name	Common Name
Class Sauropsida	**REPTILES**
PHRYNOSOMATIDAE	**ZEBRA-TAILED, EARLESS, FRINGE-TOED, SPINY, TREE, SIDE-BLOTCHED, AND HORNED LIZARDS**
Uta stansburiana	side-blotched lizard
BOIDAE	**BOAS**
Lichanura trivirgata	Mexican rosy boa
CROTALIDAE	**PIT VIPERS**
Crotalus helleri	southern pacific rattlesnake
Class Aves	**BIRDS**
CATHARTIDAE	**NEW WORLD VULTURES**
Cathartes aura	turkey vulture
ACCIPITRIDAE	**HAWKS, KITES, EAGLES**
Accipiter cooperii	Cooper's hawk
Aquila chrysaetos	Golden eagle
Buteo jamaicensis	red-tailed hawk
Buteo lineatus	red-shouldered hawk
Circus cyaneus	Northern harrier
Elanus leucurus	white-tailed kite
FALCONIDAE	**FALCONS**
Falco sparverius	American kestrel
ODONTOPHORIDAE	**NEW WORLD QUAIL**
Callipepla californica	California quail
COLUMBIDAE	**PIGEONS & DOVES**
Zenaida macroura	mourning dove
CUCULIDAE	**CUCKOOS & ROADRUNNERS**
Geococcyx californianus	greater roadrunner
APODIDAE	**SWIFTS**
Aeronautes saxatalis	white-throated swift
TROCHILIDAE	**HUMMINGBIRDS**
Calypte anna	Anna's hummingbird
Calypte costae	Costa's hummingbird
Selasphorus sasin	Allen's hummingbird
TYRANNIDAE	**TYRANT FLYCATCHERS**
Sayornis saya	Say's phoebe
Tyrannus vociferans	Cassin's kingbird
HIRUNDINIDAE	**SWALLOWS**
Hirundo rustica	barn swallow
Stelgidopteryx serripennis	northern rough-winged swallow
CORVIDAE	**JAYS & CROWS**

Scientific name	Common Name
Corvus corax	common raven
AEGITHALIDAE	**BUSHTITS**
Psaltriparus minimus	Bushtit
TROGLODYTIDAE	**WRENS**
Thryomanes bewickii	Bewick's wren
SYLVIIDAE	**OLD WORLD WARBLERS**
Chamaea fasciata	Wrentit
POLIOPTILIDAE	**GNATCATCHERS**
Polioptila californica	California gnatcatcher
MIMIDAE	**MOCKINGBIRDS, THRASHERS**
Mimus polyglottos	northern mockingbird
Toxostoma redivivum	California thrasher
PARULIDAE	**WOOD WARBLERS**
Setophaga coronata	yellow-rumped warbler
ICTERIDAE	**BLACKBIRDS**
Sturnella neglecta	western meadowlark
EMBERIZIDAE	**EMBERIZIDS**
Melospiza melodia	song sparrow
Melozone crissalis	California towhee
Pipilo maculatus	spotted towhee
Spizella atrogularis	black-chinned sparrow
Zonotrichia leucophrys	white-crowned sparrow
FRINGILLIDAE	**FINCHES**
Spinus psaltria	lesser goldfinch
Carpodacus mexicanus	house finch
Class Mammalia	**MAMMALS**
CANIDAE	**WOLVES & FOXES**
Canis latrans	coyote

APPENDIX C – SKR Focused Survey Report

November 22, 2021

Ms. Stacey Love
Recovery Permit Coordinator
Carlsbad Fish and Wildlife Office
2177 Salk Avenue, Suite 250
Carlsbad, CA 92008

Subject: Results of a trapping survey for the federally endangered Stephen's kangaroo rat (*Dipodomys stephensi*) at the Kabian Park, Riverside County, California.

Dear Ms. Love:

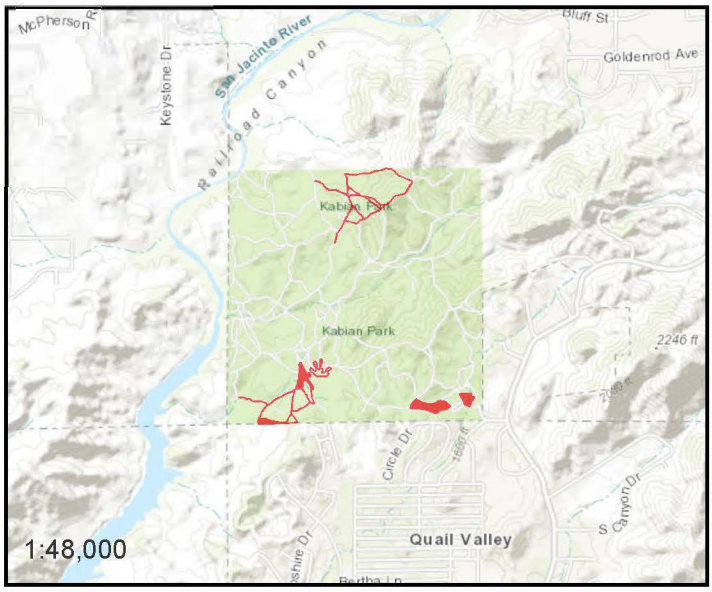
This report presents the results of a trapping survey for the federally threatened Stephen's kangaroo rat (SKR; *Dipodomys stephensi*) at the Roy W. Kabian Memorial Park (Kabian Park) in the City of Perris, western Riverside County. The survey area is located in the southern part of the park, on the U.S. Geological Survey (USGS) 7.5-minute Romoland and Lake Elsinore topographic maps (Township 5S, Range 4W, Section 24 $SW^{1/4}$, $SE^{1/4}$). The UTM coordinates of the approximate center of the survey area are 11S 476956E/ 3730732N (NAD 83). Appendix A contains site photos.

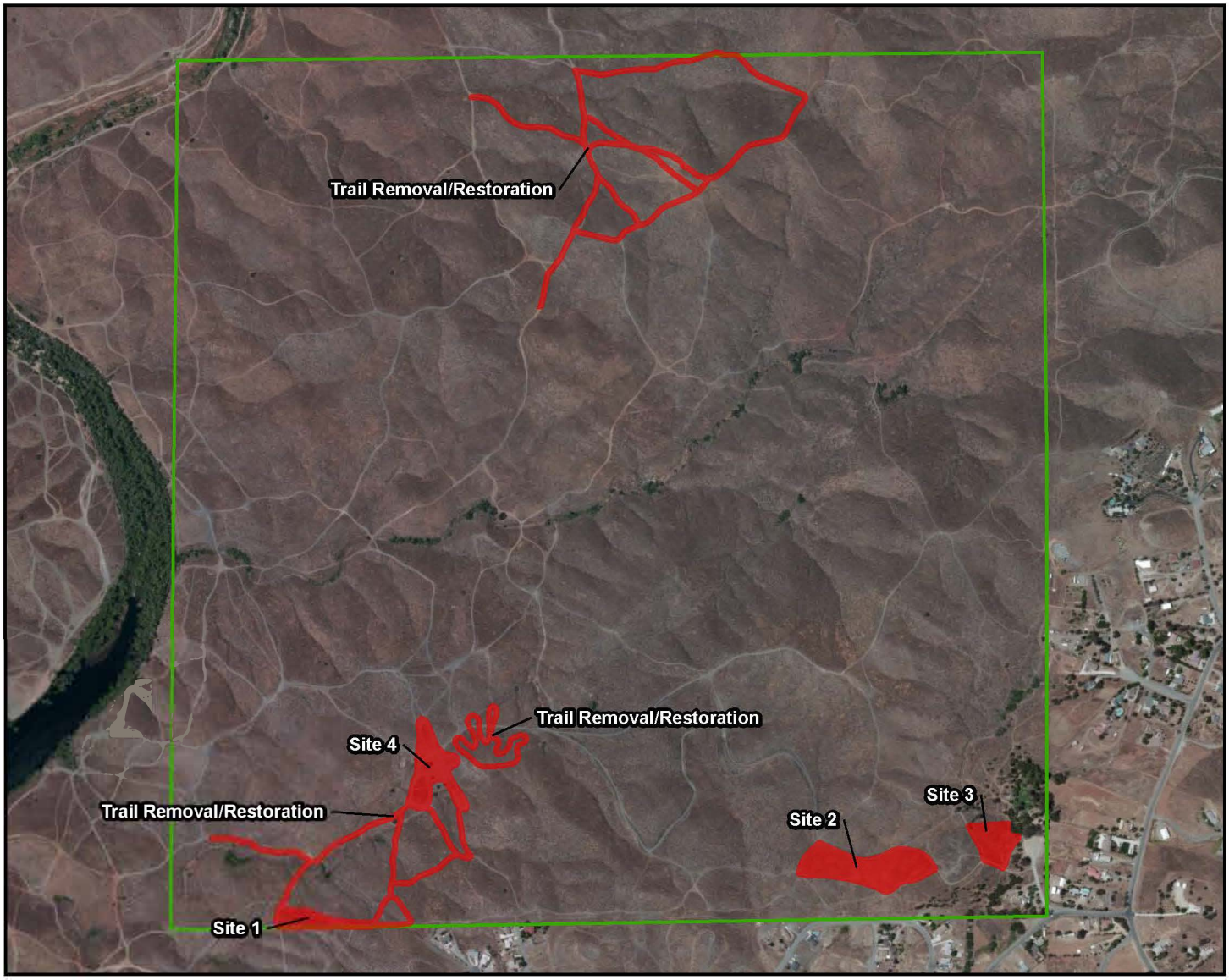
Introduction

The Kabian Park is a 640.42-acre reserve located at 28001 Goetz Road in the City of Perris, and is owned and managed by the Riverside County Regional Park and Open-Space District. The proposed project would involve new fencing, gates, sign installation, removal of unauthorized trails, and habitat improvement/restoration.

SKR background

The natural history and habitat requirements of SKR are fairly well known. Habitats occupied by SKR typically occur on level to gently sloping terrain, although the species has occasionally been found on relatively steep slopes. SKR typically occupy lands described as disturbed annual grassland and characterized by a relatively sparse cover of both shrubs and herbaceous vegetation. Occupied SKR habitat commonly exhibits an abundance of bare (unvegetated) ground during much of the year. When grasslands develop extremely high densities of herb cover following periods of rainfall, SKR usually occur only along dirt roads that traverse such dense habitats. Similarly, SKR often will be found along truck or cow trails that traverse dense grasslands. Soils in habitats harboring SKR are typically loamy in nature, while soils dominated by clay or sand very rarely support this species (O'Farrell and Uptain 1989, O'Farrell 1990, Price and Endo 1989, USFWS 1997). Stephens' kangaroo rat is known to occur widely in Riverside County, and in a few localities in southwestern San Bernardino County (O'Farrell and Uptain 1989; RCHCA 1995; USFWS 1997, 1993).





Survey Area

Kabian Reserve Boundary

N

0 400 800 1,600

Feet

Attachment 1

Kabian Park Restoration

Project Location and Vicinity Map

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Methods

A live-trapping survey was carried out in Kabian Park over five consecutive nights from August 27 to 31, 2021 in areas proposed for habitat rehabilitation activities. The live-trapping effort used large (3 x 3.75 x 12") Sherman live-traps with doors shortened to avoid tail damage. Traps were set in 23 clusters within and adjoining the areas proposed for restoration activities. The traps were set both by sign (i.e., near to potential SKR burrows) and to cover the restoration areas even if potential burrows were lacking. Figure 2 shows the trap locations relative to planned restoration activities. Traps were opened and baited with bird seed and checked at night and in the morning. Animals were identified and released at the point of capture. A total of 500 trap-nights were accrued during the field survey. Trapping was conducted by Phil Brylski, Ph.D. (USFWS permit TE148555-2 and CDFG MOU).

Results

Site Description

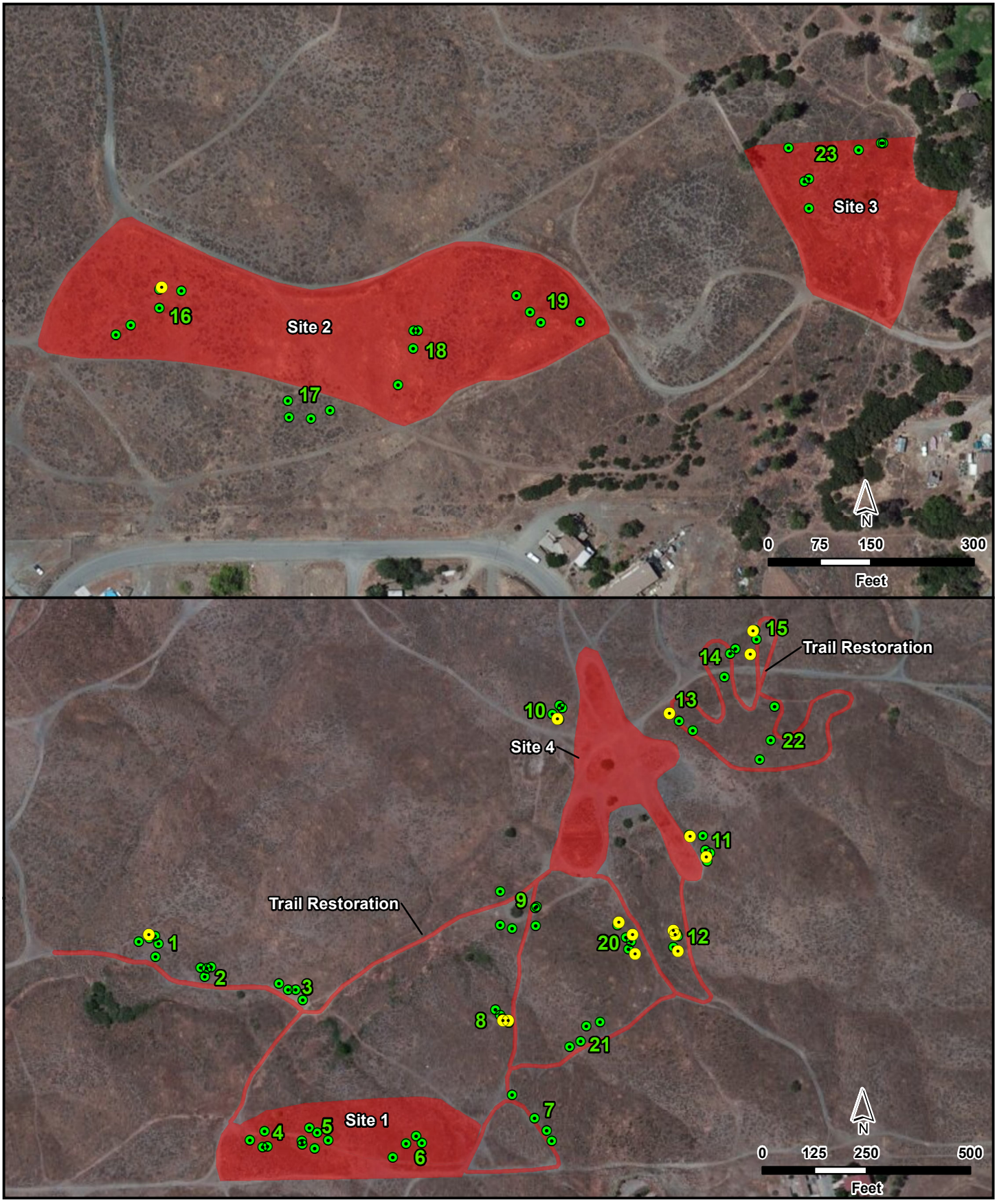
Kabian Park consists mainly of natural habitats with small areas disturbed by off-highway vehicles (OHVs) concentrated along existing dirt roads. The survey area is hilly terrain in the southern part of the park with elevations from 1,440 feet to 1,580 feet. Riversidean coastal sage scrub is the dominant vegetation, with small patches of non-native grassland in several areas. Common shrubs in the coastal sage scrub community include California buckwheat (*Eriogonum fasciculatum*), deerweed (*Acmispon glaber*), brittlebush (*Encelia farinosa*); and scattered junipers shrubs (*Juniperus californica*) in the western part. Non-shrub plants include fiddleneck (*Amsinckia* sp), California goldfields (*Lasthenia californica*), California matchweed (*Gutierrezia californica*), redstem filaree (*Erodium cicutarium*), and shortpod mustard (*Hirschfeldia incana*). Grasses include wild oat (*Avena* spp.) and brome grass (*Bromus* spp).

The survey area is bordered by rural residential land uses to the east and south, with vacant lands within the park to the north and west. The soils on the site are Lodo rocky loams.

Project Site in Relation to SKR Historical Range and Habitat

The project site is in the west-central part of SKR's historical range. The US Fish and Wildlife Service (USFWS 2021) and California Department of Fish & Wildlife California Natural Diversity Database (CDFWG 2021) contain a handful of SKR records within 1 to 1.5 miles of the survey area outside of the park boundary. Kabian Park has apparently not been surveyed for SKR in the recent past, although Spencer et al (2021) considered the habitat suitable for SKR.

The survey area contains a mix of steep slopes (>20%) with dense CSS plant cover and flat to moderately sloping (<15%) lowland areas with sparse coastal sage scrub and non-native grasslands. The steep areas with dense plant cover are unsuitable for SKR. The flat to gently/moderately sloping areas with sparse scrub cover and open grasslands are suitable for SKR; these generally occur close to the dirt roads and areas disturbed by off-highway vehicle use.



Survey Area
Trap Locations
Capture Locations

Figure 2
Kabian Park Restoration
Trapping Locations

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Print Date: 11/12/2021 10:08:42 AM Author: pcarlos

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SKR Survey Results

Weather conditions during the survey were mild, with clear skies (except night 5), low wind, and temperatures of 63 to 74°F. Table 1 summarizes the weather during the survey.

Table 1. Weather Conditions			
Date	**Temperature (F)**	**Cloud Cover (%)**	**Wind (mph)**
8-27	69/64	0	0
8-28	72/63	0	0
8-29	69/66	0	0
8-30	74/68	0	0
8-31	70/66	100	0

Five small mammal species were captured: Stephens' kangaroo rat (SKR), Dulzura kangaroo rat (*D. simulans*), San Diego pocket mouse (*Chaetodipus fallax fallax*), deer mouse (*Peromyscus maniculatus*), and Baja mouse (*P. fraterculus*). Table 2 summarizes the captures. Figure 3 shows the SKR capture locations.

Table 2. Summary of Small Mammal Captures						
Date	**Species**					
	Trap #	**SKR**	**DKR**	**CFAL**	**PMAN**	**PFRAT**
8-27	100	4		3	5	
8-28	100	4		7	6	
8-29	100	3	1	4	4	1
8-30	100	2		8	2	1
8-31	100	3		7	5	
Totals	**500**	**16**	**1**	**29**	**22**	**2**

SKR: Stephens kangaroo rat (*Dipodomys stephensi*)
DKR, Dulzura kangaroo rat (*D. simulans*)
CFAL: San Diego pocket mouse (*Chaetodipus fallax fallax*)
PMAN: deer mouse (*Peromyscus maniculatus*),
PFRAT: Baja mouse (*P. fraterculus*)

15 SKR were captured in nine of the 18 trap clusters in the western part of the survey area (Figure 3). One SKR was captured in one of five trap clusters in the eastern part of the survey area. The northwestern San Diego pocket mouse, a California Species of Concern, was common in the survey area. This species occurs in coastal scrub (CSS) and CSS-grassland interface habitats.

Of the five small mammals captured, one species is listed by state or federal agencies as threatened or endangered and one is a California Species of Special Concern, as follows:

State or Federally Listed Species

- Stephens' kangaroo rat (*Dipodomys stephensi*)

California Sensitive Species (California Species of Special Concern)

- northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*)

Non-Status Species

- Dulzura kangaroo rat (*Dipodomys simulans*)
- Deer mouse (*Peromyscus maniculatus*)
- Baja mouse (*Peromyscus fraterculus*)

Discussion

SKR occur in the flat to gently sloping lands in the survey area, some of which are planned for restoration activities. SKR would be considered common in the western part of the survey area and uncommon in the eastern part, but have the potential to occur throughout the survey area, with several qualifiers:

- Survey cluster 23 is largely dense non-native grassland and ruderal habitats. No SKR were captured in this area and no potential SKR burrows were observed there. This area was not considered occupied by SKR at the time of the survey;

- The large area of bare ground caused by OHV disturbance between survey clusters 10 and 13 did not contain potential SKR burrows at the time of the survey. SKR were captured on the margins of this area planned for restoration, and

- Survey clusters 4, 5, and 6 appeared to have suitable habitat for SKR, but none were captured there.

The proposed project would excavate soils for fencing and installation of a sewer main. While these would be considered temporary impacts, there is potential for 'take' of SKR. To avoid impacts to SKR, two measures are recommended: (1) prior to ground disturbance, a survey for potential SKR burrows should be carried out in the work areas. No ground disturbance should occur within 25 feet of potential burrows, and (2) the revegetation plan should take into account the preference of SKR for disturbed open grassland and scrub habitats.

I certify that the information in this survey report and attached exhibits fully and accurately represents my work. Please contact me if you have any questions.

Sincerely,

Phil Brylski
31 Tahoe, Irvine, CA 92612
(949) 870-8878

Permit 148555-2
Email – pbrylski@gmail.com

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Appendix A. Site Photos

Photo 1. Non-native grassland in survey clusters 16 to 19.

Photo 2. Disturbed buckwheat scrub habitat in survey cluster 16, occupied by SKR.

Photo 3. Non-native grassland habitat in survey cluster 10, occupied by SKR.

Photo 4. Non-native grassland habitat in survey cluster 8, occupied by SKR.

Photo 5. Non-native grassland/buckwheat scrub habitat in survey cluster 9, occupied by SKR.

APPENDIX D – Cultural Resources Letter Report

Results of the Cultural Resources Study for the Kabian Park Restoration Project

August 30, 2021

(21278)

Antone (Tony) Pierucci, M.A., Historic Preservation Officer
Bureau of Parks & Resources
4600 Crestmore Road
Jurupa Valley, California 92509

Subject: Letter Report for Cultural Resources Study for the Kabian Park Restoration Project in the City of Perris, Riverside County, California

Dear Mr. Pierucci,

The following Letter Report details the results of the cultural resources study undertaken by Chambers Group, Inc. (Chambers Group) in support of the Kabian Park Restoration Project (Project) on land managed by the Riverside County Regional Park and Open-Space District (RivCo Parks, District), in the City of Perris, Riverside County, California.

Purpose and Scope

Chambers Group provided cultural resources services for the proposed restoration of Roy W. Kabian Memorial Park (Park) that would include installation of new fencing, access gates, and signage; removal of unauthorized trails; and restoration of habitat. This report documents the methods and results of the cultural resources records search and subsequent field survey conducted in order to assess any potential effects to cultural resources that may be located within the proposed Project area. The area of potential effects (APE) comprises approximately 42 acres of the Park and is defined by the proposed restoration of approximately 3 miles of unauthorized trails, installation of approximately 20,000 feet of perimeter fence line, and restoration of native habitat on up to 35 acres of other lands, as identified by the District.

Project Description

The Park is a 640.42-acre reserve located at 28001 Goetz Road in the City of Perris, California (Attachment A, Figure 1). The Park includes approximately 1 acre of developed space and 639 acres of hiking and equestrian trails owned and managed by the Riverside County Regional Park and Open-Space District. The Project would involve off-highway vehicle- (OHV-) related restoration, including new fencing, gates, and sign installation; removal of unauthorized trails; and restoration of native habitat.

Approximately 20,000 feet of fencing would be installed along the perimeter of the Park (Attachment A, Figure 2). Fence material would consist of galvanized round posts, T-posts, smooth barbless wire, and 3/8-inch cable. A standard design would be implemented involving three-strain wire/cable with 10-foot spacings between posts. Fencing will be 4.5 to 5.0 feet tall, depending on terrain, and 2.0 feet deep. Four gates would be manufactured and installed by District staff: one located at the existing entrance, two along the southern edge of the Park, and one along the northern edge of the Park (Figure 2). Gates will be approximately 4 to 5 feet tall and 12 to 16 feet wide, composed mainly of 2-inch-by-2-inch square metal tubing. Approximately 3 miles of unauthorized OHV trails would be removed from the Park (Figure 2). These trails would be disked repeatedly in order to loosen compacted soil, and the areas would be replanted with native plants. A track loader with a scarifying attachment will be used to break up hard-packed soils. Removed OHV trails would be seeded with a nonirrigated native Riversidean sage scrub seed mix. Spot treatment herbicide applications would be conducted as needed. The proposed Native Habitat Restoration portion of the Project would restore 35 acres of native habitat degraded by habitual unauthorized OHV use within the Park. String trimmers and rakes would be used to dethatch and remove non-native grasses and weeds from restoration areas. Those areas would then be seeded with a nonirrigated native forb seed mix. Spot treatment herbicide applications would be conducted as needed inside the restoration areas.

Project Location

The Park is located in the western region of Riverside County (County) within the City of Perris (City) (Figure 1) and is administered by RivCo Parks. The City designates zoning and land use of the Park as Open Space (OS). Neighboring parcels to the north, south, and east are zoned by the City as Single Family Residential (R6,000 and R20,000), while parcels bordering to the west are zoned by the County as Rural Residential (R-R). Regional access to the Park is provided by Interstate 215 (I-215), Interstate 15 (I-15), and State Route 74 (SR 74). Local access to the Park is provided by Goetz Road and East Drive. The Project can be found within the United States Geological Survey (USGS) *Lake Elsinore* and *Romoland* 7.5-minute topographic quadrangles, Section24, Township 5 South, Range 4 West (Figure 1).

Location History

Cultural Setting

The following, brief culture chronology for Riverside County is based on a synthesis of the existing literature. This chronology is intended as a general model, which is dynamic and subject to modification as new information is uncovered. The prehistory of western Riverside County has been included as part of the coastal San Diego subregion (Moratto 1984). Consequently, much is made of work completed in San Diego County, to the south.

Early Holocene (10,000–7,000 B.P.)

The early occupants of the Riverside area are archaeologically represented by a culture pattern known as the Western Pluvial Lakes Tradition (WPLT) (Bedwell 1970). The WPLT includes the Playa, San Dieguito, Lake Mojave, and Death Valley I complexes. It is defined by:

- Site locations being on or near former pluvial lakeshores or along old streams
- A focus on hunting mammals and collecting and gathering plant materials
- A toolkit including chipped-stone crescents, large flake and core scrapers, choppers, scraper-planes, hammerstones, several types of cores, drills and gravers, and a variety of flakes; a developed flaked-stone technology with percussion-flaked foliate knives and points, Silver Lake and Lake Mojave points
- A lack of ground stone artifacts

The WPLT people were adapted to a wetter environment before the warmer climate led to the evaporation of the lakes (Moratto 1984).

Middle Holocene (7,000–1,500 B.P.)

The Millingstone Horizon occurs during this time period in western Riverside County. The Millingstone Horizon includes the La Jolla, Pauma, and Sayles complexes (Moratto 1984). The La Jolla Complex was defined from coastal San Diego sites (Rogers 1938, 1945). An apparent inland manifestation of the La Jolla Complex was termed the "Pauma Complex" by D. L. True (1958), who proposed the name to describe assemblages recovered from more than 20 inland sites in northern San Diego County. The La Jolla and Pauma complexes have very similar assemblages and are thought to be different environmental adaptations of the same culture (True 1958). Archaeological investigations in the Cajon Pass were used to define the type of site (SBR-421) for the Sayles Complex (Kowta 1969). Kowta (1969) defined the Sayles Complex as a variant of the Millingstone Horizon from the vicinity of the Cajon Pass.

The Millingstone Horizon assemblages suggest a generalized subsistence focus with an emphasis on hard seeds. This emphasis is indicated by the increased frequency of slab and basin metates and the adoption of a mixed cobble/core-based tool assemblage composed primarily of crudely made choppers, scrapers, and cobble hammerstones. The assemblage is typically dominated by crude, cobble-based choppers, scrapers, and flake knives. Scraper-planes are also abundant, which Kowta (1969) suggests were used to process agave and yucca. Projectile points are relatively rare, but late in the period Elko type points are occasionally seen. Portable basin and slab metates are relatively

plentiful, suggesting an economic focus on gathering plant resources. Mortars and pestles appear in the Millingstone Horizon, suggesting the use of acorns. The presence of shell middens distinguishes the La Jolla Complex from the other Millingstone Horizon complexes.

Late Holocene (1,500 B.P.–1769)

Shoshonean-speaking people from the Colorado River region moved westward into Riverside County (Moratto 1984) during the Late Holocene. Cultures representative of this time are the San Luis Rey Complex in northern San Diego County and western Riverside County and the Irvine Complex in Orange County (Meighan 1954; Moratto 1984; True et al. 1974). First described by Meighan (1954) and based on excavations at Pala, the San Luis Rey Complex is divided into an early phase, San Luis Rey I, and a later phase, San Luis II. San Luis Rey I sites are associated with bedrock outcrops and often have recognizable midden soils. Features may include cremations and bedrock mortars. The artifact assemblage includes metates, Cottonwood Triangular type projectile points, drills, bifacially flaked knives, bone awls, occasional steatite arrow shaft straighteners, and bone and shell ornaments (True and Waugh 1981). San Luis Rey II sites consist of the same assemblage with the addition of Tizon Brown Ware ceramics, red and black pictographs, cremation remains in urns, and historic materials such as glass beads and metal objects. The projectile points commonly found in San Luis Rey assemblages, Cottonwood Triangular and, less frequently, Desert side-notched forms, are both smaller than earlier types, suggesting the introduction of bow-and-arrow technology into the region.

Ethnographic Period:

The Project vicinity includes an area where the traditional territories of the Cahuilla and the Luiseño intersect and overlap, according to Kroeber (1970; Bean 1978; Bean and Shipek 1978).

The Cahuilla, along with the Luiseño, are one of the most southwesterly of the Shoshonean or Uto-Aztecan speakers. They are members of the Takic branch of this large language family. Traditional Cahuilla territory originally included western and part of central Riverside County and extended into northeastern San Diego and northwestern Imperial Counties. The western boundary generally followed the Santa Ana, Elsinore, and Palomar Mountains. The northern boundary extended north of Riverside to the San Gabriel and San Bernardino Mountains. Cahuilla territory extended east to include the Coachella Valley and down the valley as far south as the approximate middle of the Salton Sea. The approximate southern territorial limits included Borrego Springs and the south end of the Santa Rosa Mountains. The Cahuilla territory consisted of the Mountain, the Pass or Western, and the Desert divisions (Bean 1978; Hooper 1920:316; Strong 1929).

According to Kroeber (1925), Cahuilla society consisted of two ceremonial divisions or moieties: wildcat and coyote. People were further divided into somewhat localized, patrilineal clans. Each clan had a chief, or *net* in Cahuilla (Kroeber 1925:691). Some villages contained people of only one clan, but other villages had more than one clan. Also, people of one clan might live in more than one village. Chiefs were usually chosen by heredity. The chief typically was a religious leader of the larger social group, from which the chief drew certain wealth. A chief ordered ceremonies, but it was his assistant, the *paha'*, who executed them. Choice hunting and gathering areas were owned by the clan. The clan chief also settled intraclan disputes and met with other *nets* to solve interclan problems and organize ceremonies among clans.

The Luiseño are Shoshonean or Uto-Aztecan-speaking populations that were found in northern San Diego, southern Orange, and southeastern Riverside Counties from the onset of ethnohistoric times through the present day. These people are linguistically and culturally related to the Gabrielino and Cahuilla and appear to be the direct descendants of Late Prehistoric populations. The basic unit of Luiseño social structure was the clan triblet. The triblet was composed of patrilineally related people who were politically and economically autonomous from neighboring triblets. Unlike other Takic-speaking tribes that surround them, the Luiseño do not appear to have been organized into exogamous moieties (descent groups that married outside one's birth group) but may have been loosely divided into mountain-oriented groups and ocean-oriented groups (Bean and Shipek 1978). One or more clans would reside

together in a village (Oxendine 1983). A heredity village chief held a position that controlled economic, religious, and warfare powers (Bean and Shipek 1978).

History

Riverside County was created from parts of San Bernardino County and San Diego County on May 2, 1893, after approximately 70 percent of voters approved the formation of Riverside County. Voters also chose to have the city of Riverside as the county seat. Riverside County was officially formed on May 9, 1893, when the Board of Commissioners filed the final canvass of the votes. Continuing from the earlier Mexican and early American Periods, ranching and mining, followed by farming, were the major industries of the County. The movement of the resulting products was greatly accommodated by the rail network located throughout southern California. The western boundary of the Project area is bounded by Railroad Canyon Reservoir, which was the former location along which the California Southern Railroad constructed a rail line connecting Elsinore (now Lake Elsinore) and Colton, with services in between, in 1881. Local mining districts were able to take advantage of the rail line, allowing development of the nearby Good Hope and Virginia mines (Dodge 1959). The nearby town of Perris was platted in 1885 and named in honor of the Chief Engineer of the California Southern Railroad, Fred T. Perris. South of the Park is situated Quail Valley, which was initially developed in the first decades of the twentieth century. What started as a game reserve of the Quail Valley Land Company became a development scheme known as the Lake Elsinore Lodge in the 1920s after the initial investors sold off the land. Originally, parcels were sold, and the developer constructed cabins as part of the Lodge Project. By the 1940s, those lands not already sold were purchased by the Pacific Coast Finance Company, which changed the name of the project to the Quail Valley Country Club. The heyday of the Club were the decades between the 1950s and 1960s, after which the resort concept began to decline; and by the late 1960s the recreation area and club house began to fall into disrepair (Johnson 2013).

The Roy W. Kabian Memorial Park was established on Oct. 29, 1968, after the City of Perris purchased 640 acres of Bureau of Land Management land with funds provided by Madeline Kabian, who was searching for a way to memorialize her son, who had died in 1962 from multiple sclerosis. The Kabian Park Boosters Club made improvements to the park, but by the early 1970s the City of Perris was at risk of losing the park due to an inability to continue making improvements. The Kabian Park Boosters Club then proposed transferring the park to the County of Riverside, which was agreed to in 1972. Kabian Park has been under County management since.

Cultural Resources Study

Dates of Investigation

Chambers Group conducted the cultural resources survey on May 6 and 7, 2021, visually inspecting all areas proposed for restoration, and fence installation.

Project Personnel

Chambers Group Cultural Resources Department Head Sandra Pentney, M.A., Registered Professional Archaeologist (RPA) served as project manager; Richard Shultz, M.A., Registered Professional Archaeologist (RPA) served as Principal Investigator and supervised the writing of this report. Chambers Group Cultural Resources Specialists Kellie Kandybowicz and Eduvijes Davis-Mullens completed the two-day pedestrian survey and prepared this report.

Regulatory Framework

The work for this project was conducted in compliance with the California Environmental Quality Act (CEQA). Under the provisions of CEQA, including the CEQA Statutes (Public Resources Code [PRC] §§ 21083.2 and 21084.1), the CEQA Guidelines (Title 14 California Code of Regulations [CCR], § 15064.5), and PRC § 5024.1 (Title 14 CCR § 4850 et seq.), properties expected to be directly or indirectly affected by a proposed project must be evaluated for eligibility for listing in the California Register of Historical Resources (CRHR; PRC § 5024.1).

The purpose of the CRHR is to maintain listings of the state's historical resources and to indicate which properties are to be protected, to the extent prudent and feasible, from material impairment and substantial adverse change. The term historical resources includes a resource listed in or determined to be eligible for listing in the CRHR; a resource included in a local register of historical resources; and any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (CCR § 15064.5[a]). The criteria for listing properties in the CRHR were expressly developed in accordance with previously established criteria developed for listing in the National Register of Historic Places (NRHP). The California Office of Historic Preservation (OHP 1995:2) regards "any physical evidence of human activities over 45 years old" as meriting recordation and evaluation.

Records Search Methods

On March 25, 2021, Chambers Group archaeologist Eduvijes Davis-Mullens conducted a California Historical Resources Information System (CHRIS) records search through the Eastern Information Center (EIC), located at the University of California, Riverside Department of Anthropology, Riverside, California. In addition, Chambers Group conducted a Sacred Lands File search through the Native American Heritage Commission (NAHC), as well as a Paleontological records search through the Western Science Center. The records search area included the Project APE along with a 0.5-mile (0.80-kilometer) radius buffer. Additionally, any relevant historic maps, previously recorded archaeological site records, and previously conducted surveys were reviewed. The results of the CHRIS records search are summarized below.

Records Search Results

Results of the CHRIS records search indicate that 12 previous cultural resource investigations have been conducted within a 0.5-mile radius of the APE. Of these studies, none are included in the current APE. Details pertaining to these investigations are listed in Table 1.

Table 1: Prior Cultural Resources Studies within 0.5 Mile of the APE

SCCIC Report Number	Author/Company	Year	Study Title	Relationship to APE
RI-00391	Christopher E. Dover/ Esgate, Lansing & Associates, San Bernardino, CA	1978	An Archaeological Survey of the Proposed Subdivision--Tentative Parcel Map 13384, Goetz Road North of Quail Valley, Riverside County, California	Not within APE
RI-01237	Robert J. Wlodarski and John M. Foster/ Greenwood and Associates, Pacific Palisades, CA	1980	Cultural Resource Overview for The Devers Substation to Serrano Substation Transmission Route Alternatives Corridor Right-of-Way	Not within APE
RI-01527	Chace, Paul/ Paul G. Chace and Associates	1982	An Archaeological Assessment of The Racicot Property	Not within APE
RI-01837	Stephen Bouscaren and Daniel McCarthy/ Archaeological Research Unit, U.C. Riverside	1984	An Archaeological Assessment of the Proposed Devers-Valley 500 KV Transmission Line and Corridor and the Proposed Valley-Auld-Skylark 115 KV T/L Corridor, Riverside County, California	Not within APE

Table 1: Prior Cultural Resources Studies within 0.5 Mile of the APE

SCCIC Report Number	Author/Company	Year	Study Title	Relationship to APE
RI-01949	Bouscaren, Stephen/ Archaeological Research Unit, U.C. Riverside	1985	A Class III Cultural Resources Inventory of Southern California Edison Eldorado-Ivanpah Transmission Project, San Bernardino County, California and Clark County, Nevada	Not within APE
RI-05625	Robert S. White and Laura S. White/Archaeological Associates, Ltd.	2005	A Cultural Resources Assessment of a 64.2 Acre Parcel Located Adjacent to Goetz Road in the Community of Quail Valley, Unincorporated, Riverside County	Not within APE
RI-08467	Kurt Heidelberg/AECOM, Inc.	2010	Archaeological Survey Report for Southern California Edison's Service Pole Installation in Perris, Riverside County, California	Not within APE
RI-08569	Sara Bholat, Evelyn N. Chandler, and Roger Mason/ECORP Consulting Inc.	2008	Cultural Resources Inventory of Selected Routes Within the South Coast Management Planning Area.	Not within APE
RI-09746	Jason Andrew Miller/LSA	2013	Cultural Resources Survey Report Addendum Valley-Ivy Glenn 115 kV Transmission Line Project Southern California Edison, Riverside County, California	Not within APE
RI-09921	James Eighmey and Meg McDonald/ASM Affiliates, Inc.	1998	Cultural Resources Inventory and Evaluation of Parcels 176-141, 192-101, 206-301, 208-061, 208-132, and 223-161, BLM Land Transfer Western Riverside County, California	Not within APE
RI-10608	Wayne H. Bonner and Marnie Aislin-Kay/Michael Brandman Associates	2005	Cultural Resource Records Search and Site Visit Results for Cingular Telecommunications Facility Candidate RS-0085-01 (Anaya), 27772 Goetz Road, Canyon Lake, Riverside County, California	Not within APE
RI-10648	Carrie D. Wills/Helix Environmental Planning	2016	Cultural Resource Records Search and Site Visit Results for Cellco Partnership and their Controlled Affiliates doing business as Verizon Wireless Candidate 'Texas', South Canyon Drive, Unaddressed Parcel, Menifee, Riverside County, California	Not within APE

The CHRIS records search also identified seven previously recorded cultural resources located within 0.5-mile of the APE. Of these resources, none were mapped within portions of the APE. The results are summarized in Table 2.

Table 2: Previously Recorded Cultural Resources in the APE Plus 0.5-Mile Radius

Primary Number	Trinomial	Resource Type	Recorded by and Year Recorded	Resource Description	Relationship to APE
P-33-000713	CA-RIV-000713	Other	(Pinto/Bouscaren, n/a) 1984	Large boulder outcrop complex	Not within APE
P-33-001652	CA-RIV-001652	Site	(Pink) 1979	Rock cairn	Not within APE
P-33-002848	CA-RIV-002848	Site	(Rust and Bouscaren) 1984	bedrock grinding slicks	Not within APE
P-33-007679		Building	(Lorna Lege, Riverside County Historical Comm.) 1982	Vernacular adobe house	Not within APE
P-33-008710	CA-RIV-009438	Site	(Sara Bholat, Cary Cotterman, ECORP Consulting, Inc) 2008	Collapsed mine	Not within APE
P-33-014757		Structure	(Rosenberg, Seth A., Brian F. Smith and Associates) 2005	Canal/Aqueduct historic pipe and drainage ditch	Not within APE
P-33-017890	CA-RIV-009439	Site	(Sara Bholat, Cary Cotterman, ECORP Consulting, Inc) 2008	Canal/Aqueduct historic pipe and drainage ditch	Not within APE

Field Methods

Chambers Group was issued a Notice to Proceed from the District on February 21, 2021. Chambers Group Cultural Resource Specialists Kellie Kandybowicz and Eduvijes Davis-Mullens conducted a cultural resources survey of the APE on May 6 and 7, 2021. The intensive pedestrian survey covered all areas of the Project APE. The survey consisted of systematic surface inspection in all trails identified by the County for restoration with transects walked at 10-meter intervals or less and 5-meter intervals for the proposed 20,000-foot fence boundary that surrounds the Project area. This method was selected to ensure that all surface-exposed artifacts and sites could be identified. Chambers Group examined the ground surface for the presence of prehistoric artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools), historical artifacts (e.g., metal, glass, ceramics), sediment discoloration that might indicate the presence of a cultural midden, roads and trails, and depressions and other features that might indicate the former presence of structures or buildings (e.g., post holes, foundations). Chambers Group Cultural Resource Specialists photographed the APE using a collector map application and recorded data using a handheld sub-meter accurate global positioning system (GPS) unit. All field notes, photographs, and records related to the current study are on file at Chambers Group's San Diego office.

Field Results

Ground visibility within the APE ranged from good visibility on trails and roads, to 20 percent or less visibility in open areas with vegetation (see Attachment A, Figures 3 through 6). The APE is composed primarily of undeveloped habitat, with steep hills and rocky terrain. Flora is mainly composed of chaparral, tall grasses and Juniper trees. No previous recorded cultural resources were mapped within the Park. No cultural resources were identified in the APE during the field survey. A sparse collection of dispersed oyster and fragments of abalone shell was observed; however, the condition and context appear to indicate that these materials were deposited during the relatively recent past and were not part of an earlier prehistoric archaeological deposit. Additionally, the oyster species does not appear to be consistent with the type found in southern California prehistoric sites – *Ostrea laurida* – but rather appears to be a type found in a fishmonger shop, such as *Crassostrea gigas*. The abalone shell fragments appear to be representative of *Haliotis rufescens*, or red abalone, which are raised commercially, although they are found in prehistoric archaeological deposits.

Near the entrance of the Park is located a semi-subterranean rock-walled room with an opening to the east-southeast. The walls are constructed of partially dry-laid/mortared local, blocky, tabular rock, with the feature measuring approximately 12 feet by 16 feet, with the long axis running west-northwest/east-southeast. No evidence was identified to assist in dating the construction, but a review of historic aerials and topographic maps suggests the feature was constructed before 1979, and possibly before 1967. The feature is not located within a proposed restoration area; however, it is located just south of the restoration area on the north side of the Park access road near the southeast corner Park gate.

Summary and Recommendations

Chambers Group conducted an intensive pedestrian survey of approximately 42 acres of the Park. No previously recorded cultural resources were identified within the Park, and no resources were identified during the survey. Therefore, the survey resulted in negative findings. However, low ground surface visibility due to dense vegetation along most of the proposed fence line, cultural monitoring is recommended during ground disturbance of native soil to mitigate any potential impacts to unanticipated cultural resources that may be identified during construction. In addition to recommendations offered as a result of Assembly Bill 52 consultation, the following cultural resources mitigation measures are recommended:

MM CUL-1 Prior to issuance of grading permits, RivCoParks shall retain a Riverside County-certified Registered Professional Archaeologist to develop and implement a Cultural Resource Monitoring Program (CRMP). The CRMP shall address the details of all activities; provide procedures that must be followed in order to reduce the impacts to cultural and historic resources to a level that is less than significant; and address potential impacts to undiscovered buried archaeological resources associated with the proposed Project. The CRMP shall be provided to the RivCoParks for review and approval prior to issuance of the grading permit. The CRMP shall contain at a minimum the following:

a. Qualified Archaeological Monitor – An adequate number of Qualified Archaeological Monitors shall be on-site to ensure all earth moving activities are observed for areas being monitored. This includes all grubbing, grading, and trenching on-site. Inspections shall vary based on the rate of excavation, the materials excavated, and the presence and abundance of artifacts and features. The frequency and location of inspections shall be determined and directed by the Registered Professional Archaeologist. The Registered Professional Archaeologist may submit a detailed letter to RivCoParks during grading requesting a modification to the monitoring program if circumstances are encountered that reduce the need for monitoring.

b. Cultural Sensitivity Training – The Registered Professional Archaeologist, and a representative of the consulting tribe(s), shall attend the pre-grading meeting with the contractors to provide Cultural Sensitivity Training for all construction personnel. Training shall include a brief review of the cultural sensitivity of the Project site and the surrounding area; the areas to be avoided during grading activities; what resources could potentially be identified during earthmoving activities; the requirements of the monitoring program; the protocols that apply in the event unanticipated cultural resources are identified, including who to contact and appropriate avoidance measures until the find(s) can be properly evaluated; and any other appropriate protocols. This shall be a mandatory training and all construction personnel must attend prior to beginning work on the Project site. A sign-in sheet for attendees of this training shall be included in the Cultural Resources Monitoring Report.

MM CUL-2 Unanticipated Resources – If unanticipated cultural resources are discovered during ground disturbing activities, the following provisions shall apply:

a. All ground disturbing activities within 100 feet of the discovered cultural resources shall be halted until a meeting is convened between the Registered Professional Archaeologist, the Native American monitor, and RivCoParks to discuss the significance of the find. At the meeting, the significance of the discoveries shall be discussed and after consultation with the Registered Professional Archaeologist and the Native American monitor, a decision shall be made, with the concurrence of RivCoParks, as to the appropriate mitigation (e.g., documentation, recovery, avoidance, etc.) for the cultural resources.

b. Ground disturbance shall not resume within the area of the discovery until RivCoParks, in consultation with the Registered Professional Archaeologist and the Native American monitor, has reached a decision as to the appropriate mitigation. Work shall be allowed to continue outside of the buffer area and will be monitored by tribal monitor(s), if needed.

c. If the find is determined to be significant and avoidance is infeasible, a Phase III Data Recovery Plan shall be prepared by the Registered Professional Archeologist, in consultation with the Native American monitor, and shall be submitted to RivCoParks for review and approval prior to implementation of the plan.

d. Pursuant to California Public Resources Code Section 21083.2(b), avoidance is the preferred method of preservation for archaeological resources and cultural resources. If the Registered Professional Archaeologist and the Native American monitor cannot agree on the significance or the mitigation for the archaeological or cultural resources, these issues shall be presented to RivCoParks. RivCoParks shall make the determination based on the provisions of CEQA with respect to archaeological resources, recommendations of the Registered Professional Archeologist and shall take into account the cultural and religious principles and practices of the tribe(s).

MM CUL-3 Prior to the issuance of grading permits, RivCoParks shall enter into an agreement with the consulting tribe(s) for (a) Native American monitor(s). The Native American monitor(s) shall be on-site during all initial ground disturbing activities and excavation of each portion of the project site including clearing, grubbing, tree removals, grading, and trenching. In conjunction with the Qualified Archaeological Monitor, the Native American monitor(s) shall have the authority to temporarily divert, redirect, or halt the ground disturbance activities to allow identification, evaluation, and potential recovery of cultural resources. RivCoParks shall submit a fully executed copy of the agreement to the Registered Professional Archaeologist as verification of compliance with this requirement.

MM-CUL-4 Cultural resources shall be preserved in place, where feasible. Preservation in place is defined as avoiding the resources, leaving them in place where they were found with no development affecting the integrity of the resource. When preservation in place in not feasible, upon completion of ground disturbing activities, resources recovered during construction activities and made available by the affected landowner(s), the following procedures shall be carried out for final disposition of the discoveries:

a. Historic Resources – All historic archaeological materials recovered during the archaeological investigations shall be curated at a Riverside County curation facility that meets State Office of Historic Preservation Guidelines for the Curation of Archeological Resources ensuring access and use pursuant to the Guidelines.

b. Prehistoric Resources (reburial of the resources on the Project site) – Any reburial of resources on the Project site shall be performed in a manner and location that shall ensure they are protected from any future impacts in perpetuity. Reburial shall not occur until all legally required cataloguing, analysis, and studies have been completed on the cultural resources, with an exception of sacred items, grave goods, and Native American human remains. Human remains and grave goods shall not be subjected to testing, cataloguing, studies, or laboratory analysis unless approved in writing by the Most Likely Descendant. Listing of contents and location of the reburial shall be included in the confidential Cultural Resources Monitoring Report. The Cultural Resources Monitoring Report shall be filed with the District under a confidential cover and not subject to a Public Records Request.

c. Prehistoric Resources (if reburial is not agreed upon by the consulting tribes) – The resources shall be curated at a culturally appropriate manner at a Riverside County curation facility that meets State Office of Historic Preservation Guidelines for the Curation of Archeological Resources ensuring access and use pursuant to the Guidelines. The collection and associated records shall be transferred, including title, and are to be accompanied by payment of the fees necessary for permanent curation. Evidence of curation in the form of a letter from the curation facility stating that subject archaeological materials have been received and that all fees have been paid, shall be maintained on file at RivCoParks.

MM-CUL-5 Upon completion of ground disturbing activities, a Phase IV Cultural Resources Monitoring Report shall be prepared, consistent with the County of Riverside Planning Department Cultural Resources (Archaeological) Investigations Standard Scope of Work. The report shall include results of any feature relocation or residue analysis required as well as evidence of the required cultural sensitivity training for the construction staff held during the required pre-grade meeting and evidence that any artifacts have been treated in accordance with procedures stipulated in the Cultural Resources Monitoring Program. Once the report is determined to be adequate, two (2) copies shall be submitted to the Eastern Information Center (EIC) at the University of California Riverside (UCR) and one (1) copy shall be submitted to the consulting tribe(s).

MM-CUL 6: If human remains are encountered, California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the Riverside County Coroner has made the necessary findings as to origin. Further, pursuant to Public Resource Code Section 5097.98(b), remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the Riverside County Coroner determines the remains to be Native American, the NAHC shall be contacted within the period specified by law (i.e., 24 hours). Subsequently, the NAHC shall identify the "most likely descendant." The most likely descendant shall then make recommendations and engage in consultation concerning the treatment of the remains as provided in Public Resources Code Section 5097.98.

Sincerely,

CHAMBERS GROUP, INC.

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Attachments

Attachment A: Project Maps and Report Figures

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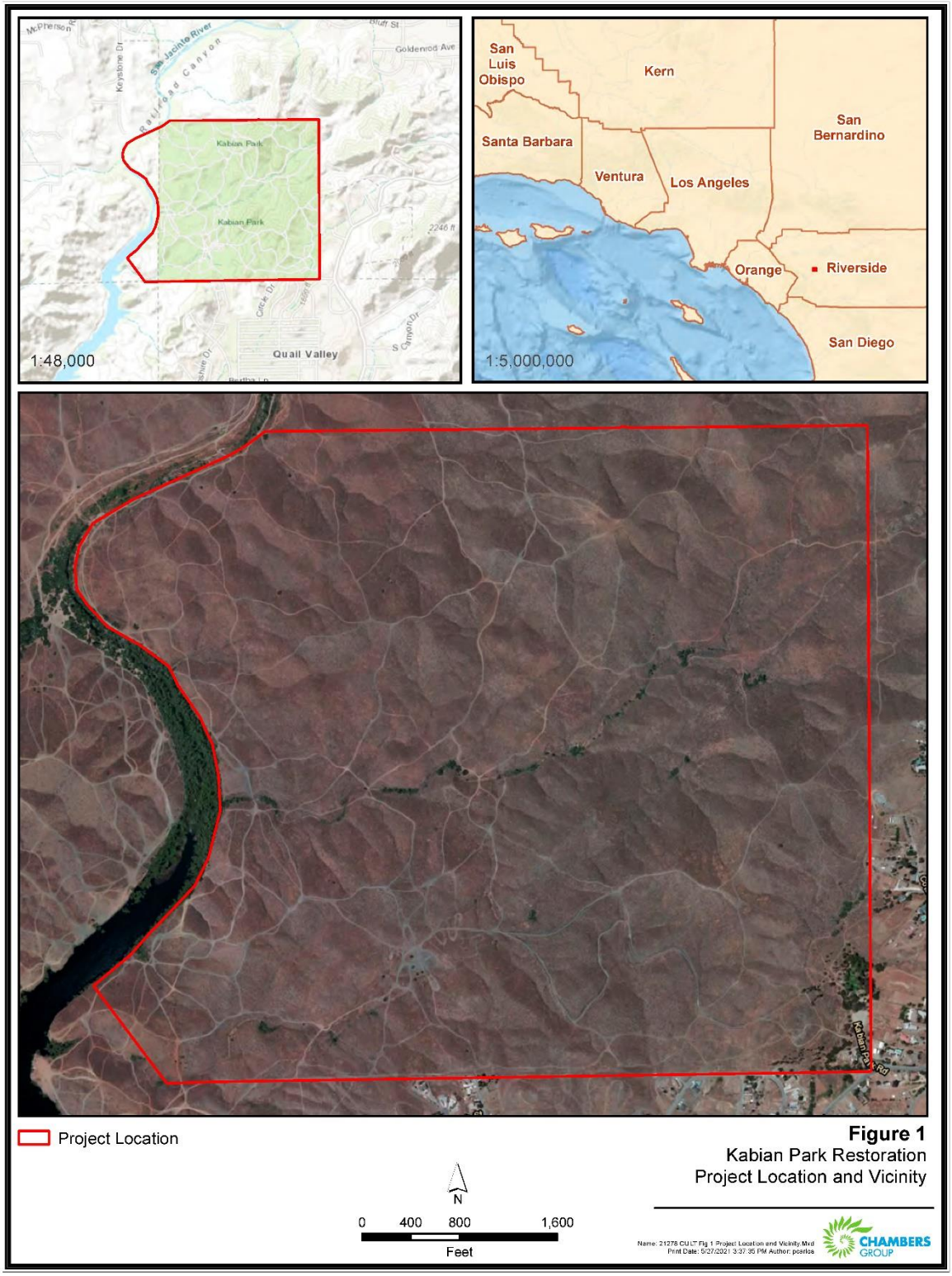
ATTACHMENT A – PROJECT MAPS AND REPORT FIGURES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San Bernardino
Santa Barbara
Ventura
Los Angeles
Orange
Riverside
San Diego
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Project Location
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0 400 800 1,600
Feet
Figure 1
Kabian Park Restoration
Project Location and Vicinity
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Print Date: 5/27/2021 3:37:35 PM Author: psorlos
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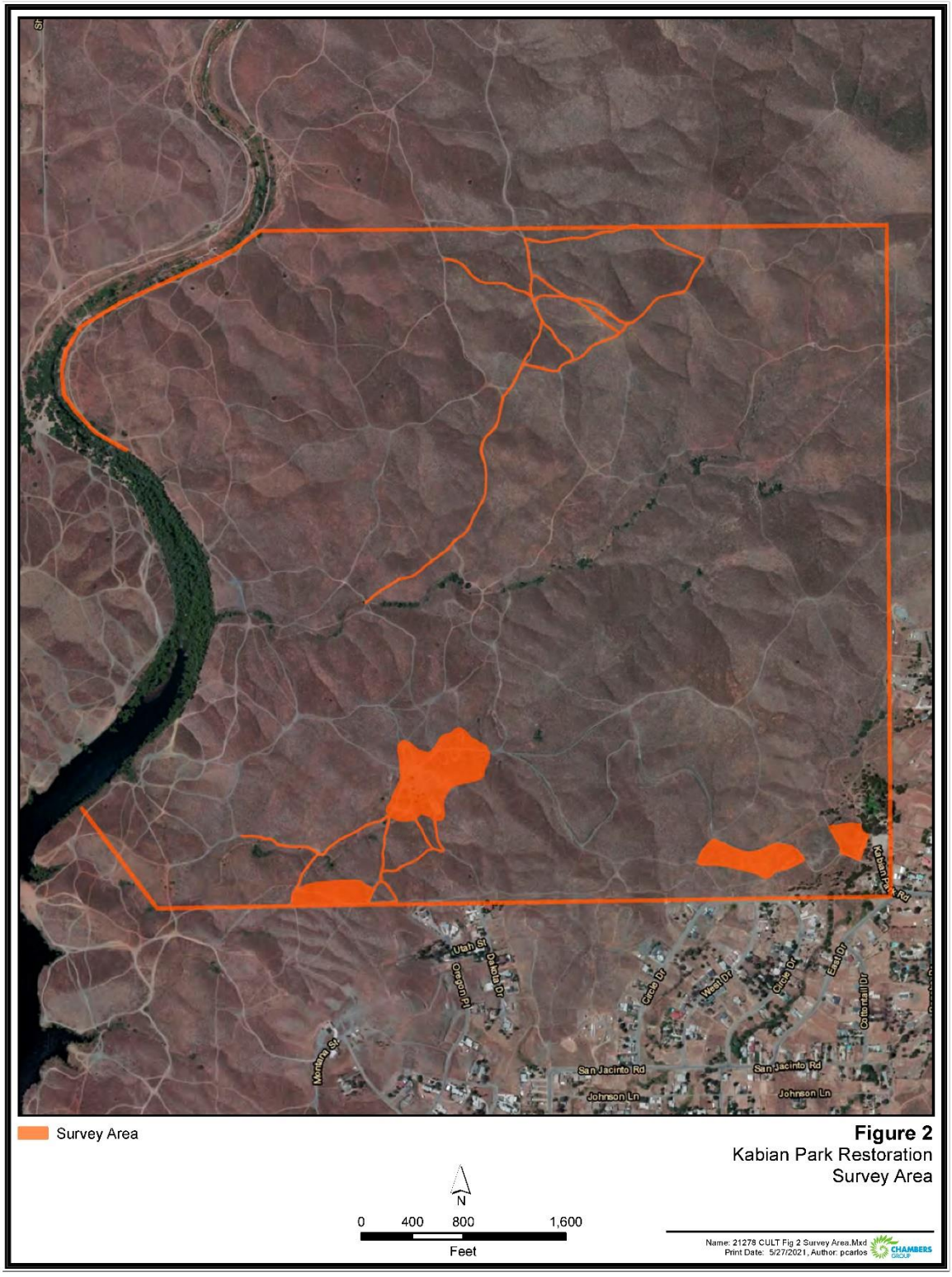

Figure 2
Kabian Park Restoration
Survey Area

Figure 1: Survey site near entrance of park. View to the southwest.

Figure 2: Survey area Fence Boundary. View to the east.

Figure 3: Project survey Area Fence Boundary. Dense vegetation.

Figure 4: Southwestern edge of the Project Survey Area. View to the west.

Figure 5: Shell identified during survey. Species appear to be *Crassostrea gigas* and *Haliotis rufescens*.

Figure 6: Stacked rock semi-subterranean room, located near park gate at southeast corner of the park. View to east-southeast.