

COUNTY OF RIVERSIDE

ENVIRONMENTAL ASSESSMENT FORM: INITIAL STUDY

Environmental Assessment (CEQ / EA) Number: TBD

Project Case Type (s) and Number(s): PK-9703

Lead Agency Name: Riverside County Regional Park & Open-Space District

Address: 21470 Gavilan Road, Perris, CA

Contact Person: Analicia Gomez, Planner

Telephone Number: (951) 500-7188

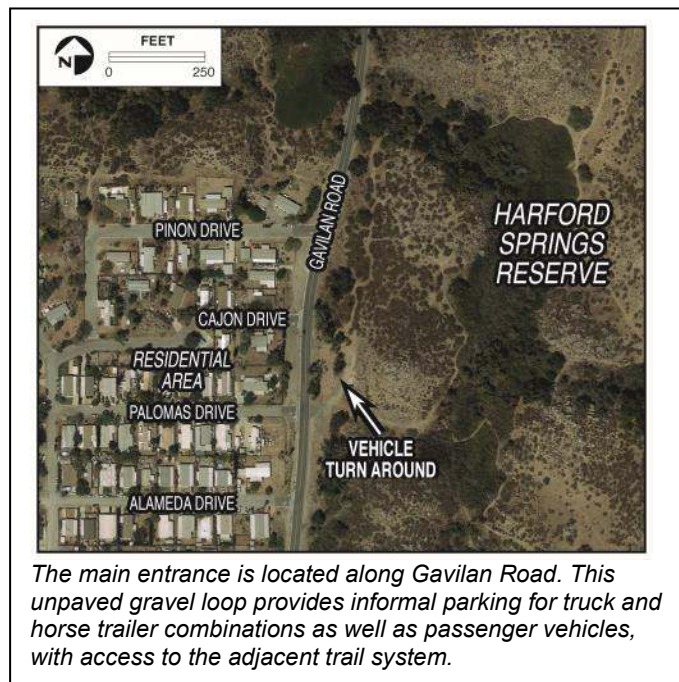
Applicant's Name: Riverside County Regional Park & Open-Space District

Applicant's Address: 4600 Crestmore Road, Jurupa Valley, CA 92509

I. PROJECT INFORMATION

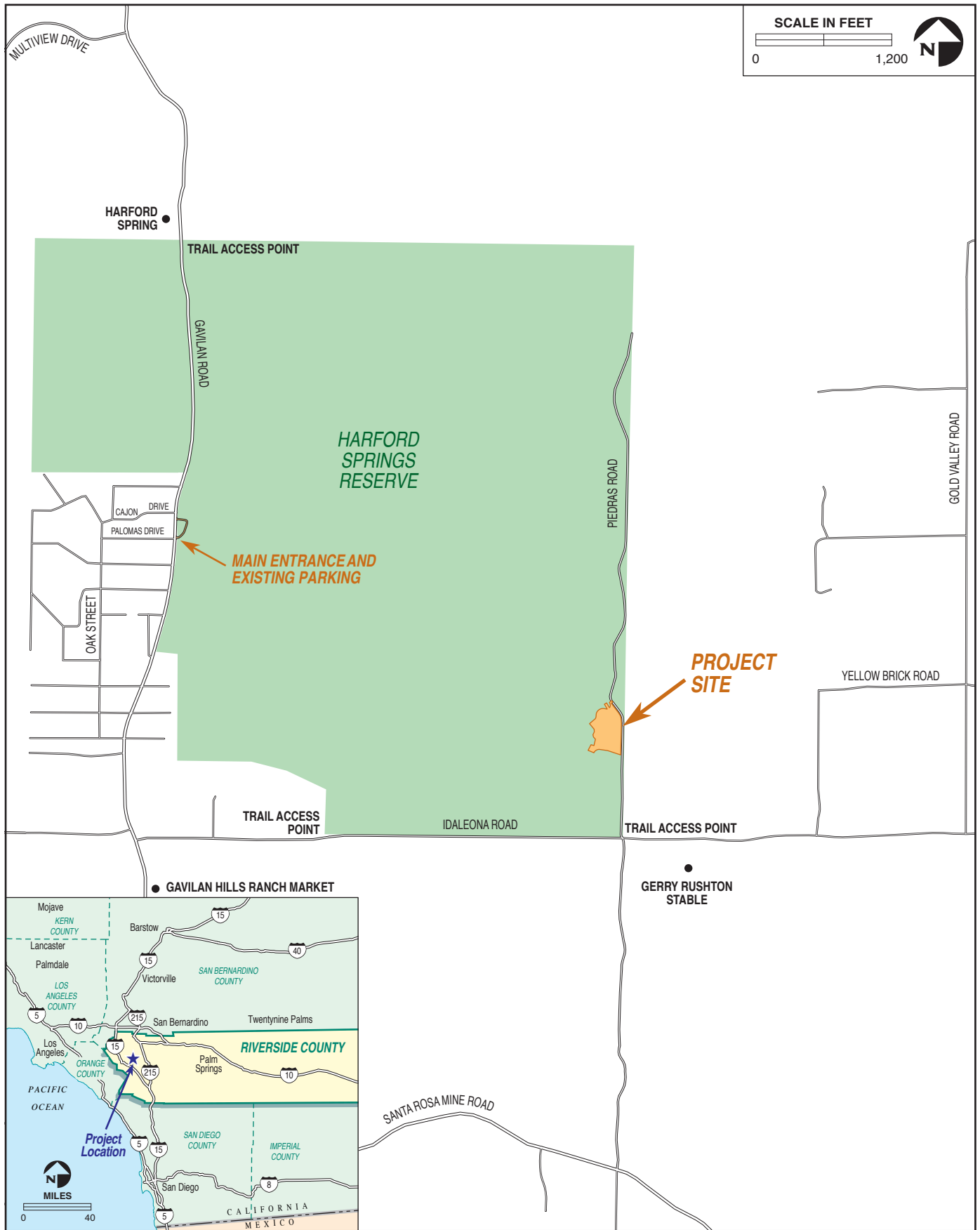
Project Description

Harford Springs Reserve (Reserve) is an approximately 325-acre undeveloped open space, located in the western region of unincorporated Riverside County, which is owned and managed by Riverside County Regional Park & Open-Space District (RivCoParks) (see Figure 1). The main entrance to the Reserve is located east of Gavilan Road between Palomas Drive and Cajon Drive, along the western border of the Reserve (see Figure 1). The unpaved gravel loop at this location provides informal parking for approximately 1 to 2 truck and horse trailer combinations as well as 4 to 6 passenger vehicles. During periods of peak demand (e.g., during the morning on the weekends in the Spring and Summer), many visitors park their vehicles on the street along Gavilan Road or in the dirt parking area at the Gavilan Ranch Market, located to the south at the corner of Gavilan Road and Idaleona Road (see Figure 1).



The proposed Project would create an approximately 1.8-acre day use parking and staging area (Project site) in the southeast corner of the Reserve, located immediately west of Piedras Road, approximately 750 feet from the intersection of Piedras Road and Idaleona Road. The proposed day use parking and staging area would provide additional parking for approximately 10 truck and horse trailer combinations, including 1 space that would meet Americans with Disability Act of 1990 (ADA) requirements, and 5 parking spaces for passenger vehicles, including 1 space that would meet ADA requirements. Additionally, the day use parking and staging area would provide additional recreational amenities including hitching posts and picnic tables.

Development of the proposed day use parking and staging area would involve minimal vegetation clearing and grubbing, rough and finish grading, base compaction, limited concrete paving for ADA spaces, delineation of individual parking spaces, and construction of a perimeter split rail fence.



Harford Springs Reserve
Project Vicinity

**FIGURE
1**

RivCoParks conducted several public outreach meetings to inform the community, identify public concerns, and provide an opportunity to gather comments and input on the scope of the proposed Project. The first public meeting on February 19, 2019 included several RivCoParks staff and approximately 50 community members. The primary community concerns that were identified during this initial public meeting included illegal activity (e.g., dumping, off-highway vehicle [OHV] use, etc.), speeding along Idaleona Road, security within the Reserve and at the private properties farther north off Piedras Road, and adding rangers. On April 25, 2019, RivCoParks hosted a subsequent meeting with the Greater Lake Mathews Rural Trail Association (GLMRTA) to present the preliminary project design for the proposed day use parking and staging area. The GLMRTA expressed concerns regarding line-of-sight truck and horse trailer combinations turning onto and off of Piedras Road. The GLMRTA also suggested the design remain minimal and to maximize parking at the site. During another meeting with the GLMRTA on February 27, 2020, RivCoParks presented a revised design. RivCoParks requested that the GLMRTA “adopt” the day use parking and staging area to assist with maintenance and discussed the GLMRTA’s concerns regarding site security.

Project Site and History

As previously described the Reserve is located in the western region of unincorporated Riverside County, and generally boarded by unincorporated open space to the north, south, and west as well as a small rural residential neighborhood to the east. Regional access to the Reserve is provided by Interstate 215 (I-215), Interstate 15 (I-15), California State Route 74 (Route 74), and California State Route 91 (Route 91) (refer to Figure 1). Local access to the Reserve is provided by Gavilan Road, which is a two-lane roadway that provides local north-south access, and Idaleona Road, which is an unmarked paved road that provides local east-west access. As previously described, the main entrance to the Reserve is provided east of Gavilan Road between Palomas Drive and Cajon Drive, along the western border of the Reserve (see Figure 2). In addition to the unpaved gravel loop and informal parking, the main entrance also includes a bulletin board and trails map, dumpster, and portable toilet for visitors.

A secondary entrance to the Reserve is provided by Piedras Road, located approximately 125 feet north of its intersection with Idaleona Road. Piedras Road begins as a paved road but becomes a dirt road shortly past a wooden gate that marks the entrance to the Reserve. The road is approximately 16 feet wide near the gate and extends for approximately 4,800 feet (0.90 miles), running along the eastern edge of the Reserve.



The main entrance is an unpaved gravel loop located along Gavilan Road. This area is marked by a sign, but otherwise provides limited recreational amenities.



The day use parking and staging area would be located off of Piedras Road where it intersects Idaleona Road. A wooden gate marks the existing pedestrian entrance on the southern edge of the Reserve.

This secondary entrance serves as a trail access point for hikers and equestrians. However, no parking or other recreational amenities are provided.

The Reserve is named after the original property owner, Henry Morey Harford, a rancher, publisher, and realtor who moved to the City of Perris in 1900. His property was a popular spot for nature enthusiasts, and in 1960 the County was looking for potential space in the region. The County and the property owner, Harford's daughter, worked on an agreement for 10 years until the County's purchase was finalized officially in 1970 (Lech 2020). The Reserve is currently owned and managed RivCoParks and is open every day from 8:00 AM to sunset.



Harford Springs Reserve provides a variety of trails through diverse topographies and habitat types.

The Reserve provides a variety of trails (see Figure 2), which are popular for moderately challenging hiking, running, mountain biking, and equestrian use as well as wildlife viewing and nature photography. RivCoParks conducts trails maintenance and erosion control activities, as necessary, on all trails at least once per year. Weed abatement is conducted near residential areas to remove potential ladder fuels. Additionally, RivCoParks conducts weed eating activities, trash pickup, and tree trimming approximately two to three times per year. Typically, work is completed by 2 rangers, 1 maintenance worker, and 3 to 4 work release workers.

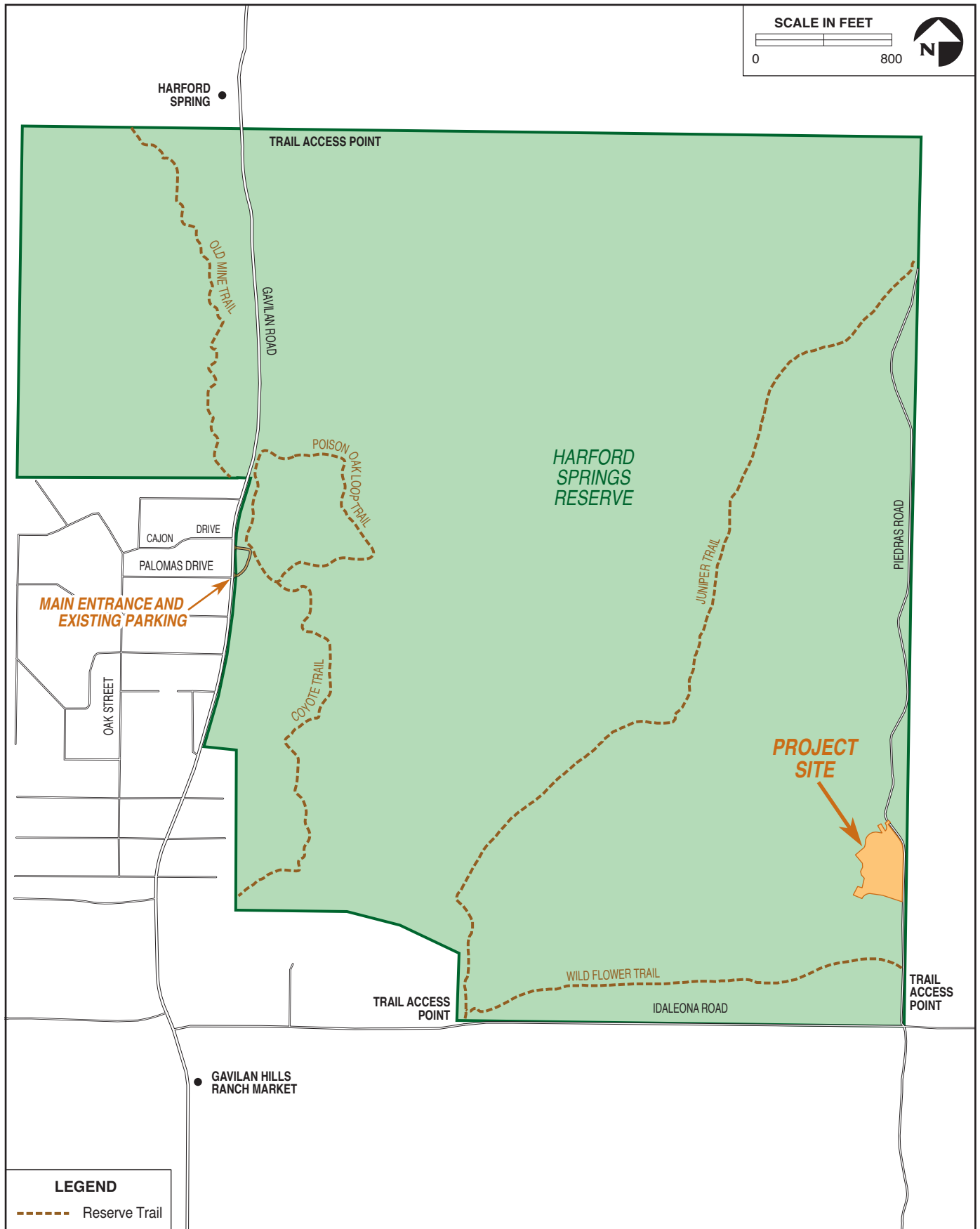
Approximately 1,000 to 1,500 people visit the Reserve annually, with more visitors during years with large wildflower blooms. Peak demand generally occurs in the Spring and Summer months, when between approximately 20 to 50 people visit the Reserve every week. However, during equestrian events at the Reserve, there can be up to 50 to 75 riders during a single day.

The number of visitors – particularly during the Spring and Summer months – overwhelm the limited number of informal parking spaces available at the main entrance. Truck and horse trailer combinations as well as passenger vehicles often park on the side of Gavilan Road and Piedras Road, which can restrict access to the entrance for wider truck and horse trailer combinations. Visitors also park at the Gavilan Ranch Market, located on Gavilan Road, approximately 600 feet



During peak periods, visitors often park at Gavilan Ranch Market, located less than 1 mile from the southeastern edge of the Reserve.

south of Idaleona Road. During equestrian events or other peak periods, the store's parking lot has been completely full with 15 or more truck and horse trailer combinations. Not only does this interrupt business at the store, it also presents potential safety hazards for hikers, runners, mountain bikers, and equestrians traveling along Gavilan Road or across Idaleona Road to reach the trail access points (refer to Figure 2). To address the visitor parking constraints at the Reserve, RivCoParks, in conjunction with community members and the GLMRTA, began investigating the possibility of developing an equestrian, day use parking and staging area within the southeastern portion of the Reserve. The proposed Project site was chosen because it provides sufficient space, relatively flat terrain, minimal/disturbed vegetation, and an existing unpaved access road from Idaleona Road.



Proposed Project Components

Vehicle Parking

Under the proposed Project, the approximately 1.8-acre Project site would be cleared and grubbed and small to medium sized boulders encountered on-site would be relocated to the perimeter. Four California juniper trees (*Juniperus californica*) located within the footprint of the Project site would be removed with the stumps of these trees ground to 12 inches below the finished surface of the proposed day use parking and staging areas. The Project site would be leveled with minor grading necessary to maintain existing surface water drainage, which would continue to be directed from the east towards the interior of the Reserve to the northwest (see Section 23, *Water Quality Impacts*).

Concrete flatwork would be required for the ADA-accessible truck and horse trailer combination space as well as the ADA-accessible passenger vehicle space. Two 6-inch-thick reinforced concrete pads would be constructed in these areas and disable parking signs would be installed. The remainder of the proposed day use parking and staging area would be covered with native soil and stabilizers.

The unpaved loop would provide parking for approximately 10 truck and horse trailer combinations with trucks entering through the northernmost entry and parking along the edge of the loop. The passenger vehicle parking spaces would be located along the southern end of the proposed day use parking and staging area and would be striped or delineated using small rocks or down branches. Vehicles would exit the loop using the southernmost split exit, which would allow vehicles to turn left along Piedras Road to re-enter the unpaved loop or turn right along Piedras road to exit the Reserve. Vehicles would be prevented from traveling past the day use parking and staging area into the Reserve by a pipe gate that would be installed as a part of the proposed Project (see Figure 3).

The proposed day use parking and staging area would be surrounded by split rail fencing and relocated boulders along the perimeter with entrances to the existing trails (see Figure 3).

Additional Recreational Amenities

The proposed day use parking and staging area would include five precast concrete picnic tables located between the ADA-accessible truck and horse trailer combination and passenger vehicle parking spaces. This area would be covered by 3 inches of decomposed granite. One 6-inch by 6-inch wooden hitching post would be located to the north of the proposed day use parking and staging area, three hitching posts would be located to the south of the picnic tables, and five precast concrete trash receptacles would be located throughout the Project site near the hitching posts, parking areas, and trail access points (see Figure 3).

Construction

The primary heavy construction activities associated with the proposed Project would be limited to grading and concrete flatwork associated with the ADA-accessible spaces. Installation of split rail fencing, picnic tables, trash receptacles, etc. would generally be accomplished using hand tools.

In total, the proposed construction activities would require approximately 1.8 acres of grading. The maximum depth of cut and fill would be approximately 2 feet, with 500 cubic yards (cy) of total earthwork. However, soil would be balanced site, with no soil export or import of fill material required for the proposed Project.

Heavy haul trucks used to deliver equipment and materials to the Project site would access the Project site from Gavilan Road turning east onto Idaleona Road and turning north onto Piedras Road to access the Project site. The materials laydown and construction staging area would be located on the Project site in the area that would become the unpaved gravel loop. Heavy construction equipment would remain in the construction staging area throughout the duration of construction. It is estimated that 1 to 7 construction workers would be required depending of the phase of construction (see Table 1).

Construction Timing

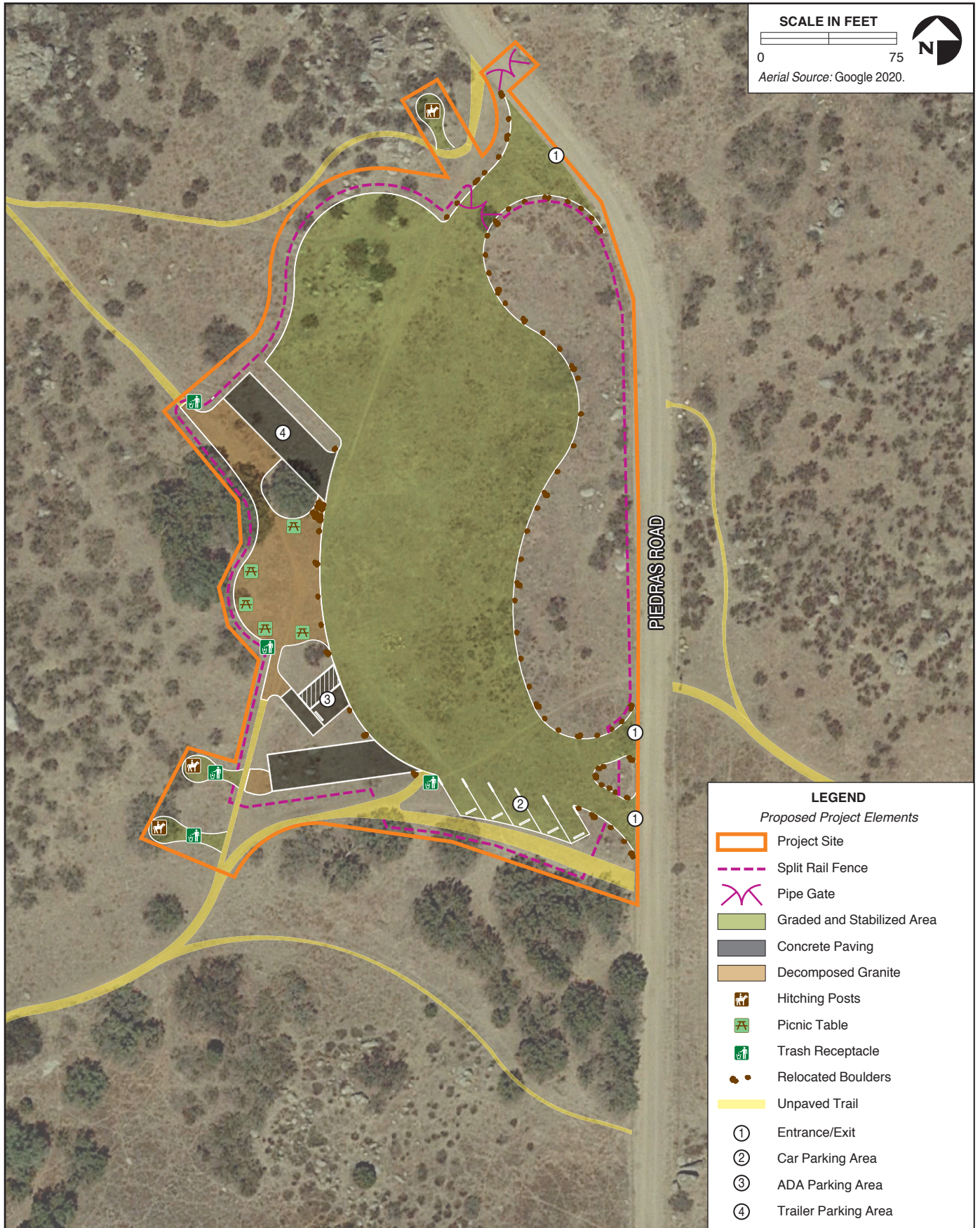
Construction activities would be minimal and the timeline would be heavily dependent on the lead time of purchasing and delivering precast concrete picnic tables and waste receptacles, which would take between 6 to 8 weeks. For the purposes of analysis, it has been assumed that construction activities would occur intermittently over an estimated 2- to 3-month period beginning in Summer 2020.

Public construction projects and facilities owned or operated by or for a governmental agency are exempt from the County’s Noise Ordinance (Ordinance Number 847; Riverside County 2007). Although the proposed Project is exempt from limitations on construction hours, to the maximum extent feasible, RivCoParks would voluntarily limit construction activities to the hours between 6:00 AM and 6:00 PM during the months of June through September, and between 6:00 AM and 7:00 PM 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 miles of a residence.

The proposed construction timeline, staffing, and equipment needs are described in Table 1 below:

Table 1. Construction Activities and Timeline

Activity	Timeframe	Equipment	Daily Workers
Mobilization and securing site	1 week	18-wheel truck for delivery of heavy equipment for grading, stake bed truck for bringing temporary fencing for staging/laydown area	3-5
Grading and boulder placement	3 weeks	Bulldozer, skid loader, motor grader, wheel compactor, 18-wheel truck/trailer to haul heavy equipment after grading is complete	3-5
Concrete forming and placing	2 weeks	Crew trucks, 10-wheel cement mixer	5-7
Fencing and hitching posts	3 weeks	Stake bed trucks, crew trucks	3-5
Installing site furnishings	1 week (concurrent with fencing)	Articulated lift, 18-wheel delivery truck, crew truck	3-5
Signage, striping	1 week (concurrent with fencing)	Crew trucks	1-2
Clean up and demobilization	1 week	Crew trucks	1-2



Required Agency Approvals

As discussed in Section 7, *Wildlife & Vegetation* the Project site located within the Criteria Area of the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP). Therefore, the proposed day use parking and staging area would be subject Joint Project Review (JPR) process by the Western Riverside County Regional Conservation Authority (RCA). The proposed Project would use the “take” permits granted under the MSHCP instead of having to obtain separate permits or negotiated with the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW).

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

B. Total Project Area:

Residential Acres: N/A
Commercial Acres: N/A
Industrial Acres: N/A
Other: 1.8 acres

Lots: Units:
Lots: Sq. Ft. of Bldg. Area:
Lots: Sq. Ft. of Bldg. Area:

Projected No. of Residents:
Est. No. of Employees:
Est. No. of Employees:

C. Assessor’s Parcel No(s): 287-280-012-2

Street References: North of Idaleona Road and west of Piedras Road

D. Section, Township & Range Description or Reference/Attach a Legal Description: The Project site is located on the western edge of Section 19 in Township 4 South, Range 4 West, of the San Bernardino Baseline and Meridian, County of Riverside, State of California.

E. Brief description of the existing environmental setting of the project site and its surroundings:

The Reserve is located within unincorporated Riverside County, west of the City of Perris and the unincorporated area of Mead Valley, and south of the unincorporated area of Woodcrest. The Reserve is approximately 3 miles east of the Lake Mathews Estelle Mountain Reserve and 4 miles southeast of Lake Mathews. The Reserve is generally bordered by Gavilan Road to the west, Idaleona Road to the south, and Piedras Road to the east. Gavilan Hills Ranch Market is located approximately 0.25 miles from the southwestern corner of the Reserve (refer to Figure 1 and Figure 2). The Reserve is surrounded by undeveloped open space to the north, south, and east and a small rural residential neighborhood to the west. There is a horse stable and one single family rural residence within 0.25 miles of the Project site, located directly south across Idaleona Road. No other residences are located within 0.25 miles of the Project site.



Existing parking at the main entrance is limited to a small paved and gravel area off of Gavilan Road on the eastern border of the Reserve.

Several field surveys and associated technical reports have been prepared for the proposed Project, including a MSHCP Consistency Analysis (Amec Foster Wheeler Environment & Infrastructure, Inc. [Amec Foster Wheeler] 2018b; see Appendix A), Jurisdictional Delineation (Wood Environment &

Infrastructure Solutions, Inc. [Wood] 2020; see Appendix B), and Extended Phase I Cultural Resources Inventory (Amec Foster Wheeler 2018a; see Appendix C). These field surveys and technical reports provide the description of the existing setting for the Project site and the surrounding vicinity.

The Project site is generally located at an elevation of 2,000 to 2,050 feet above mean sea level. This area is characterized by the Vista soil series, which includes moderately deep, well drained soils that formed in material weathered from decomposed granitic rocks. Vista soils are generally located on hills and mountainous uplands and have slopes of 2 to 85 percent. In Southern California – including Riverside County – Vista soils are located on hilly slopes at elevations of 400 to 3,900 feet. They are well drained with slow to rapid runoff and moderately rapid permeability (Amec Foster Wheeler 2018b; U.S. Department of Agriculture Natural Resources Conservation Service 2017).

The Project site is located within the Santa Ana watershed, where the average rainfall is approximately 8.23 inches per year. Surface water runoff within the region generally originates from the south, flows to the north into Lake Mathews, and then flows to west for approximately 4 miles before reaching the Temescal Creek. The drainage continues for approximately 6 miles until it reaches the Prado Flood Control Basin. Water is then drained southwest by the Santa Ana River approximately 29 miles until it reaches the Pacific Ocean (Wood 2020).

The Project site is located approximately 300 feet to the north of an un-named drainage that conveys natural surface water flows and urban run-off from the surrounding single-family rural residences and commercial land uses (see Figure 4). However, this drainage path supports only intermittent flows that occur during and immediately following heavy storm events and shows no evidence of an ordinary-high-water mark (OHWM) and/or definable bed and bank feature. Two partially buried culverts are located beneath Piedras Road; however, these culverts have not conveyed any recent flows. A clearly defined bed and bank feature is located approximately 0.5 miles downstream to the west, which is where the jurisdictional drainage feature begins (Wood 2020).

The Project site is located in an area known for underground springs, hence the name Harford Springs Reserve. There are sparse individual willows within the headwaters, but these are in extremely poor health and are likely associated with deep roots that tap into the underground springs. In years of drought, these trees die-back. During years of average to above average rainfall, these willows may show signs of recovery. Within the vicinity of the Project site, the individual willows are sparse and would not be classified as a riparian habitat (Wood 2020).

Four primary vegetation types are located within the vicinity of the Project area (see Figure 4), including:

- **Grassland:** The Project site generally is characterized by the grassland vegetation community (see Figure 4), which is primarily composed of annual plant species dominated by several grasses. These include slender wild oat (*Avena barbata*), red brome (*Bromus madritensis* ssp. *rubens*), and soft chess (*Bromus hordeaceus*). There is a component of native and



Existing vegetation at the Project site is generally limited to annual grasses and low growing shrubs.

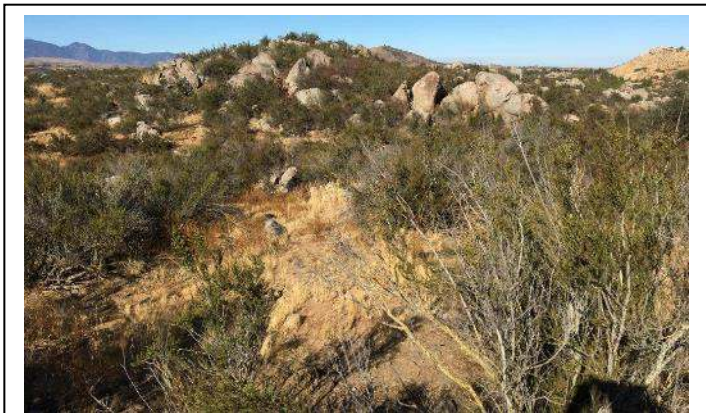
non-native forbs such as Russian thistle (*Salsola tragus*), turkey mullein (*Croton setiger*), and Maltese star-thistle (*Centaurea melitensis*).

- **Woodland and Forests:** The Project site includes small patches of the woodland and forests vegetation community. Within the Project site and the immediate vicinity this vegetative community includes scrub oaks (*Quercus berberidifolia*) and California juniper. Larger blocks of this vegetation community are located further south of the Project site adjacent to Idaleona Road (see Figure 4).

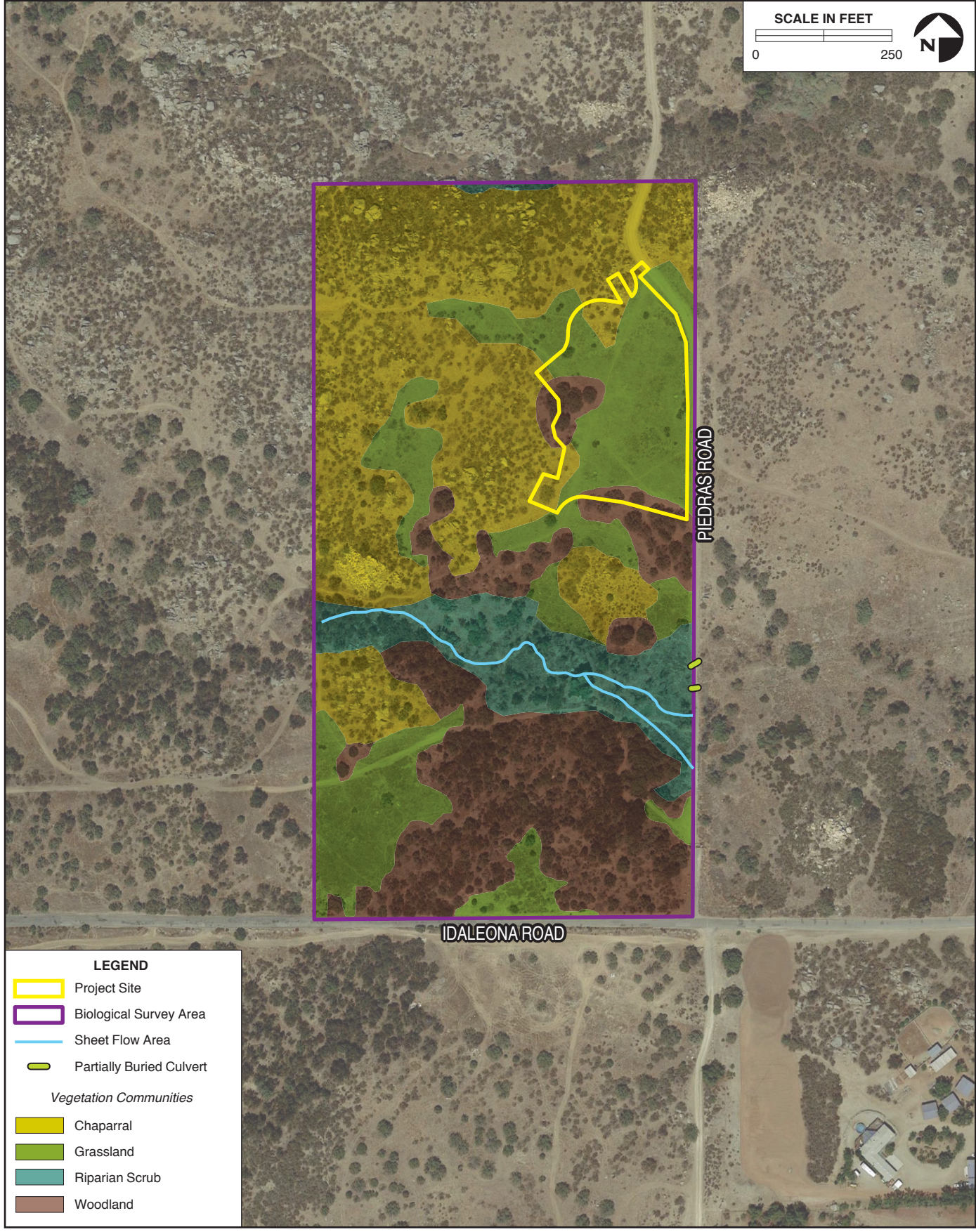


Juniper and oak dominated woodlands are located to the south of the Project site.

- **Chaparral:** The Project site includes a small patch of chaparral to the southwest. This vegetation community occurs to the north and to the west of the Project site (see Figure 4). Chaparral is a shrub-dominated vegetation community that is composed relatively largely of evergreen species that range from 3 to 12 feet in height. The most common and widespread species within chaparral vegetation community is chamise (*Adenostoma fasciculatum*). Other common shrub species include oak (*Quercus* spp.) and redberry (*Rhamnus* spp.). Subshrubs are less common in this community but occur within canopy gaps of mature stands. Common species include California buckwheat (*Eriogonum fasciculatum*), sages (*Salvia* spp.), and monkeyflower (*Mimulus* spp.).
- **Riparian Scrub:** This vegetation community, which occurs approximately 300 feet to the south of the Project site, include elements of southern riparian scrub and southern cottonwood willow riparian forest, which are both considered special-status vegetation communities by the CDFW. These riparian communities are dominated by trees and shrubs, including willows (*Salix* spp.), mule fat (*Baccharis salicifolia*), Fremont cottonwood (*Populus fremontii*), blue elderberry (*Sambucus nigra* ssp. *caerulea*), and saltcedar (*Tamarix* spp.). As previously described, natural runoff in this area sheet flows during and immediately following heavy storm events; However, there is no evidence of an ordinary-high-water mark (OHWM) and/or definable bed and bank feature (see Section 7, *Wildlife & Vegetation*).



Chaparral and rock outcrops are located to the north and to the west of the Project site.



LEGEND

- Project Site
- Biological Survey Area
- Sheet Flow Area
- Partially Buried Culvert

Vegetation Communities

- Chaparral
- Grassland
- Riparian Scrub
- Woodland

Some of the most common vertebrate species observed on the Project site and in the surrounding vicinity include red-tailed hawk (*Buteo jamaicensis*), Anna's hummingbird (*Calypte anna*), mourning dove (*Zenaida macroura*), black phoebe (*Sayornis saya*), Audubon's cottontail (*Sylvilagus audubonii*), California ground squirrel (*Otospermophilus beecheyi*), and western fence lizard (*Sceloporus occidentalis*). A literature review conducted in preparation of the MSHCP Consistency Analysis showed that there are 83 special status biological resources known to occur within a 5-mile radius of the Project site. These include 26 plant species, 4 vegetation communities, 2 invertebrates, 1 amphibian, 8 reptiles, 12 birds, and 4 mammals (Amec Foster Wheeler 2018b; see Section 7, *Wildlife & Vegetation*).

Two cultural resources – an isolated hole-in-top can (P-33-028090) and a campsite (P-33-028089) – were discovered during the Extended Phase I Cultural Resources Inventory (Amec Foster Wheeler 2018a). However, it was determined that neither the hole-in-top can nor campsite were eligible for listing in the National Register of Historic Places (NRHP) or California Register of Historical Resources (CRHR) (Amec Foster Wheeler 2018a; see Section 8, *Historical Resources*). Therefore, these resources do not qualify as “historical resources” under the California Environmental Quality Act (CEQA) or as Riverside County Landmark. No other prehistoric or tribal cultural resources were encountered at the Project site (Amec Foster Wheeler 2018a; see Section 39, *Tribal Cultural Resources*).

II. APPLICABLE GENERAL PLAN AND ZONING REGULATIONS

F. General Plan Elements / Policies:

- 1. Land Use:** The Project site is located within the Lake Mathews / Woodcrest Area Plan and is designated as Open Space-Conservation Habitat (OS-C H). This land use designation applies to public and private lands conserved and managed in accordance with an adopted MSHCP or other Conservation Plan(s) and in accordance with related Riverside County policies. Ancillary structures or uses may be permitted within this land use designation for the purpose of preserving or enjoying open space (Riverside County 2019a).
- 2. Circulation:** All materials laydown and construction staging would occur with the Project site, limiting potential transportation impacts along Gavilan Road, Idaleona Road, and Piedras Road. The proposed Project would not measurably affect any other transportation facilities referenced in the General Plan and meets all applicable circulation policies (Riverside County 2017).
- 3. Multipurpose Open Space:** The proposed Project does not include drinking fountains or permanent restrooms facilities. As such there would be no increase in demand for domestic water or wastewater facilities. There are no agricultural, forest, mineral, or energy resources 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 state-designated very high fire hazard severity zone; however, the entrance to the Reserve is located approximately 2.5 miles from the closest fire station and the implementation of the proposed Project would not increase the risk of fire hazards (Riverside County 2019b; see Section 44, *Wildfire Impacts*). The proposed day use parking and staging area would have a boundary sign prohibiting hunting, fires, shooting, and other potential ignition sources. Similar signage is also at the existing main entrance and every 300 feet along Gavilan and Idaleona Road. Additionally, RivCoParks would continue to conduct regular weed abatement to reduce ladder fuels 100 feet from residences.

5. **Noise:** The Reserve is surrounded by undeveloped open space to the north, south, and east and a small rural residential neighborhood to the west. There is a horse stable and one single family rural residence within 0.25 miles of the Project site, located directly south across Idaleona Road. No other residences are located within 0.25 miles of the Project site. Construction activities would comply with the County Noise Ordinance (Riverside County 2007; see Section 27, *Noise Effects by the Project*) and long-term noise compatibility issues as a result of the proposed day use parking and staging area would not be anticipated.
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 short-term and temporary with emissions that would be below the South Coast Air Quality Management District (SCAQMD) thresholds (see Section 6, *Air Quality Impacts*). Operation of the proposed Project would not include activities that would result in additional new stationary or mobile air emissions. The proposed day use parking and staging area would provide parking for visitors that are already accessing the Reserve.
8. **Healthy Communities:** The proposed Project would provide increased access to recreational open space, providing safe opportunities for recreation and physical activities.
9. **Administration:** Not applicable to the proposed Project.
10. **Environmental Justice:** As of May 2020, the Environmental Justice Element has not been adopted.

11. **General Plan Area Plan(s):** Lake Mathews / Woodcrest Area Plan

G. **Foundation Component(s):** Open Space

H. **Land Use Designation(s):** Open Space-Conservation Habitat (OS-C H)

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

J. **Policy Area(s), if any:** Gavilan Hills Policy Area

K. **Adjacent and Surrounding:**

1. **General Plan Area Plan(s):** Lake Mathews / Woodcrest Area Plan

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

3. **Land Use Designation(s):** Open Space-Conservation Habitat (OS-C H)

4. **Overlay(s), if any:** N/A

5. **Policy Area(s), if any:** Gavilan Hills Policy Area

L. **Adopted Specific Plan Information**

1. **Name and Number of Specific Plan, if any:** Lake Mathews / Woodcrest Area Plan

2. Specific Plan Planning Area, and Policies, if any: Gavilan Hills Policy Area; policies focus on regulating future residential development in the area.

M. Existing Zoning: Natural Assets (N-A)

N. Proposed Zoning, if any: N/A

O. Adjacent and Surrounding Zoning: Specific Plan (S-P)

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.

- | | | |
|--|--|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Agriculture & Forest Resources | <input type="checkbox"/> Hydrology / Water Quality | <input type="checkbox"/> Transportation |
| <input type="checkbox"/> Air Quality | <input type="checkbox"/> Land Use / Planning | <input checked="" type="checkbox"/> Tribal Cultural Resources |
| <input checked="" type="checkbox"/> Biological Resources | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Utilities / Service Systems |
| <input checked="" type="checkbox"/> Cultural Resources | <input type="checkbox"/> Noise | <input type="checkbox"/> Wildfire |
| <input type="checkbox"/> Energy | <input type="checkbox"/> Paleontological Resources | <input type="checkbox"/> Mandatory Findings of Significance |

IV. DETERMINATION

On the basis of this initial evaluation:

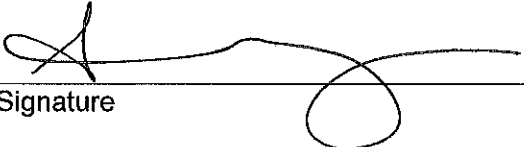
A PREVIOUS ENVIRONMENTAL IMPACT REPORT / NEGATIVE DECLARATION WAS NOT PREPARED
<input type="checkbox"/> I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
<input checked="" type="checkbox"/> I find that although the proposed 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.
<input type="checkbox"/> 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
<input type="checkbox"/> 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

10/29/2020

Date

ANALICIA GOMEZ

Printed Name

For:
RIVERSIDE COUNTY REGIONAL PARK
& OPEN-SPACE DISTRICT

II. ENVIRONMENTAL ISSUES ASSESSMENT

In accordance with CEQA (Public Resources Code Section 21000-21178.1), this Initial Study has been prepared to analyze the proposed Project and to identify any potentially significant temporary or long-term environmental impacts. In accordance with California Code of Regulations Section 15063, this Initial Study is a preliminary analysis prepared by Riverside County, the Lead Agency, 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

As previously described the Project site is located approximately 820 feet to the north of the intersection of Idaleona Road and Piedras Road (refer to Figure 1). The Project site is not located within the vicinity of any scenic highways designated by the California Department of Transportation (Caltrans) (Caltrans 2020). Additionally, Idaleona Road has not been designated as Eligible or Designated State or County Scenic Highway in the Riverside County General Plan (Riverside County 2017). Pedestrian facilities (e.g., sidewalks) are not provided along Idaleona Road. While pedestrians may walk along the shoulder of the paved roadway, views along the Idaleona Road are generally



Foreground views along Idaleona Road include fencing and low growing vegetation. Midground and background views include trees and other shrubby vegetation as well as mountainous terrain and open sky.

limited to drivers, who are traveling at speeds of 25 miles per hour (mph) or more. Views along Idaleona Road within the immediate vicinity of the Project site include trees and other shrubby vegetation along both sides of the paved roadway as well as a 4-foot tall barbed wire fencing along the northern side of

the road. Background views include rolling hills and mountainous topography. The Project site may be visible for short periods along Idaleona Road; however, due to existing topography and vegetation along the road, views of the Project site are largely obscured or completely blocked.

Source(s): Caltrans Scenic Highway System Lists; Riverside County General Plan Circulation Element Figure C-8, *Scenic Highways*

Findings of Fact:

a) **No Impact.** As previously described, there are no scenic highways located near the Project site (Caltrans 2020). The nearest locally designated scenic corridor is located on Cajalco Road, approximately 2.5 miles north of the Project site (Riverside County 2017). Therefore, there would be no impact associated with the implementation of the proposed Project.

b, c) **Less Than Significant.** The proposed Project would remove four existing California juniper trees at the Project site; however, the remaining trees within and surrounding the Project site, would be preserved in place, including the scrub oaks and California juniper trees that make up the patches of woodland and forest vegetation community to the west and to the south (refer to Figure 4). Additionally, the proposed Project would relocate existing small to medium sized boulders on the Project site but would not damage any scenic resources including rock outcroppings and unique or landmark features within the Reserve. Construction equipment would be visible from areas adjacent to the Project site, but potential impacts to surrounding views would be short-term and temporary, lasting for a period of 2- to 3-weeks. Following the completion of construction, the proposed day use parking and staging area would include rustic low-profile features (e.g., split rail fencing, 6-inch by 6-inch wooden hitching posts, relocated boulders, etc.). The unpaved areas within the Project site would be characterized by native soil and stabilizers as well as decomposed granite that would be generally compatible with the existing rural nature of the Reserve. As with the main entrance, vehicles may be visible in the proposed day use parking and staging area, particularly in areas that are located immediately adjacent or at some higher elevations within the Reserve. However, 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 325-acre Reserve. Hikers, runners, mountain bikers, and equestrians traveling along Trail 12 to the west (refer to Figure 3) would descend to an elevation of 1,985 feet above mean sea level within less than 0.25 miles, after which the proposed day use parking and staging area would no longer be visible. Trail 1 rises in elevation to the north (refer to Figure 3); however, direct views of the proposed day use parking and staging area would be blocked by topographical features that reach elevations of over 2,050 feet above mean sea level. Closer to the Project site the western and southern boundary of the Project site would be bordered by scrub oaks and California juniper trees that would obscure views of parked vehicles. Therefore, the proposed Project would not degrade the existing visual character of the Reserve and impacts to scenic resources would be less than significant.

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
2. Mt. Palomar Observatory				
a) Interfere with the nighttime use of the Mt. Palomar Observatory, as protected through Riverside County Ordinance No. 655?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Source(s): County of Riverside Transportation and Land Management Agency GIS Data Downloads; County Ordinance Number 655

Findings of Fact:

a) **No Impact.** The Project site is located approximately 42 miles northwest of the Mt. Palomar Observatory. All construction activities at the Project site would take place during the daylight hours between 6:00 AM and 7:00 PM, and therefore, would not require nighttime lighting. Further, the proposed Project would not include permanent lighting since the Reserve 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 impact.

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Expose residential property to unacceptable light levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Source(s): County Ordinance Number 847

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 AM and 7:00 PM, and therefore, would not require nighttime lighting. Further, the proposed Project would not include permanent lighting since the Reserve closes at sunset every day. Therefore, there would be no impact 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
AGRICULTURE & FOREST RESOURCES Would the project:				
4. Agriculture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Cause development of non-agricultural uses within 300 feet of agriculturally zoned property (Ordinance No. 625 "Right-to-Farm")?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Project site is located within the Lake Mathews / Woodcrest Area Plan and is designated as Open Space-Conservation Habitat (OS-C H) (Riverside County 2019a). The vegetation on the Project site consists of grassland as well as woodland and forest vegetation communities (Amec Foster Wheeler 2018b; refer to Figure 4). No current or historical agricultural and ranching operations are known to have occurred within the Project site (Amec Foster Wheeler 2018a).

Source(s): Riverside County General Plan Figure OS-2, *Agricultural Resources*

Findings of Fact:

- a) **No Impact.** The California Department of Conservation's Farmland Mapping and Monitoring Program identifies categories of agricultural resources that are significant and require special consideration. According to the Farmland Map, the Project site is not located in an area designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (as defined by Government Code Section 51201[c] and 56064) or Agricultural Land (as defined by Government Code Section 56016) (California Department of Conservation 2016). Further, none of the proposed Project elements would convert existing farmland to non-agricultural use. Therefore, there would be no impact to farmland 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. Therefore, the proposed Project would not conflict with existing zoning for agricultural use, or a Williamson Act Contract and there would be no impact.
- 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 4,400 feet (0.80 miles) to the southwest of the Project site near the Gavilan Hills Ranch Market. Therefore, there would be no impact associated with the implementation of the proposed Project.

d) **No Impact.** The proposed 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, there would be no impact 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
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])?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Source(s): Riverside County General Plan Figure OS-3a, *Forestry Resources Western Riverside County Parks, Forests, and Recreation Areas*

Findings of Fact:

a-c) **No Impact.** As previously described, the Project site is located within the Lake Mathews / Woodcrest Area Plan and is designated as Open Space-Conservation Habitat (OS-C H) (Riverside County 2019a). Neither the Project site nor the surrounding vicinity is zoned as forest land or timberland. The implementation of the proposed Project would require removal of four California juniper trees; however, the Project site is not within a forested area. Therefore, the proposed Project would not conflict with existing zoning or otherwise result in the conversion of forest land to non-forest use.

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
AIR QUALITY Would the project:				
6. Air Quality Impacts				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors, which are located within one (1) mile of the project site, to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The Project site is located within the South Coast Air Basin (Basin), which is governed by the SCAQMD. Riverside County is currently in *nonattainment* for ozone (O₃), both 1-hour and 8-hour, carbon monoxide (CO), nitrogen dioxide (NO₂), particulate matter equal to or less than ten microns in diameter (PM₁₀), and 2.5 microns in diameter (PM_{2.5}) under the National Ambient Air Quality Standards (NAAQS) (U.S. Environmental Protection Agency [USEPA] 2019). Additionally, the Basin is in *nonattainment* for O₃, PM_{2.5}, and PM₁₀ under the California Ambient Air Quality Standards (CAAQS) (California Air Resources Board [CARB] 2018a). The SCAQMD has established significance thresholds for construction emissions and operational emissions for six categories of pollutants, including nitrous oxides (NO_x), volatile organic compounds, (VOC), PM₁₀, and PM_{2.5}, sulfur oxides (SO_x), CO, and lead (Pb) (see Table 2). These thresholds are based on the potential adverse short-term health effects of each pollutant.

Table 2. Air Quality Significance Thresholds

Pollutant	Pounds per Day
Carbon Monoxide (CO)	550
Nitrogen Oxides (NO _x)	100
Respirable Particulate Matter (PM ₁₀)	150
Fine Particulate Matter (PM _{2.5})	55
Sulfur Oxides (SO _x)	150
Lead (Pb)	3
Reactive Organic Gases (ROGs)	75

Sources: SCAQMD 2019.

The SCAQMD and the Southern California Association of Governments (SCAG) are responsible for formulating and implementing the Air Quality Management Plan (AQMP) for the Basin. A development or land use project is considered to be consistent with the AQMP if it furthers one or more policies or/and does not obstruct other policies. The SCAQMD's CEQA Air Quality Handbook (1993) identifies two key indicators of consistency:

- Whether the development or land use project would result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay timely attainment of NAAQS or the interim emission reductions specified in the AQMP, except as provided for CO in Section 9.4 for relocating CO hot spots.

- Whether or not the development or land use project would exceed the assumptions in the AQMP in the year of build-out.

Construction

Construction emissions were estimated for the proposed Project using the California Emissions Estimator Model (CalEEMod) Version 2016.3.2 (see Appendix D). The CalEEMod analysis conservatively assumed that construction would begin in July 2020, since air quality in Southern California tends to be worse during the Summer, when NO_x more readily reacts with other chemicals and hydrocarbons in the sunlight to form O₃. Construction activities would last for a total of 10 weeks, including mobilization, grading, concrete flatwork, fencing, and installation of site furnishings and signage. Table 3 presents the estimated maximum unmitigated daily construction emissions associated with the proposed Project, which includes emissions from on-site sources (i.e., construction equipment) and off-site sources (i.e., haul truck trips, concrete truck trips, and construction worker vehicles). Daily construction emissions would not exceed the SCAQMD thresholds for VOC, NO_x, CO, SO_x, PM₁₀, or PM_{2.5} (see Table 3).

Table 3. Estimated Maximum Daily Construction Emissions (pounds per day)

Peak Daily Total	ROG	NO _x	CO	SO ₂	Fugitive Dust	
					PM ₁₀	PM _{2.5}
Summer 2020	3.88	18.64	8.45	0.02	12.69	2.47
SCAQMD Threshold	75	100	550	150	150	55
Significant?	No	No	No	No	No	No

Note: No mitigation measures were applied as estimated daily maximum construction emission are below SCAQMD thresholds.

Source: CalEEMod Version 2016.3.2; see Appendix D.

Operation

Operation of the proposed Project would be limited to visitor trips to and from the proposed day use parking and staging area as well as periodic vehicle trips for maintenance. Visitor trips to the proposed day use parking and staging area were estimated in CalEEMod using the ITE trip generation rates for a 325-acre Reserve (see Appendix D). Therefore, Table 4 conservatively represents the total estimated annual operational emissions that would result from visitors traveling to and from Reserve. However, the proposed day use parking and staging area would provide parking for visitors that are already accessing the Reserve. Therefore, the net increase in operational emissions over the course of a year would be negligible. Nevertheless, even with this conservative assumption, total operational emissions would remain well below the SCAQMD thresholds and would not violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Table 4. Estimated Daily Maximum Operational Emissions (pounds per day)

Peak Daily Total	ROG	NO _x	CO	SO ₂	Fugitive Dust	
					PM ₁₀	PM _{2.5}
Area	0.035	<0.00	0.008	0.000	<0.000	<0.000
Energy	0.000	0.000	0.000	0.000	0.000	0.000
Mobile	0.126	0.901	1.501	0.006	20.12	2.075
Overall	0.161	0.901	1.510	0.006	20.12	2.075
SCAQMD Threshold	75	100	550	150	150	55

Peak Daily Total	ROG	NO _x	CO	SO ₂	Fugitive Dust	
					PM ₁₀	PM _{2.5}
Significant?	No	No	No	No	No	No

Note: No mitigation measures were applied as estimated daily maximum construction emission are below SCAQMD thresholds.

Source: CalEEMod Version 2016.3.2; see Appendix D.

Source(s): SCAQMD CEQA Air Quality Handbook

Findings of Fact:

a) **No Impact.** As shown in Table 3, construction of the proposed Project would not substantially increase any sources of criteria pollutant emissions and construction emissions would remain well below the SCAQMD thresholds. As such, the minor, short-term construction emissions associated with the proposed Project would not conflict with or obstruct implementation of the AQMP. Implementation of the proposed Project would neither introduce new stationary sources of emissions nor substantially change existing mobile operations at the Reserve. The AQMP is based on emission projections, which assume land use composition and intensity from local general plan land use elements. Because the proposed Project does not include any change in land use or activities at the Project site and would not result in an increase in overall demand for the Reserve, the proposed Project would not induce growth (directly or indirectly) that might be inconsistent with the Riverside County General Plan or AQMP. Therefore, there would be no impact associated with the implementation of the proposed Project.

b) **Less Than Significant.** Due to the limited scope of the proposed construction activities – in terms of equipment, duration of construction, truck trips, and number of construction worker vehicle trips, etc. – short-term, temporary construction emissions would not violate air quality standards or contribute substantially to an existing air quality violation (refer to Table 3). As such, the proposed Project would result in less than significant impacts to air quality during construction. As the net increase in operational emissions would be negligible, the long-term operational impacts to air quality associated with the proposed Project would also be less than significant.

c) **Less Than Significant.** The nearest sensitive receptor to the Project site is the single-family rural residence located south of Idaleona Road (approximately 0.25 miles). The Reserve itself could also be considered a sensitive receptor; however, trail users within the 325-acre Reserve visit intermittently and would generally disperse quickly from the proposed day use parking and staging area.

Construction activities associated with the proposed Project would be short-term (i.e., between 2 to 3 months) and temporary. Due to the limited area of disturbance (i.e., 1.8 acres) and total earthwork (i.e., 500 cy), construction emissions would remain well below the SCAQMND thresholds (refer Table 3). Operational emissions associated with the proposed Project would be similar to existing conditions and would also remain well below SCAQMD thresholds (refer Table 4). Therefore, impacts to sensitive receptors would be less than significant.

d) **Less Than Significant.** Odors produced during the 2- to 3-month construction period would be localized and attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment. Such odors would be temporary, 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 miles from the nearest sensitive receptor with intervening vegetation and roadways. Therefore, impacts associated with odors during construction would be considered less than significant. Operation odors associated with the proposed day use

parking and staging area would be limited to vehicle emissions from truck and horse trailer combinations and passenger vehicles. These odors would be negligible, particularly given the intervening roadways and impacts would be less than significant.

Mitigation: The proposed Project would not result in significant impacts to air quality at the regional or local levels. However, to assure compliance with SCAQMD rules, the following Best Management Practices (BMPs) would be implemented as a part of the proposed Project:

BMP AQ-1: During clearing, grading, earth moving, or excavation operations, excessive fugitive dust emissions shall be controlled by regular watering or other dust preventive measures using the following procedures, as specified in SCAQMD Rule 403:

- All material excavated or graded shall be sufficiently watered to prevent excessive amounts of dust.
- Watering shall occur at least twice daily with complete coverage, preferable in the late morning and after work is done for the day.
- All material transported on- or off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust.
- The area disturbed by cleaning, grading, or earth moving operations shall be minimized so as to prevent excessive amounts of dust.

BMP AQ-2: Emissions from construction equipment vehicles shall be controlled by maintaining equipment engines in good operating condition and in proper tune per manufacturer’s specifications.

Monitoring: Compliance with these BMPs would be subject to periodic site inspections by the Riverside County Planning Department.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

An MSHCP Consistency Analysis was prepared for the proposed Project by Amec Foster Wheeler (Amec Foster Wheeler 2018b; see Appendix A). This analysis included a literature review and reconnaissance-level field survey, which was conducted on September 26, 2017, covering a 17-acre biological survey area (BSA) (refer to Figure 4). The entire Reserve, including the Project site, is a part of the Western Riverside MSHCP Conservation Area and occurs within the Public-Quasi-Public (PQP) lands. Section 4 of the MSHCP, states that the “conservation area incorporates maximum use of existing PQP lands to achieve conservation objectives” and specifically names the Reserve as land “that will contribute to the conservation of covered species.”

The BSA is located within MSHCP survey areas for several species including:

- Little mousetail (*Myosurus minimus* ssp. *apus*);
- Many-stemmed dudleya (*Dudleya multicaulis*);
- Munz's onion (*Allium munzii*);
- Round-leaved filaree (*California [Erodium] macrophyllum*);
- San Diego ambrosia (*Ambrosia pumila*);
- Smooth tarplant (*Centromadia pungens* ssp. *laevis*);
- Thread-leaved brodiaea (*Brodiaea filifolia*); and
- Burrowing owl (*Athene cunicularia*).

The entire BSA was surveyed for these special status plants and animals as well as any other special status species identified during the literature review. Representative photographs and a list of all plants

and animals detected (e.g., through direct observation, vocalizations, presence of scat, tracks, and/or bones) within the BSA are included in Appendix A.

Critical Habitat

The MSHCP Consistency Analysis found that no federally designated critical habitat occurs within the Project site or within the Reserve (Amec Foster Wheeler 2018b; USFWS 2017).

Vegetation

Four vegetation communities were mapped within the BSA, including grasslands, woodland and forest, chaparral, and riparian scrub. Representative plant species observed in the BSA included, but were not limited to California juniper, scrub oak, chamise, small-flowered fiddleneck, Russian thistle, California buckwheat, red brome, mule fat, and red willow. Scrub oaks are not protected by the Riverside County Oak Tree Management Guidelines (Riverside County 1999) and no other oak species were detected in the BSA.

The Project site is primarily characterized by the grassland vegetation community, which consists of annual plant species dominated by several grasses including slender wild oat, red brome, and soft chess (Amec Foster Wheeler 2018b; refer to Figure 4). Small patches of woodland and forest, characterized by scrub oak and California juniper, occur at the western boundary and along the southern boundary of the Project site (Amec Foster Wheeler 2018b; refer to Figure 4). A small patch of chaparral, a shrub-dominated vegetation community that is composed relatively largely of evergreen species, is located at the southwestern corner of the Project site (Amec Foster Wheeler 2018b; refer to Figure 4).

Special Status Biological Resources

The review of the California Natural Diversity Database (CNDDDB), California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants, and other sources identified a total of 83 special status biological resources known to occur within 5 miles of the Project site. These include 26 plants, 4 vegetation communities, 2 invertebrates, 1 amphibian, 8 reptiles, 12 birds, and 4 mammals (Amec Foster Wheeler 2018b). Amec Foster Wheeler conducted a reconnaissance-level field survey to inventory plants and animals within the BSA and to determine overall the habitat suitability for special status species. Of the special status species identified in the literature review, 11 plants, 1 invertebrate, 3 reptiles, 3 birds, and 2 mammals are considered to have a high potential to occur within the BSA (see Tables 6 and 7). Additionally, 1 amphibian, 4 reptiles, 4 birds, and 1 mammal are considered to have a moderate to occur within the BSA (see Tables 6 and 7).

Table 5. Special Status Plant Species with Moderate to High Potential for Occurrence in the BSA

Species	Scientific Name	Federal Status	State Status	CRPR	Other Special Status	Habitat
Little mouseltail	<i>Myosurus minimus</i> ssp. <i>apus</i>	-	-	3.1	S2	High Potential. Vernal pools, valley and foothill grassland. Alkaline soils. 65 – 2,100 feet.
Long-spined spineflower	<i>Chorizanthe polygonoides</i> var. <i>longispina</i>	-	-	1B.2	S3	High Potential. Chaparral, coastal scrub, meadows and seeps, valley and foothill grassland, vernal pools. Gabbroic clay. 95 – 5,055 feet.
Munz's onion	<i>Allium munzii</i>	FE	ST	1B.1	S1	High Potential. Heavy clay soils; grows in grasslands and openings within shrublands or woodlands. 1,230 – 3,415 feet.
Palmer's grapplinghook	<i>Harpagonella palmeri</i>	-	-	4.2	S3	High Potential. Chaparral, coastal scrub, valley and foothill grassland. Clay soils. 65 – 3,135 feet.
Paniculate tarplant*	<i>Deinandra paniculata</i>	-	-	4.2	S4	Occurs within BSA. Coastal scrub, valley and foothill grassland, vernal pools. 80 – 3,085 feet.
Parry's spineflower	<i>Chorizanthe parryi</i> var. <i>parryi</i>	-	-	1B.1	S2	High Potential. Sandy or rocky openings in chaparral, coastal sage scrub, cismontane woodland, valley and foothill grassland. 900 – 4,005 feet.
Payson's jewlflower	<i>Caulanthus simulans</i>	-	-	4.2	S4	High Potential. Sandy, granitic areas in chaparral and coastal scrub. 295 – 7,220 feet.
Peninsular spineflower	<i>Chorizanthe leptotheca</i>	-	-	4.2	S3	High Potential. Alluvial fans, granitic areas in chaparral, coastal scrub, and lower montane coniferous forest. 980 – 6,235 feet.

Species	Scientific Name	Federal Status	State Status	CRPR	Other Special Status	Habitat
Small-flowered microseris	<i>Microseris douglasii</i> ssp. <i>platycarpha</i>	-	-	4.2	S4	High Potential. Cismontane woodland, coastal scrub, valley and foothill grassland, vernal pools. 45 – 3,515 feet.
Small-flowered morning-glory	<i>Convolvulus simulans</i>	-	-	4.2	S4	High Potential. Chaparral (openings), coastal scrub, valley and foothill grassland. 95 – 2,430 feet.
Smooth tarplant	<i>Centromadia pungens</i> ssp. <i>laevis</i>	-	-	1B.1	S2	High Potential. Annual herb found in alkaline areas within chenopod scrub, meadows, playas, riparian woodland, valley and foothill grassland below 3,000 feet.
Woven-spored lichen*	<i>Texosporium sanctijacobi</i>	-	-	3	S1	High Potential. Openings in chaparral on soil, small mammal pellets, dead twigs, and <i>Selaginella</i> spp. 950 – 2,170 feet.
Federal Status FE: Federally Endangered State Status ST: State Threatened CDFW Status S1: Critically Imperiled S2: Imperiled S3: Vulnerable S4: Apparently Secure		California Native Plant Society CRPR: California Rare Plant Rank 1B: Plants rare, threatened, or endangered in California and elsewhere 3: Plants about which more information is needed (Review List) 4: Plants of limited distribution (Watch List) 0.1: Seriously threatened in California 0.2: Moderately threatened in California MSHCP * Species not included in the Western Riverside MSHCP				

Notes: The species included have been observed within the BSA or the Reserve or otherwise have a high potential for occurrence based on existing habitat within the BSA. For a complete list of specialist status species – including species that have been recorded in the vicinity but have a low potential to occur within the BSA – see Appendix A. Source: Amec Foster Wheeler 2018b.

Table 6. Special Status Animal Species with Moderate to High Potential for Occurrence in the BSA

Species	Scientific Name	Federal Status	State Status	Other Special Status	Habitat
Invertebrates					
Quino checkerspot butterfly	<i>Euphydryas editha quino</i>	FE	-	S1S2	High Potential. Occurs in sunny openings within chaparral and coastal sage shrublands in parts of Riverside and San Diego counties. Also occurs in hills and mesas near the coast. Requires high densities of food plants <i>Plantago erecta</i> , <i>P. insularis</i> , and <i>Orthocarpus purpurescens</i> .
Amphibians					
Western spadefoot	<i>Spea hammondi</i>	-	-	SSC, S3	Moderate Potential. Occurs primarily in grassland habitats but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg laying.
Reptiles					
(Belding's) orange-throated whiptail	<i>Aspidoscelis hyperythra</i>	-	-	WL, S2S3	High Potential. Inhabits low-elevation coastal scrub, chaparral, and valley-foothill hardwood habitats. Prefers washes and other sandy areas with patches of brush and rocks.
California (coastal) glossy snake*	<i>Arizona elegans occidentalis</i>	-	-	SSC, S2	Moderate Potential. Reported from a range of scrub and grassland habitats, often with loose or sandy soils.
coast patch-nosed snake*	<i>Salvadora hexalepis virgultea</i>			SSC, S2S3	Moderate Potential. Brushy or shrubby vegetation in coastal Southern California. Requires small mammal burrows for refuge and overwintering sites.
Coast (San Diego) horned lizard	<i>Phrynosoma blainvillii</i>	-	-	SSC, S3S4	High Potential. Occurs in many scrub and woodland habitats, grasslands within loose soils. Prefers open sandy areas, washes, and floodplains.

Species	Scientific Name	Federal Status	State Status	Other Special Status	Habitat
					Requires open areas for sunning, bushes for cover, and ants or other prey items.
Coastal western whiptail	<i>Aspidoscelis tigris stejnegeri</i>	-	-	SSC, S3	Moderate Potential. Occurs in a wide variety of habitats including coastal sage scrub, sparse grassland, and riparian woodland; coastal and inland valleys and foothills.
(Northern) red-diamond rattlesnake	<i>Crotalus ruber</i>	-	-	SSC, S3	High Potential. Occurs in chaparral, woodland, grassland, and desert areas, particularly in rocky areas and areas with dense vegetation. Requires rodent burrows, cracks in rocks, or other surface cover objects.
San Bernardino ringneck Snake*	<i>Diadophis punctatus modestus</i>	-	-	SSC, S2?	Moderate Potential. Most common in open, relatively rocky areas. Often in somewhat moist microhabitats near intermittent streams. Avoids moving through open or barren areas by restricting movements to areas of surface litter or herbaceous vegetation.
Birds					
Bell's (sage) sparrow	<i>Artemisiospiza belli</i>	-	-	MBTA, BBC, FGC, WL, S3	Moderate Potential. Nests in chaparral, usually dominated by fairly dense stands of chamise. Found in coastal sage scrub in south of range.
Coastal California gnatcatcher	<i>Polioptila californica californica</i>	FT	-	MBTA, FGC, SSC, S2,	Moderate Potential. Inhabits sage scrub in low-lying foothills and valleys, and sparse chaparral habitats.
Cooper's hawk	<i>Accipiter cooperi</i>	-	-	MBTA, FGC, WL, S4	Occurs within BSA. Occurs in woodlands, chiefly of open, interrupted, or marginal type. Nest mainly in riparian growths of deciduous trees as well as in canyon bottoms along river flood plains.
Loggerhead shrike	<i>Lanius ludovicianus</i>	-	-	MBTA, BBC, FGC, SSC, S4	Moderate Potential. Found in open habitats with widely spaced vegetation.

Species	Scientific Name	Federal Status	State Status	Other Special Status	Habitat
Long-eared owl*	<i>Asio otus</i>	-	-	MBTA, BCC, FGC, SSC, S3	High Potential. Occurs in riparian bottomlands grown to tall willows and cottonwoods as well as belts of live oak paralleling stream courses. Requires adjacent open land, with mice for prey and the presence of old nests of crows, hawks, or magpies for breeding.
Southern California rufous-crowned sparrow	<i>Aimophila ruficeps canescens</i>	-	-	MBTA, FGC, WL, S3	Moderate Potential. Steep, rocky coastal sage scrub and open chaparral habitats, particularly scrubby areas mixed with grasslands. From Santa Barbara County to northwestern Baja California.
White-tailed kite	<i>Elanus leucurus</i>	-	-	MBTA, FP, FGC, S3S4	High Potential. Occurs in rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Prefers open grasslands, meadows, or marshes for foraging close to trees for nesting and perching.
Mammals					
Northwestern San Diego pocket mouse	<i>Chaetodipus fallax fallax</i>	-	-	SSC, S3S4	Moderate Potential. Found in sandy herbaceous areas, usually associated with rocks or coarse gravel in coastal scrub, chaparral, grasslands, and sagebrush.
Stephens' kangaroo rat	<i>Dipodomys stephensi</i>	FE	ST	S3S4	High Potential. Primarily occurs in annual and perennial grasslands, but also occurs in coastal scrub and sagebrush with sparse canopy cover. Prefers buckwheat, chamise, brome grass, and filaree and will burrow into firm soil.
San Diego desert woodrat	<i>Neotoma lepida intermedia</i>	-	-	SSC, S3S4	High Potential. The subspecies "intermedia" is an animal that occurs within the coastal slope. Coastal sage

Species	Scientific Name	Federal Status	State Status	Other Special Status	Habitat
					scrub and chaparral with rock outcrops, boulders, cactus patches, or dense undergrowth. This subspecies is generally now considered a full species, Bryant's woodrat (<i>Neotoma bryanti</i>).
Federal Status FE: Federally Endangered State Status ST: State Threatened CDFW Status S1: Critically Imperiled S2: Imperiled S3: Vulnerable S4: Apparently Secure		Other Federal Designations MBTA: Bird Species Protected under the Migratory Bird Treaty Act BCC: Bird of Conservation Concern Other CDFW Designations FP: CDFW Fully Protected Species FGC: Bird Species Protected by the California Fish and Game Code SSC: CDFW Species of Special Concern MSHCP * Species not included in the Western Riverside MSHCP			

Notes: The species included have been observed within the BSA or the Reserve or otherwise have a high potential for occurrence based on existing habitat within the BSA. For a complete list of specialist status species – including species with moderate, low, and no potential to occur within the BSA – see Appendix A.
Source: Amec Foster Wheeler 2018b

Jurisdictional Waters

The Jurisdictional Delineation prepared for the proposed Project included a review of the National Wetlands Inventory (NWI) Mapper to identify potential wetland features within the BSA (Wood 2020). The BSA crosses one NWI feature categorized as riverine, intermittent streambed, seasonally flooded wetlands (R4SBC) (Wood 2020; USFWS 2019).

A field survey was conducted on September 18, 2019 to determine if the flows associated with potential drainage wetland feature met the minimum criteria to be considered under the jurisdiction of U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and CDFW. Visual observations of vegetation types, changes in hydrology and changes in soils texture were used to locate the areas to be evaluated. To determine jurisdictional boundaries, the surveyor walked the length of the drainage and recorded the centerline with a Trimble GeoXH global positioning system. The width of the drainage was determined by the OHWM and bankfull width measurements at locations where transitions were apparent. Other data recorded included bank height and morphology, substrate type, and all vegetation within the streambed and riparian vegetation adjacent to the streambed. Soils pits were dug in areas that contained hydrophytic vegetation and wetland hydrology to determine if hydric soils were present. Areas that lacked evidence of hydrophytic vegetation, lacked evidence of wetland hydrology, and had no recent disturbance, did not require a soil pit given that the other wetland indicators were not present (Wood 2020).

The BSA contains the headwaters of a downstream drainage feature, approximately 300 feet to the south of the Project site (refer to Figure 4). However, natural runoff in this area sheet flows across Piedras Road with no evidence of an OHWM and/or definable bed and bank feature. Two partially buried culverts were observed under the access road within the survey area (refer to Figure 4). These culverts have not recently conveyed any flows and showed no sign of OHWM. The sheet flow within the BSA is conveyed in an area that has scattered red willow (*Salix laevigata*) but does not have sufficient cover to be considered a riparian habitat. A soil pit was attempted, but the soil was extremely hard and a pit of approximately 3 to 4 inches was completed. There was no evidence of hydric soils or any noticeable wetland hydrology indicators. There was also no change in soil texture or vegetation coverage, often associated with a drainage feature with no definable bed and bank feature. Therefore, no areas within the BSA – including the Project site – meet the minimum criteria to be under the jurisdiction of USACE, RWQCB, or CDFW. Further, no areas within the BSA – including the Project site – meet the minimum criteria to be considered Riparian/Riverine under the Western Riverside County MSHCP (Wood 2020).

Source(s): Harford Springs Day Use Staging Area Project Environmental Constraints & Western Riverside County Multiple Species Habitat Conservation Plan Consistency Analysis; Harford Springs Day Use Staging Area Project Delineation of Jurisdictional Waters

Findings of Fact:

a) **Less Than Significant with Mitigation Incorporated.** Section 7 of the MSHCP discusses covered activities and allowable uses in the Conservation Area. As described in the MSHCP Consistency Analysis, the proposed Project appears to qualify as a “conditionally compatible use” under Section 7.4.2 of the MSHCP. 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 primary public access component within the Conservation Area is trails; however, three other types of public access facilities can also be located within the Conservation Area: trailheads, interpretive centers, and maintenance facilities (Amec Foster Wheeler 2018b).

Trailheads provide trail access points and recreational amenities for day use activities that can be selectively specialized to accommodate hikers, runner, mountain biker, and/or equestrians. The MSHCP includes the assumption that 14 trailheads will be constructed within the Conservation Area, each being approximately 5 acres. It is unclear from the MSHCP whether these facilities are conceptual or if they have already been identified and sited. Vegetation communities identified by the MSHCP as anticipated to be impacted included agricultural land, chaparral, coastal sage scrub, and grassland. Two of those communities, chaparral and grassland, occur within the BSA and one of those communities, grassland, occurs within the Project site (Amec Foster Wheeler 2018b). With the implementation of Mitigation Measure BR-1, which would require compliance with the construction guidelines provided in Section 7.5.3 of the MSHCP, the impacts would be less than significant with mitigation incorporated.

In the event that the proposed Project is not considered a covered “conditionally compatible use” by the RCA as described in Section 7.4.2 of the MSHCP, it could still be approved under the process described in Section 7.2.4 of the MSHCP: “Future Facilities Within PQP Lands.” While this section specifically mentions facilities for water, sewer, electrical, gas and solid waste, it identifies a process of equivalent conservation provided through individual mitigation. The process would require an equivalency analysis which would address the following categories:

- Effects on habitats;
- Effects on covered species;
- Effects on core areas;
- Effects on linkages and constrained linkages;
- Effects on MSHCP Conservation Area configuration and management; and
- Effects on ecotones (defined as areas of adjoining vegetation communities, generally characterized by greater biological diversity) and other conditions affecting species diversity (such as invasion by exotics).

The equivalency analysis would be provided for review and concurrence by the RCA and would compare the effects/benefits of the proposed Project including specific mitigation and compensation for lost conservation values, with the conditions prior to facility implementation. The analysis would need to consider specific design features of the proposed Project, including consideration of MSHCP siting and design guidelines as well as MSHCP BMPs. In this case, impacts to habitats within the existing PQP lands would be compensated by purchase and dedication into the MSHCP Conservation Area of land elsewhere consistent with the requirement of Mitigation Measure BR-1. As such, impacts associated with the proposed Project would be less than significant with mitigation incorporated.

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 BR-2 would address these indirect effects and would reduce impacts to less than significant with mitigation incorporated.

b, c) **Less Than Significant with Mitigation Incorporated.** As previously described Amec Foster Wheeler conducted a reconnaissance-level field survey to inventory flora and fauna within the BSA and to determine overall habitat suitability for special status plants and animals. Of the special status species identified in the literature review, 11 plants, 1 invertebrate, 3 reptiles, 3 birds, and 2 mammals are considered to have a high probability of being present in the BSA (see Tables 6 and 7). Additionally, 1 amphibian, 4 reptiles, 4 birds, and 1 mammal are considered to have a moderate probability of being present in the BSA (refer to Tables 6 and 7).

Federally and State Listed Species

The literature review and reconnaissance-level field survey indicate 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 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 purpureus*. This species is managed for in the Subunit 3 of the Lake Mathews / Woodcrest Area Plan: “Gavilan Hills West,” which calls for reintroduction within the Northwest Riverside County Recovery Unit and the Gavilan Hills Habitat Complex as identified in the January 2001 USFWS Draft Recovery Plan for the Quino Checkerspot Butterfly. This species is managed for at the Reserve under the terms of the MSHCP and has been previously recorded within the BSA (Amec Foster Wheeler 2018b).

Coastal California Gnatcatcher – The coastal California gnatcatcher is a federally threatened species that inhabits sage scrub in low-lying foothills and valleys, and sparse chaparral habitats. This species has been previously recorded within the Reserve and in the surrounding vicinity. However, the Project site does not include high quality chaparral habitat. Therefore, while coastal California gnatcatchers have a moderate potential to occur within the BSA, they are unlikely to occur within the Project site (Amec Foster Wheeler 2018b).

Stephens’ Kangaroo Rat – Stephens’ kangaroo rat is a federally endangered and state-listed threatened species that occur 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. Stephens’ kangaroo rats are managed for in the Subunit 3 of the Lake Mathews / Woodcrest Area Plan: “Gavilan Hills West,” which calls for maintaining the linkage area in this area. During the reconnaissance-level field survey kangaroo rat sign was widespread in the BSA (Amec Foster Wheeler 2018b).



Kangaroo rat burrows were observed to the east of the Project site indicating the potential presence of Stephens’ Kangaroo Rat.

Munz's Onion – Munz's onion occurs in heavy clay soils in grassland vegetation communities and in openings within shrublands or woodlands. This species is managed for in the Subunit 3 of the Lake Mathews / Woodcrest Area Plan: "Gavilan Hills West," which calls for conservation of clay soils supporting Munz's onion. Additionally, this species has been previously recorded within the southwestern corner of the BSA within Bosanko clay soils. However, as described in Section 18, *Soils* the Project site is characterized by the Vista soil series, which includes moderately deep, well drained soils that formed in material weathered from decomposed granitic rocks (Amec Foster Wheeler 2018b; U.S. Department of Agriculture Natural Resources Conservation Service 2017). Therefore, Munz's onion is not likely to occur within the Project site.

Other Special Status Species Identified in the MSHCP

Protection of Narrow Endemic Plant Species is discussed in Section 6.1.3 of the MSHCP. The plan states that the existing MSHCP database does not provide the level of detail sufficient to determine the extent of presence or distribution of certain Narrow Endemic Plant Species. As such, survey areas have been established within the Criteria Area of the MSHCP for locations where appropriate habitat may be present. Habitat assessment for four of these species was required within the BSA: Munz's onion, San Diego ambrosia, slender-horned spineflower, and many-stemmed dudleya. Potential habitat was present within the BSA for all of these except slender-horned spineflower. However, only Munz's onion has a high potential for occurrence within the BSA. As previously described the Project site is characterized by the Vista soil series, which includes moderately deep, well drained soils that formed in material weathered from decomposed granitic rocks (Amec Foster Wheeler 2018b; U.S. Department of Agriculture Natural Resources Conservation Service 2017). Therefore, Munz's onion is not likely to occur within the Project site.

In addition to Narrow Endemic Plant Species, portions of the BSA are in Criteria Area Species Survey Area 1, which includes the following seven species: round-leaved filaree, smooth tarplant, thread-leaved brodiaea, Davidson's saltscale (*Atriplex serenana* var. *davidsonii*), Parish's brittlescale (*Atriplex parishii*), Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*), and little mousetail. Portions of the BSA are also in the designated survey area for the burrowing owl. Potential habitat is present in the BSA for all of these species except Davidson's saltscale, Parish's brittlescale, and Coulter's goldfields. However, only smooth tarplant and little mousetail have a high potential for occurrence.

Potential Impacts

Implementation of the proposed Project would involve vegetation removal and minor grading activities throughout the 1.8-acre Project site. These activities would 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. Therefore, with the implementation of Mitigation Measure BR-3 and approval of the proposed Project the RCA through the JPR review process, "take" permits granted under the MSHCP. Additionally, Stephens' kangaroo rat is covered by a separate habitat conservation plan administered by the Riverside County Habitat Conservation Agency (RCHCA) (RCHCA 1990). Under Mitigation Measure BR-4, RivCoParks shall consult with the RCA and the RCHCA and negotiate payment of the Stephens' Kangaroo Rat Habitat Conservation Plan (SKRHCP) fee. With the implementation of Mitigation Measures BR-3 and BR-4, construction-related impacts to federally and state listed species would be less than significant with mitigation measures incorporated.

The majority of other special status species with moderate to high potential to occur on the Project site are also covered in the MSHCP. Given that the proposed Project is consistent with the MSHCP, potential impacts to these species would be less than significant. Special status species with moderate to high potential to occur on the Project site that are not covered in the MSHCP include the following:

- Paniculate tarplant
- Woven-spored lichen
- California (coastal) glossy snake
- Coast patch-nosed snake
- San Bernardino ringneck snake
- Long-eared owl

Paniculate tarplant and woven-spored lichen are CRPR 4.2 (Watch List) and CRPR 3 (Review List), respectively. Potential impacts to these species would not have a substantial impact on the overall health or future growth of the population within the region. The four special status animal species not covered under the MSHCP are CDFW Species of Special Concern (SSC). Additionally, the long-eared owl is protected by the California Department of Fish and Game Code. With the implementation of Mitigation Measure BR-5 and BR-6, which require pre-construction surveys, a Worker Environmental Awareness Program (WEAP) training, and biological monitoring during vegetation removal and initial ground disturbance potential construction-related impacts to these species would be less than significant with mitigation incorporated.

The Federal Migratory Bird Treaty Act (MBTA) and Section 3503 of the California Fish and Game Code prohibit the knowing disruption of an active nest of virtually any native bird species. Construction activities associated with the proposed Project could result in the disruption of one or more active nests of regulated bird species, particularly during vegetation removal. Construction activities associated with the proposed Project may also result in indirect impacts to nesting birds due to increased construction noise levels in the immediate Project vicinity. With the implementation of Mitigation Measure BR-7, which would require nesting bird surveys and monitoring, if necessary, potential impacts to nesting birds would be avoided and impacts would be less than significant with mitigation incorporated.

Following the completion of construction activities, operation of the proposed day use parking and staging area would not result in substantial new disturbance to special status species within the vicinity. The proposed day use parking and staging area is located adjacent to Piedras Road approximately 820 feet to the north of its intersection of Idaleona Road. These roads already experience vehicle traffic and associated vehicle-generated noise. Additionally, the proposed day use parking and staging area would be integrated with the existing trail system. As such, hikers, runners, mountain bikers, and equestrians would be using existing established trails and there would be less than significant impacts on surrounding biological resources, including special status species.

d) **Less Than Significant with Mitigation Incorporated.** The BSA is located in the Lake Mathews / Woodcrest Area Plan, which is discussed in Section 3.3.7 of the MSHCP. Cores and linkages within the Lake Mathews / Woodcrest Area Plan include a small portion of Proposed Core 1, a portion of Proposed Extension of Existing Core 2, and a portion of Proposed Linkage 3. Only Proposed Linkage 3 is located within the vicinity of the BSA (see Appendix A). This proposed linkage is generally comprised of upland habitats in the Gavilan Hills, Harford Springs, and proposed North Peak Conservation Bank

under PQP and private ownership. This linkage is one of two connections between the Lake Mathews / Estelle Mountain Reserve and core areas in Alberhill.

Part of the BSA is located in Subunit 3 of the Lake Mathews / Woodcrest Area Plan: "Gavilan Hills West." The BSA intersects three criteria cells with defined MSHCP goals (see Appendix A). Cells 2738, which is the only criteria cell located within the Project site, is located in Cell Group L. Conservation within this cell group will contribute to assembly of Proposed Linkage 3. Conservation will focus on a mosaic of habitat types including chaparral, coastal sage scrub, grassland, woodland, and forest habitat. Areas conserved within this group will be connected to chaparral, coastal sage scrub, woodland and forest habitat proposed for conservation in Cell Group I to the north, to coastal sage scrub habitat proposed for conservation in Cell 2629 to the west, and to chaparral, grassland, woodland, and forest habitat proposed for conservation in Cell Group M to the east.

The implementation of the proposed Project would have a minimal effect on Proposed Linkage 3. Construction and operation of the proposed Project would result in disturbance, but neither block the proposed linkage nor substantially interfere with the movements of any native or migratory animal species. The implementation of Mitigation Measures BR-1 and BR-2 would require RivCoParks to comply with siting and construction requirements established in the MSHCP and compensate habitat within the Conservation Area at a 1:1 ratio in the event that the proposed Project is not considered a "conditionally compatible use" by the RCA as described in Section 7.4.2 of the MSHCP. With these mitigation measures, any impacts to wildlife corridors or linkages would be less than significant with mitigation incorporated.

e, f) **No Impact.** According to the Jurisdictional Delineation prepared for Project site, there are no wetlands or riparian habitats within the Project site (Wood 2020; see Appendix B). Therefore, there would be no impact to wetlands associated with the implementation of the proposed Project.

g) **No Impact.** County Ordinance Number 559 requires a tree removal permit for 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 (Riverside County 1985). While the proposed Project would require the removal of four trees, a permit pursuant to County Ordinance Number 559 would not be required as the Project site is located below 5,000 feet above mean sea level. Therefore, there would be no impact to protected biological resources that may conflict with local ordinances.

Mitigation: The following mitigation measures include recommendations from the MSHCP Consistency Analysis (Amec Foster Wheeler 2018b; see Appendix A). The potential adverse impacts to biological resources would be mitigated to a less than significant level through implementation of the measures described below.

Mitigation Measure BR-1: If the proposed Project is approved as a "conditionally compatible use" by the RCA, RivCoParks would be required to comply with the guidelines provided in the Section 7.4.2 of the MSHCP for siting and design. These guidelines address ways to avoid and minimize impacts to natural resources within the conservation area as a result of the placement and design of such facilities. RivCoParks would also be required to comply with the construction guidelines provided in Section 7.5.3 of the MSHCP for facilities within the criteria area and PQP lands.

In the event that the proposed Project is not considered a "conditionally compatible use" by the RCA and is instead pursued as a "future facility within PQP lands," impacts to habitats within the Reserve

would be compensated by purchase and dedication into the MSHCP Conservation Area of land at not less than a ratio of 1:1.

Mitigation Measure BR-2: The proposed Project would 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.

Mitigation Measure BR-3: As discussed in Section 7, *Wildlife & Vegetation* the Project site located within the Criteria Area of the MSHCP. Therefore, the proposed day use parking and staging area would be subject to the JPR process by the RCA. The proposed Project would use the “take” permits for federally listed and state-listed species granted under the MSHCP.

Mitigation Measure BR-4: Stephens’ kangaroo rat is covered by a separate habitat conservation plan administered by the RCHCA (RCHCA 1990). Prior to the initiation of construction activities RivCoParks shall consult with the RCA and the RCHCA and negotiate payment of the SKRHCP fee. If it is determined by either the RCA or the RCHCA that the SKRHCP does not apply, then RivCoParks shall retain a qualified biologist to conduct focused nocturnal live-trapping surveys, necessary to conclusively determine whether the on-site kangaroo rat is Stephens’ kangaroo rat.

Mitigation Measure BR-5: The Project site is located within the MSHCP designated burrowing owl survey area and potential habitat, albeit low quality, is present within the vicinity. Therefore, pre-construction burrowing owl surveys shall be conducted by a qualified biologist in compliance with the MSHCP guidelines. During pre-construction surveys for burrowing owls, any other special status plant and wildlife species that are encountered shall also be identified. Any special status animal species found in the Project site during the pre-construction survey shall be left to leave on its own or shall be relocated prior to construction by the qualified biologist to an off-site area that provides suitable habitat conditions, as determined by the qualified biologist in coordination with RivCoParks and the RCA.

Mitigation Measure BR-6: Prior to the initiation of construction-related activities, a Worker Environmental Awareness Program (WEAP) training shall be provided by a qualified biologist to ensure that work crews know how to identify and avoid special status plant and animal species that could occur within the Project site during construction. Additionally, a qualified biologist shall be present during all vegetation clearing and initial soil disturbance to monitor these construction activities and identify any special status plant and wildlife species that may occur within the Project site. Any special status animal species found in the Project site during the construction shall be left to leave on its own or shall be relocated prior to construction by the qualified biologist to an off-site area that provides suitable habitat conditions, as determined by the qualified biologist in coordination with RivCoParks and the RCA.

Mitigation Measure BR-7: To the maximum extent feasible, construction activities shall be conducted outside of the local nesting season for birds, which can be expected in the region from approximately February 15 through August 31. If construction activities are scheduled to occur during the nesting season, a qualified biologist shall conduct a nesting bird survey no more than 3 days prior to the start of construction. Consistent with CDFW recommendations, if any nesting birds or raptors are observed, the biologist shall clearly mark the location of the nest (e.g., with staking and flags), which should be avoided until the nestlings have fledged (i.e., left the nest), as determined by the biologist. Further, the biologist, in coordination with RivCoParks and the RCA, shall identify any additional measures necessary to avoid potential adverse impacts on nesting birds. Appropriate measures may include attenuating construction noise (through sound-dampening boards or other equipment) to a level of 60 A-weighted decibels (dBA) (1-hour L_{eq}) or otherwise limiting disturbances within a buffered distance of the nest – to be determined by the biologist in coordination with the RCA – until nesting is complete. If the level of 60 dBA cannot be achieved, the biologist shall be present during construction activities to ensure that nesting birds are not disturbed. The biologist shall halt any construction activity determined to be potentially disturbing for any nesting bird. Construction may continue when the biologist

determines the activity can be carried out without disruption of nesting, or when the nestlings have fledged.

Monitoring: Compliance with these mitigation measures would be subject to periodic site inspections by the Riverside County Planning Department.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
CULTURAL RESOURCES Would the project:				
8. Historic Resources				
a) Alter or destroy a historic site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of a historical resource, pursuant to California Code of Regulations, Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Between September 2017 and March 2018, Amec Foster Wheeler conducted an intensive Phase I cultural resources ground surface survey and subsequent Extended Phase I Cultural Resources excavation. The intensive ground surface survey was conducted throughout the entire the Area of Project Effect (APE), including 1.8 acres of undeveloped and semi-developed land at the southeastern corner of the Reserve. Amec Foster Wheeler conducted an archaeological and historical resources records search as an element of the investigations (Amec Foster Wheeler 2018a), consultation with the Native American Heritage Commission (NAHC) and appropriate tribal representatives (see Section 39, *Tribal Cultural Resources*).

Records Search

The background archaeological record search was conducted on September 8, 2017 at the Eastern Information Center (EIC) of the University of California, Riverside. The records search identified 18 previously completed cultural resource inventory surveys within and extending 1 mile from the APE, but none were conducted within the APE. A total of 33 prehistoric resources and two historic-era resources have been recorded within 1 mile of the APE, but none of these are recorded within the APE. A majority of the recorded prehistoric resources consisted of bedrock milling features associated with seed and vegetable processing, while the recorded historic-era resources included a refuse scatter, mining features, a bridge, and a dam. Given the results of the previous cultural resource inventory surveys conducted in the vicinity of the APE, the prehistoric sensitivity of the APE was determined to be high, while the historic-era archaeological sensitivity of the APE was determined to be low to moderate (Amec Foster Wheeler 2018a).

Native American Consultation

On September 27, 2017, Amec Foster Wheeler submitted a Sacred Lands File request to the NAHC to determine the presence of any tribal cultural sites recognized within or in the vicinity of the Project APE. On September 29, 2017, the NAHC responded that the Sacred Lands File records search did identify tribal cultural sites within the APE that may be impacted by the proposed Project. The NAHC provided a list of 37 tribal representatives to contact regarding the proposed Project. Amec Foster Wheeler sent letters to the 37 tribal representatives on October 27, 2017, to request specific information regarding cultural resources within or near the APE (see Section 39, *Tribal Cultural*). Of the 37 tribal representatives contacted, 12 tribal representatives responded to the letter, including the Pechanga Band, Soboba Band, Viejas Band, Augustine Band, La Jolla Band, Manzanita Band, Morongo Band,

Ramona Band, Agua Caliente Band, Rincon Band, Santa Rosa Band, and Pauma Band. The majority of responses deferred to a later time or to the local tribes. Joseph Ontiveros of the Soboba Band asked that Riverside County initiate and continue correspondence with the Tribe, that he receive project information, that the Tribe have the opportunity to monitor any ground disturbing activities during implementation of the proposed Project, that the proper procedures and requests of the Tribe be honored and included a regulatory framework for the treatment of cultural items and human remains. Planning Specialist Tuba Ebru Ozdil of the Pechanga Band stated that the APE is in a highly sensitive area for cultural resources and human remains and asked that a qualified archaeologist and Pechanga Band tribal monitor be present during future earthmoving activities, including tree removal. She also asked to be notified of the entitlement process and to receive all pertinent archaeological reports, resource files, and grading plans. Ms. Ozdil also requested formal government-to-government consultation with Riverside County, the Lead Agency. The remaining Tribal representatives were called on November 15, 2017, but have not replied as of this time. See Section 39, *Tribal Cultural Resources* for further discussion of the Native American consultation efforts conducted for the proposed Project.

Intensive Field Survey

An intensive ground surface survey of the APE was conducted on November 22, 2017. The pedestrian survey included walking east-west transects of the entire APE, spaced no more than 50 feet apart. The ground surface was visually inspected for any signs of human use dating to more than 50 years old. Areas with disturbed or exposed soils were particularly scrutinized for indications of cultural materials. Modern trash, including rusted metal objects and cans used for target practice, were observed on the ground surface within the APE; however, these items were determined not any have historic value. Two historic-era resources were encountered during the field survey: an isolated hole-in-top can; and a campsite, consisting of of a metal can scatter and two fire pits. The two resources were documented on California Department of Parks and Recreation Series 523 site forms.

Extended Phase I Excavation

A focused Extended Phase I subsurface excavation was conducted on February 23, 2018 with a tribal representative of the Pechanga Band. Two 20-inch diameter shovel test probes (STPs) were excavated within the area where historic period campsite surface artifacts had been recorded to determine whether or not the resource contained a subsurface cultural resource component and evaluate the function and age of the rock assemblages. Soils from the STPs were systematically screened and recovered charcoal, ash, melted glass, a wire nail, and a staple, which are all indicative of a localized camp fire and associated camping activities. No other cultural materials were encountered during the subsurface testing effort. No artifacts were able to provide a specific date as to when the campsite was occupied.

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 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 (Riverside County Historical Commission 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 hole-in-top can is an isolated artifact and does not have the potential to yield unique information about significant events, persons, time periods, the County, or the State. Therefore, this feature is not eligible for the CRHR. The campsite is older than 50 years; however, it is not associated with a significant historic event or broad patterns in history (Criterion 1 of the CRHR), is not associated with persons of historical significance (Criterion 2 of the CRHR), does not have distinctive characteristics (Criterion 3 of the CRHR), and is not likely to yield important data about prehistory or history (Criterion 4 of the CRHR). Therefore, the campsite is not eligible for the CRHR and does not qualify as a "historical resource" under CEQA. Additionally, the campsite is not eligible as a Riverside County Historical Landmark. Therefore, the Phase I intensive surface survey and subsequent focused Extended Phase I Cultural Resources Inventory did not identify and potentially significant prehistoric or historic-era resources within the APE.

Source(s): Phase I and Extended Phase I Cultural Resources Investigation

Findings of Fact:

a, b) **Less Than Significant with Mitigation Incorporated.** No potentially significant prehistoric or historic sites or resources eligible for listing in the CRHR or as a Riverside County Historical Landmark were identified within the Phase I ground surface survey and subsequent Extended Phase I Cultural Resources Inventory prepared for the proposed Project (Amec Foster Wheeler 2018a). Additionally, construction of the proposed Project would be limited to minor grading activities at shallow depths (i.e., maximum cut of 2 feet), necessary to level the Project site. Therefore, the potential to encounter previously unknown buried archaeological resources would be low. Nevertheless, due to the undeveloped nature of the Project site, Mitigation Measures CUL-1 through CUL-6 would ensure that construction workers would be prepared in the event that a previously unknown buried archaeological resource is encountered during grading activities. Mitigation Measures CUL-1 through CUL-6 describe the standard protocols for evaluation and recovery of archaeological resources at the Project site. With implementation of Mitigation Measures CUL-1 through CUL-6, impacts would be less than significant with mitigation incorporated.

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

Mitigation Measure 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.

Mitigation Measure 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 Archeologist 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).

Mitigation Measure CUL-3: Prior to the issuance of grading permits, RivCoParks shall enter into an agreement with the consulting tribe(s) or (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 Archeologist as verification of compliance with this requirement.

Mitigation Measure 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 is 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 Resources Department 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 Resources Department 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.

Mitigation Measure 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 to 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).

Mitigation Measure 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 the Riverside County Planning Department.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
9. Archaeological Resources				
a) Alter or destroy an archaeological site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource, pursuant to California Code of Regulations, Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Source(s): Extended Phase I Cultural Resources Inventory

Findings of Fact:

a, b) **Less Than Significant with Mitigation Incorporated.** As described in Section 8, *Cultural Resources*, the Phase I Extended Cultural Resources Inventory determined 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 (Amec Foster Wheeler 2018a). Additionally, construction of the proposed Project would be limited to minor grading activities at shallow depths (i.e., maximum cut of 2 feet), necessary to level the Project site. Therefore, the potential to encounter previously unknown buried archaeological resources would be low. Nevertheless, due to the undeveloped nature of the Project site, Mitigation Measures CUL-1 through CUL-6 would ensure that construction workers would be prepared in the event that a previously unknown buried archaeological resource is encountered during grading activities. Mitigation Measures CUL-1 through CUL-6 describe the standard protocols for evaluation and recovery of archaeological resources at the Project site. With implementation of Mitigation Measures CUL-1 through CUL-6, impacts would be less than significant with mitigation incorporated.

c) **Less Than Significant with Mitigation Incorporated.** The NAHC was contacted on September 27, 2017 to determine if there were any known Native American resources within or immediately adjacent to the APE. On September 29, 2017, the NAHC responded that the Sacred Lands File records search did identify sites within the APE that may be impacted by the proposed Project. The NAHC provided a list of 37 tribal representatives – including the Pechanga Band of Luiseno Indians – to contact regarding the proposed Project. Planning Specialist Tuba Ebru Ozdil of the Pechanga Band stated that the APE is in a highly sensitive area for cultural resources and human remains and asked that a qualified archaeologist and Pechanga Band tribal monitor be present during future earthmoving activities, including tree removal. Implementation of TC-1, which would require monitoring by a qualified archaeologist and Pechanga Band tribal monitor during all ground disturbing activities as requested, would reduce the potential for construction to disturb human remains. In the event that Native American resources or human remains are discovered during construction activities, implementation of Mitigation Measure CUL-3 and TC-1 would reduce potential impacts to less than significant levels with mitigation incorporated.

Mitigation: Refer to Mitigation Measures CUL-1 through CUL-6 and see Mitigation Measure TC-1.

Monitoring: Compliance with these mitigation measures would be subject to periodic site inspections by the Riverside County Planning Department.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or obstruct a State or Local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Source(s): Riverside County General Plan; Riverside County Climate Action Plan

Findings of Fact:

a) **Less Than Significant.** Consumption of energy resources associated with the proposed Project would be generally limited to the minor amount haul truck trips, concrete truck trips, and construction worker commutes. Additional consumption of energy resources would occur as a result of the operation of heavy construction equipment and the watering of on exposed soils during grading consistent with SCAQMD Rule 403 (refer to BMP AQ-1). The proposed Project does include permanent restrooms or lighting and therefore, there would be no additional operational energy use. Any consumption of energy resources associated with visitors and maintenance activities would be negligible as the proposed day use parking and staging area is not anticipated to substantially increase visitation or maintenance 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 proposed Project, neither construction nor operation of the proposed day use parking and staging area would conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Therefore, there would be no impact 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
GEOLOGY AND SOILS Would the project directly or indirectly:				
11. Alquist-Priolo Earthquake Fault Zone or County Fault Hazard Zones	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 General Plan Figure S-2, *Earthquake Fault Study Zones*; Fault Activity Map of California (2010)

Findings of Fact:

a) **Less Than Significant.** The Project site is not located within an Alquist-Priolo Earthquake Fault Zone. The nearest active faults to the Project site are the Glen Ivy North Fault, located approximately 8 miles from the Project site, and the Casa Loma Fault, located approximately 16 miles from the Project site (California Department of Conservation 2010). 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.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
12. Liquefaction Potential Zone				
a) Be subject to seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Source(s): Riverside County General Plan Figure S-3, *Generalized Liquefaction*

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 California Department of Conservation’s Earthquake Zones of Required Investigation, the Project site is not within an area susceptible to liquefaction (California Department of Conservation 2020b). Therefore, there would be no impact 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
13. Ground-shaking Zone				
a) Be subject to strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

Findings of Fact:

a) **Less Than Significant.** According to CGS maps, the Reserve is located in an area with low to moderate risk of ground shaking (CGS 2014). As previously described, the nearest fault is approximately 8 miles from the Project site. 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. Conformance with standard engineering practices and design criteria (e.g., California Building Code, etc.) would reduce potential impacts related to earthquake faults or seismic ground shaking to less than significant.

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
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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): Riverside County General Plan Figure S-4, *Earthquake-Induced Slope Instability Map*; California Geological Survey Deep-Seated Landslide Susceptibility Map; California Department of Conservation Landslide Information Warehouse

Findings of Fact:

a) **No impact.** According to the CGS Deep-Seated Landslide Susceptibility Map the closest historical landslide was documented approximately 9 miles southeast of the Reserve in the Santa Ana Mountain Range (California Department of Conservation 2020a). The northern and western areas of the Reserve have higher hills and a moderate landslide susceptibility; however, the Project site and the entire southeast corner of the Reserve are relatively flat and do not have any landslide susceptibility (CGS 2018). Additionally, construction of the proposed Project would be limited to minor grading activities at shallow depths (i.e., maximum cut of 2 feet), necessary to level the Project site. As such implementation of the proposed Project would not introduce engineered slopes or otherwise increase the potential for landslide risk and there would be no impact.

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
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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): Riverside County General Plan Figure S-7, *Documented Subsidence Areas Map*

Findings of Fact:

a) **No Impact.** The Project site is characterized by the Vista soil series, which includes moderately deep, well drained soils that formed in material weathered from decomposed granitic rocks (Amec Foster Wheeler 2018b; U.S. Department of Agriculture Natural Resources Conservation Service 2017). According to the County General Plan Documented Subsidence Areas Map, the Project site is not located within a subsidence area (Riverside County 2019a). Therefore, there would be no impact 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
16. Other Geologic Hazards				
a) Be subject to geologic hazards, such as seiche, mudflow, or volcanic hazard?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Source(s): Riverside County General Plan Safety Element

Findings of Fact:

a) **No Impact.** The Project site is located approximately 4 miles from Lake Mathews, the closest water body, and is not susceptible to seiches. The Project site is relatively flat and the entire surrounding southeast corner of the Reserve, including the Project site, has a low risk of landslides (refer to Section 14, *Landslide Risk*). The closest volcano is Salton Buttes, which is over 100 miles from the Project site. The most recent eruptions, which took place about 1,800 years ago, started explosively, then progressed to relatively gentle effusion of dense, glassy-looking (obsidian) lava domes. The Salton Sea Geothermal Field, which currently produces enough power to supply about 325,000 homes (U.S. Geological Survey [USGS] 2020). Therefore, the Project site is not susceptible to seiche, mudflow, or volcanic hazards and there would be no impact.

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
17. Slopes				
a) Change topography or ground surface relief features?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create cut or fill slopes greater than 2:1 or higher than 10 feet?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in grading that affects or negates subsurface sewage disposal systems?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Source(s): Riverside County General Plan Safety Element

Findings of Fact:

a) **Less Than Significant.** The Project site is generally located at an elevation of 2,000 to 2,050 feet above mean sea level. The proposed changes in topography associated with the proposed day use parking and staging area would be minor and impacts would be less than significant.

b, c) **No Impact.** Construction of the proposed Project would be limited to minor grading activities at shallow depths (i.e., maximum cut of 2 feet), necessary to level the Project site. The proposed Project would not create cut or fill slopes greater than 2:1 or higher than 10 feet. Additionally, the proposed Project would not include the construction of permanent restrooms or otherwise require or affect sewage disposal systems. Therefore, there would be no impacts 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
18. Soils				
a) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have soils incapable of adequately supporting use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Source(s): U.S. Department of Agriculture Natural Resources Conservation Service Web Soil Survey, MSHCP Consistency Analysis

Findings of Fact:

a) **Less Than Significant.** Implementation of the proposed Project would result in soil disturbance from minor grading activities during the construction phase. However, all construction 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 through implementation of these procedures. Following construction, the proposed Project would not increase the potential for soils to be subject to erosion. Overall, it is anticipated that impacts to substantial 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 (i.e., shrink) or take on water (i.e., swell). The change in volume exerts stress on buildings and other loads placed on these soils. The occurrence of these soils is often associated with geologic units having marginal stability (Riverside County 2019a). The Project site is characterized by the Vista soil series, which includes moderately deep, well drained soils that formed in material weathered from decomposed granitic rocks (Amec Foster Wheeler 2018b; U.S. Department of Agriculture Natural Resources Conservation Service 2017). The Project site is not located on expansive soil and no habitable structures are proposed. Additionally, the proposed Project would not include the construction of permanent restrooms that would require septic tanks or alternative waste water systems. Therefore, there would be no impacts 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
19. Wind Erosion and Blows and from project either on or off site.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
a) Be impacted by or result in an increase in wind erosion and blows and, either on or off site?				

Source(s): Riverside County General Plan Figure S-8, *Wind Erosion Susceptibility Map*; County Ordinance Number 460, Article XV; County Ordinance Number 484

Findings of Fact:

a) **Less Than Significant.** According to the Riverside County General Plan Wind Erosion Susceptibility Map, the Project site is located within an area considered to have a moderate wind erodibility rating. However, construction of the proposed Project would be limited to minor grading activities at shallow depths (i.e., maximum cut of 2 feet), necessary to level the Project site. construction activities. Additionally, all exposed soils would be watered during grading consistent with SCAQMD Rule 403 (refer to BMP AQ-1). Following the completion of construction activities, the proposed day use parking and staging area would be covered with native soil and stabilizers as well as decomposed granite in the picnic table area. Therefore, the potential for wind erosion as a result of the proposed Project would be less than significant.

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
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 (CH₄) 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 (Intergovernmental Panel on Climate Change [IPCC] 2014). The principal GHGs that enter the atmosphere because of human activities are:

- **Carbon dioxide (CO₂)** 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 (CH₄)** 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 CH₄ emissions as well as the decay of waste in landfills.
- **Nitrous oxide (N₂O)** 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 (HFC), perfluorocarbons (PFC), and sulfur hexafluoride (SF₆). 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). For example, 1 pound of CH₄ has 21 times more heat capturing potential than 1 pound of CO₂. When dealing with an array of emissions, the gases are converted to carbon dioxide equivalents (CO₂e) for comparison purposes. The analysis for this Initial Study uses the screening threshold recommended by the SCAQMD of 3,000 metric tons of CO₂e (MT CO₂e) per year (SCAQMD 2008).

The greatest GHG emissions source associated with development and land use projects in California is vehicle emissions. The second greatest source is energy consumption, including natural gas and electricity use. As described under Section 6, *Air Quality*, the proposed Project would require haul truck trips, concrete truck trips, construction worker commutes, and heavy construction equipment use. These sources of GHG emissions were included in CalEEMod to accurately estimate the worst-case emissions for the proposed Project (see Table 7). The GHG emissions are expressed in units of MT CO₂e per year. Construction-related GHG emissions for the proposed Project in 2020 from on-site (i.e., construction equipment) and off-site (i.e., haul trucks, vendor trucks, construction worker vehicles) emission sources would not exceed the SCAQMD threshold (see Table 7).

Table 7. Estimated Annual Construction GHG Emissions

		MT CO ₂ e per year
Construction Emissions	2020	32.70
	Amortized over 30 Years	1.09
Operational Emission	Area	<0.00
	Energy	0.00
	Mobile	92.65
	Overall	92.65
Total		93.74
SCAQMD Threshold of Significance		3,000
Significant?		No
Source: CalEEMod Version 2016.3.2; see Appendix D.		

The proposed Project would result in a negligible increase in long-term GHG emissions due to visitor trips to and from the proposed day use parking and staging area as well as periodic vehicle trips for site maintenance. As described in Section 6, *Air Quality*, visitor trips to the Project site were modeled in CalEEMod based on the ITE trip generation rates for the 325-acre Reserve (see Appendix D). However, the proposed day use parking and staging area would provide parking for visitors that are already accessing the Reserve. Therefore, the net increase in operational emissions over the course of a year would be negligible. Nevertheless, this conservative analysis assesses the operational emissions as if all of these visitors would be newly generated by the proposed Project. Even with this conservative assumption, total operational emissions would be well below the SCAQMD thresholds and would not violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Source(s): Riverside County General Plan; Riverside County Climate Action Plan

Findings of Fact:

a) **Less Than Significant.** According to the CalEEMod analysis conducted for the proposed Project, construction and operation of the proposed day use parking and staging area would result in a total of 93.74 MT CO₂e of GHG emissions. Therefore, the total GHG emissions would be well below the applicable screening threshold of 3,000 MTCO₂e and impacts related to GHG emissions would be less than significant.

b) **No Impact.** The proposed Project does not include any new uses or facilities that would generate a substantial increase in operational GHG emissions. GHG emissions from construction and operation would be negligible and would not conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the GHG emissions.

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
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Government Code Section 65962.5 requires the California Environmental Protection Agency (Cal EPA) to develop and annually update the Hazardous Waste and Substances List – Site Cleanup (Cortese) List. Information on the location of hazardous material sites contained in the Cortese List is provided by the California Department of Toxic Substances Control (DTSC). A review of the Cortese List indicates that there are no identified hazardous materials release sites located within the Project site or immediate vicinity. In addition, a review of the DTSC EnviroStor Database did not identify any cleanup sites or hazardous waste facilities within the immediate Project vicinity (DTSC 2020). The former Idaleona Mine is located approximately 0.7 miles southeast of the Project site, but contamination related to this site is not known and not likely to have migrated to the Project site.

The closest school is Columbia Elementary School, which is located approximately 4 miles northeast of the Project site. The closest public airport, Perris Valley Airport, is located in the City of Perris approximately 8 miles southeast of the Project site. The Project site is not located within the vicinity of a private airstrip. Public access to the Reserve is limited to Gavilan Road or Idaleona Road. The California Department of Forestry and Fire Protection (CAL FIRE) designates the Project site and the surrounding area as a Local Responsibility Area Very High Fire Hazard Severity Zone (Riverside County 2019b).

Source(s): Riverside County General Plan Safety Element; DTSC EnviroStor Database

Findings of Fact:

a, b) **Less Than Significant.** During construction 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 construction equipment. The construction phase may include the transport and on-site storage of petroleum products for the purpose of fueling construction equipment. However, the use and transport of these materials during construction activities would be short-term in nature and would occur in accordance with standard construction 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 (see Section 23, *Hydrology and Water Quality*). All transport, handling, use, and disposal of substances such as petroleum products related to construction of the proposed day use parking and staging area would comply with applicable Federal, State, and local health and safety regulations. All vehicle fueling and maintenance would occur off-site. Additionally, RivCoParks 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 construction activities these materials would be removed from the Project site and no hazardous materials would be required for operation of the proposed day use parking and staging area. Therefore, impacts associated with the proposed Project would be less than significant.

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

d) **No Impact.** According to the Cortese List and the DTSC EnvirStor Database, the Project site is not located within the vicinity of a contaminated site. Therefore, there would be no impact associated with the implementation of the proposed Project.

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

f) **No Impact.** Neither construction nor operation of the proposed day use parking and staging area would result in a significant increase in traffic congestion that might impede mobility during an emergency (see Section 37, *Transportation* and Section 44, *Wildfire*). Further, the proposed Project would not result in physical obstruction of any street or highway that is critical to evacuation in the event of an emergency. Therefore, there would be no impact associated with the implementation of the proposed Project.

g) **Less Than Significant.** While the Project site is located within a very high fire hazard severity zone, construction and operation of the proposed day use parking and staging area would not result in exposure of people or structures to risk of loss, injury or death involving wildland fires. The proposed Project would provide additional vehicle parking and limited recreational amenities (e.g., picnic tables); however, the proposed Project would not include any habitable structures. Further, the proposed day use parking and staging area would have a boundary sign prohibiting hunting, fires, shooting, and other potential ignition sources. Similar signage is also at the existing main entrance and every 300 feet along Gavilan and Idaleona Road. Additionally, RivCoParks would continue to conduct regular weed abatement to reduce ladder fuels 100 feet from residences. Therefore, impacts associated with the proposed Project would be less than significant.

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
22. Airports				
a) Result in an inconsistency with an Airport Master Plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Require review by the Airport Land Use Commission?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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 project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Source(s): Riverside County General Plan Figure S-20, *Airport Locations*; County of Riverside Transportation and Land Management Agency GIS Data Downloads

Findings of Fact:

a-d) **No Impact.** The Project site is located approximately 8 miles from the closest airport and is not covered by any Airport Master Plan. Therefore, there would be no impacts 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
HYDROLOGY AND WATER QUALITY Would the project:				
23. Water Quality Impacts	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in substantial erosion or siltation on-site or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-site or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) In flood hazard, tsunami, or seiche zones, risk the release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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; County of Riverside Transportation and Land Management Agency GIS Data Downloads GIS Database; Jurisdictional Delineation

Findings of Fact:

a, d) **Less Than Significant.** As described in Section 7, *Wildlife & Vegetation*, the Project site is located approximately 300 feet to the north of an un-named drainage that conveys natural surface water flows and urban run-off from the surrounding single family rural residences and commercial land uses (refer to Figure 4). However, this drainage path supports only intermittent flows that occur during and immediately following heavy storm events and shows no evidence of an OHWM and/or definable bed and bank feature. Natural runoff in the vicinity of the Project site sheet flows across Piedras Road with no evidence of an OHWM and/or definable bed and bank feature

The 1.8-acre Project site would be leveled with minor grading necessary to maintain existing surface water drainage, which would continue to be directed from the east towards the interior of the Reserve to the northwest. Therefore, there is a potential for erosion and sedimentation during construction associated with the proposed Project. Because construction activities would disturb more than 1 acre, RivCoParks would be required to develop and implement a SWPPP prior to the commencement of any construction-related activities in accordance with the NPDES Construction General Permit. The SWPPP would include standard construction BMPs (e.g., off-site fueling and maintenance of construction equipment), which would be in place for the duration of the construction activities to avoid potential impacts to surface water quality due to potential pollutant discharge during construction activities. 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.

Following the completion of construction activities, the proposed day use parking and staging area would be covered with native soil and stabilizers as well as decomposed granite in the picnic table area. Surface water drainage continue to be directed from the east towards the interior of the Reserve to the northwest. Therefore, the potential for impacts related to erosion and water quality would be less than significant.

b) **No Impact.** Short-term water demand for construction-related activities (e.g., watering exposed soils pursuant to SCAQMD Rule 403) would be minimal. Given the location of the Project site, water would likely be imported to the Project site using a water truck. The proposed 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 operation demand for domestic water. Given the limited scope of the proposed Project, this demand would be minor and would have a negligible effect on local groundwater supplies.

The proposed Project would include an incremental increase in impervious surfaces at the Project site associated with the two ADA-accessible parking spaces. The remainder of the 1.8-acre Project site would include pervious ground cover – including native soil and decomposed granite. The proposed incremental increase in impervious surfaces would have a negligible effect on the potential for groundwater recharge within the groundwater basin. Therefore, the proposed Project would have no impact on groundwater supplies, groundwater recharge, or aquifers.

c, e-g) **Less Than Significant.** The Jurisdictional Delineation identified the headwaters of a downstream drainage feature, approximately 300 feet to the south of the Project site (refer to Figure 4). As described in Section 7, *Biological Resources*, natural runoff in the vicinity of the Project site flows across Piedras Road with no evidence of an OHWM and/or definable bed and bank feature. The 1.8-acre Project site would be leveled with minor grading necessary to maintain existing surface water drainage, which would continue to be directed from the east towards the interior of the Reserve to the northwest. Additionally, the proposed Project would not include any habitable structures that could be impacted by flooding during heavy storm events. Therefore, implementation of the proposed Project would result less than significant impacts related to stormwater drainage and flooding.

h) **No Impact.** No topographical features or water bodies capable of producing seiche, tsunami, or mudflow events are present within the vicinity of the Project site (refer to Section 11, *Geology and Soils*). The proposed Project would not increase the risk associated with seiche, tsunami, or mudflow beyond those of the existing conditions. Therefore, there would be no impact associated with the implementation of the proposed Project.

i) **Less Than significant.** Construction of the proposed Project would be limited to minor grading activities at shallow depths (i.e., maximum cut of 2 feet), necessary to level the Project site. The proposed day use parking and staging area would be covered with native soil and stabilizers as well as decomposed granite in the picnic table area. The implementation of standard construction BMPs from the SWPPP (e.g., off-site fueling and maintenance of construction equipment), would avoid potential impacts to surface water quality due to potential pollutant discharge during construction activities. The proposed Project does not include permanent restrooms, water fountains, or any other structures that require the use of domestic water. Therefore, the proposed 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.

Mitigation: No monitoring is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Disrupt or divide the physical arrangement of an established community (including a low-income or minority community)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Project site is located within the Lake Mathews / Woodcrest Area Plan and is designated as Open Space-Conservation Habitat (OS-C H). This land use designation applies to public and private lands conserved and managed in accordance with an adopted MSHCP or other Conservation Plan(s) and in accordance with related Riverside County policies. Ancillary structures or uses may be permitted within this land use designation for the purpose of preserving or enjoying open space (Riverside County 2019a).

The entire Reserve, including the Project site, is located within the Gavilan Hills Policy Area. The Lake Mathews / Woodcrest Area Plan policies for the Gavilan Hills Policy Area encourages the construction of a day use parking area to serve peak parking demand at the Reserve. Existing and proposed uses and facilities are consistent with current zoning and General Plan designations for the Project site.

Source(s): Riverside County General Plan; Lake Mathews / Woodcrest Area Plan

Findings of Fact:

a) **No Impact.** The proposed Project would not change the existing land use of the Project site, and new recreational facilities would not conflict with the Riverside County General Plan policies. The proposed Project would implement a goal of the Lake Mathews / Woodcrest Area Plan, which encourages the construction of a day use parking area at the Reserve to accommodate peak parking demand.

b) **No Impact.** No long-term separation of land uses between land use types would occur as a result of the proposed Project. Temporary disruption of access along Piedras Road (e.g., haul truck trips or concrete truck trips) during construction would not disrupt recreational activities at the Reserve. Therefore, implementation of the proposed Project would not divide an established community and no impact would occur.

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
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Potentially expose people or property to hazards from proposed, existing, or abandoned quarries or mines?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

Findings of Fact:

a-c) **No Impact.** According to the CGS referenced in the Riverside County General Plan (Riverside County 2015a), there are no mineral recovery sites on or near the Project site. The entire Reserve is in an area where the significance of mineral deposits are undetermined. However, given the nature of the proposed Project, it would not result in the permanent loss of availability of a potential mineral resource recovery site. Therefore, the proposed Project would not result in the loss of availability of a known mineral resource and there would be no impact to mineral resources.

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
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Source(s): Riverside County General Plan Figure S-20, *Airport Locations*

Findings of Fact:

a-b) **No Impact.** The nearest public airport, Perris Valley Airport, is located in the City of Perris approximately 8 miles southeast 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; therefore, the proposed Project would not expose people residing or working within the vicinity of the Project site to excessive noise levels. The Project site is not within the vicinity of a private airstrip or heliport; therefore, the proposed Project would not expose people residing or working in the Project area to excessive noise levels and there would be no impact.

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
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive ground-borne vibration or ground-borne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Construction Noise

As previously described, there is one single family rural residence within 0.25 miles of the Project site, located directly south across Idaleona Road. Other sensitive receptors include Columbia Elementary School and Mead Valley Library, which are approximately 4 miles northeast of the Project site. Construction-related noise would be generated by minor grading activities, the operation of power tools, and truck trips. Construction noise levels were evaluated using data published by the U.S. Department of Transportation (DOT), as indicated in Table 8.

Table 8. Noise Ranges of Typical Construction Equipment

Construction Equipment	Noise Levels in dBA L _{eq} at 50 Feet
Heavy Haul Trucks	82–95
Compressors	75–87
Concrete Mixers	75–88
Concrete Pumps	81–85
Back Hoe	73–95

Notes:

dBA: A-weighted decibels

L_{eq}: Equivalent continuous sound level

Source: U.S. DOT Construction Noise Handbook 2006.

The noise generated by the use of heavy construction equipment would result in a temporary increase in ambient noise levels consistent with the general noise levels presented in Table 8. However, this increase would be intermittent, short-term (i.e., between 2 to 3 months), and temporary. Additionally, to the maximum extent feasible, RivCoParks would voluntarily limit construction activities to the hours between 6:00 AM and 6:00 PM during the months of June through September, and between 6:00 AM and 7:00 PM during the months of October through May, consistent with requirements codified in the

County's Noise Ordinance (Riverside County 2007). The County's Noise Ordinance does not identify maximum noise levels for construction; however, given the distance to the existing sensitive receptors as well as the intervening topography, vegetation, and roadways that would dampen and/or attenuate construction-related noise, increases in ambient noise levels would not be noticeable.

Operational Noise

Consistent with existing conditions at the Reserve, the proposed day use parking and staging area would be used during daytime hours only. Truck and horse trailer combinations and passenger vehicles may generate additional noise at the Reserve. The General Plan Noise Element states that stationary source land use noise cannot exceed 65 dBA L_{eq} for longer than 10 minutes from 7:00 AM to 10:00 PM outside within residential areas. No noise standards are provided for other non-residential land uses (Riverside County 2015b). Although rural residences are present to the east, west, and south of the Reserve, operational noise associated with vehicle trips to and from the proposed day use parking and staging area would be buffered by the surrounding topography, vegetation, and roadways and would not exceed those standards for residential uses.

Source(s): Riverside County General Plan Noise Element

Findings of Fact:

a) **Less Than significant.** During construction activities involving the use of the loudest piece of construction equipment (e.g., back hoe, which can generate noise levels of approximately 95 dBA at 50 feet), exterior noise levels at the nearest sensitive receptor would be approximately 67 dBA. This conservatively represents the construction noise levels based on attenuation with distance only and does not include additional noise dampening from topography, vegetation, and roadways that would further reduce potential increases in ambient noise. Additionally, to the maximum extent feasible, RivCoParks would voluntarily limit construction activities to the hours between 6:00 AM and 6:00 PM during the months of June through September, and between 6:00 AM and 7:00 PM during the months of October through May, consistent with requirements codified in the County's Noise Ordinance (Riverside County 2007).

Consistent with existing conditions at the Reserve, the proposed day use parking and staging area would be used during daytime hours only. Truck and horse trailer combinations and passenger vehicles may generate additional daytime noise at the Reserve. The General Plan Noise Element states that stationary source noise cannot exceed 65 dBA L_{eq} for longer than 10 minutes from 7:00 AM to 10:00 PM outside within residential areas. No noise standards are provided for other non-residential land uses (Riverside County 2015b). Although rural residences are present to the east, west, and south of the Reserve, operational noise associated with vehicle trips to and from the proposed day use parking and staging area would be buffered by the surrounding topography, vegetation, and roadways and would not exceed those standards for residential uses. Operational noise would be limited to truck and horse trailer combinations and passenger vehicles parking at the proposed day use parking and staging area as well as minor noise from talking and animals (e.g., horses, dogs, etc.). However, long-term operational activities associated with the proposed staging area would not generate substantial noise at or in the vicinity of the Reserve. Noise levels at the nearest sensitive receptor would continue to be dominated by vehicle traffic along Idaleona Road. As such, the proposed Project would not result in a temporary or permanent increase in ambient noise levels in excess of any established standards and impacts would be less than significant.

b) **Less Than Significant.** No permanent increase in groundborne vibration or groundborne noise levels would result from the implementation of the proposed Project. The proposed Project would involve intermittent use of heavy construction equipment for short-term construction activities, which has potential to cause a temporary increase in groundborne vibration. However, no excavation or pile driving would be required and groundborne vibrational from construction equipment would be minimal. Additionally, no operational or maintenance activities associated with the proposed day use parking and staging area would result in groundborne vibration or groundborne noise. Therefore, impacts associated with the proposed Project would be less than significant.

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
PALEONTOLOGICAL RESOURCES:				
28. Paleontological Resources				
a) Directly or indirectly destroy a unique paleontological resource, site, or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Source(s): Riverside County General Plan Figure OS-8, *Paleontological Sensitivity*

Findings of Fact:

a) **No Impact.** According to the Riverside County General Plan, the entire Reserve, including the Project site, is in an area that is considered to have low paleontological sensitivity (Riverside County 2015a). Construction of the proposed Project would be limited to minor grading activities at shallow depths (i.e., maximum cut of 2 feet), necessary to level the Project site. Therefore, construction of the proposed day use parking and staging area would result in no impact.

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
POPULATION AND HOUSING Would the project:				
29. Housing				
a) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Create a demand for additional housing, particularly housing affordable to households earning 80% or less of the County's median income?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Source(s): Riverside County General Plan Housing Element

Findings of Fact:

a-c) **No Impact.** The proposed day use parking and staging area would not displace any existing people, establish new housing, or extend any roads or urban services. The proposed Project would not create demand for additional housing or induce substantial unplanned population growth because of its limited scale. Therefore, there would be no impact 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
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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Source(s): Riverside County General Plan Safety Element

Findings of Fact:

No Impact. The Riverside County Fire Department provides fire protection and emergency medical (i.e., paramedic) services within unincorporated portions of the County. Riverside County Fire Department Station 4, located approximately 3 miles north of the Project site, is the closest station to the Project site. During construction, emergency access to the Project site would be maintained along roadways, and there would be no lane closures. Following the completion of construction-related activities, the proposed Project would not result in a change in land use or activities. Nor would the proposed Project induce growth or substantially increase, either directly or indirectly, the need for fire protection services over existing conditions. The existing main entrance and the proposed day use parking and staging area would have boundary sign states no hunting, no fires, no shooting, and etc. Similar signage is also located every 300 feet along Gavilan and Idaleona Road. Additionally, RivCoParks conducts regular weed abatement to reduce ladder fuels 100 feet from residences. Therefore, there would be no impact on fire services 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
31. Sheriff Services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Source(s): Riverside County General Plan Safety Element

Findings of Fact:

No Impact. The closest police station to the Project site is the City of Perris Police Station, located approximately 7 miles east of the Project site. Construction of the proposed day use parking and staging area is not anticipated to result in temporary interruption or delays for law enforcement response times. Additionally, operational of the proposed day use parking and staging area would neither measurably increase the demand for law enforcement nor require the construction of new facilities (i.e., police or sheriff stations). Therefore, there would be no impact on sheriff services 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
32. Schools	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Findings of Fact:

No Impact. No new residential units would be constructed as a part of the proposed Project, and the proposed Project would not result in new permanent populations that would require school facilities. Therefore, there would be no impact on schools 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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Source(s): Riverside County General Plan

Findings of Fact:

No Impact. No new residential units would be constructed as a part of the proposed Project, and the proposed Project would not result in new permanent populations would increase demand on libraries or any other public services or facilities. Therefore, there would be no impact on libraries 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
34. Health Services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Source(s): Riverside County General Plan

Findings of Fact:

No Impact. No new residential units would be constructed as a part of the proposed Project, and the proposed Project would not result in new permanent populations would increase demand on health services. Therefore, there would be no impact on health services 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
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located within a Community Service Area (CSA) or recreation and park district with a Community Parks and Recreation Plan (Quimby fees)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Source(s): County of Riverside Transportation and Land Management Agency GIS Data Downloads; County Ordinance Number 460, Section 10.35 (Regulating the Division of Land – Park and Recreation Fees and Dedications); County Ordinance Number 659 (Establishing Development Impact Fees)

Findings of Fact:

a) **Less Than Significant.** The proposed day use parking and staging area would provide a formal day use parking area for the Reserve as well as limited recreational amenities, including picnic tables and hitching posts for equestrian use. The proposed day use parking and staging area would provide connections to existing trails within the Reserve. However, the proposed day use parking and staging area would be an ancillary use intended to support the existing Reserve. Therefore, it 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 provide formal parking for hikers, runners, mountain bikers, and equestrians that are already using the Reserve, but are parking in informal or undesignated overflow parking areas. As such, the implementation of the proposed Project would relieve congestion at the main entrance and associated trail access points and improve overall operation of the Reserve. While the proposed Project may increase the use of the existing trails on the eastern side of the Reserve, implementation of the proposed Project would not result in any physical deterioration of these established trails. Therefore, impacts associated with the implementation of the proposed 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 there would be no Quimby fees associated with the 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
36. Recreational Trails				
a) Include the construction or expansion of a trail system?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Source(s): Riverside County General Plan Figure C-6, *Trails and Bikeway System*, Harford Springs Reserve Trail Map

Findings of Fact:

a) **No Impact.** The proposed Project would be limited to the construction of a day use parking and staging area, which would provide connections to existing trails on the eastern side of the Reserve, but would not include the construction of new trails or the expansion of the trail system. The proposed Project would include trail connections to existing trails near the Project site. Therefore, there would be no impact on recreational trails 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
TRANSPORTATION Would the project:				
37. Transportation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Cause an effect upon, or a need for new or altered maintenance of roads?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Cause an effect upon circulation during the project's construction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Result in inadequate emergency access or access to nearby uses?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Source(s): Riverside County General Plan

Findings of Fact:

a, b) **No Impact**. Construction and operation of the proposed Project would not conflict with adopted policies, plans, and programs supporting alternative transportation. During construction activities, there would 500 cy of total earthwork; however, soil would be balanced site, with no soil export or import of fill material required for the proposed Project. A limited number of heavy haul trucks used to deliver equipment and materials to the Project site would access the Project site from Gavilan Road turning east onto Idaleona Road and turning north onto Piedras Road to access the Project site. Heavy construction equipment would remain in the construction staging area throughout the duration of construction and would further limit trips to and from the Project site. It is estimated that 1 to 7 construction workers would be required depending of the phase of construction (refer to Table 1), which would result in a maximum of 14 round trips per day during construction period. 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 day¹ generally may be assumed

¹ "CEQA provides a categorical exemption for existing facilities, including additions to existing structures of up to 10,000 square feet, so long as the project is in an area where public infrastructure is available to allow for maximum planned development and the project is not in an environmentally sensitive area. (CEQA Guidelines Section 15301[e][2]) Typical project types for which trip generation increases relatively linearly with building

to cause a less than significant transportation impact” (OPR 2017). Therefore, because the proposed construction activities would generate fewer trips than the OPR’s threshold of 110 trips per day and impacts related to VMT would be less than significant.

The proposed Project would not conflict with any policies for roadways near the Project site and would not conflict with any congestion management programs within the County. The proposed Project would accomplish a goal of the Lake Mathews / Woodcrest Area Plan, which encourages the construction of a day use parking area at the Reserve to accommodate peak parking demand. The proposed Project would also reduce congestion on Gavilan Road and Idaleona Road during peak periods, which can be exacerbated by visitors parking vehicles along the side of the roadway when the informal parking area at the main entrance is full.

Implementation of the proposed Project would have no adverse impacts on transportation.

c-f) **No Impact.** Local access to the Reserve is provided by Gavilan Road, which is a two-lane roadway that provides local north-south access, and Idaleona Road, which is an unmarked paved road that provides local east-west access. As previously described, the main entrance to the Reserve is provided east of Gavilan Road between Palomas Drive and Cajon Drive, along the western border of the Reserve (refer to Figure 2). A secondary entrance to the Reserve is provided by Piedras Road, located approximately 125 feet north of its intersection with Idaleona Road. Piedras Road begins as a paved road but becomes a dirt road shortly past a wooden gate that marks the entrance to the Reserve. The road is approximately 16 feet wide near the gate and extends for approximately 4,800 feet (0.90 miles), running along the eastern edge of the Reserve.

The unpaved loop would provide parking for approximately 10 truck and horse trailer combinations with trucks entering through the northernmost entry and parking along the edge of the loop. The passenger vehicle parking spaces would be located along the southern end of the proposed day use parking and staging area and would be striped or delineated using small rocks or down branches. Vehicles would exit the loop using the southernmost split exit, which would allow vehicles to turn left along Piedras Road to re-enter the unpaved loop or turn right along Piedras Road to exit the Reserve. Vehicles would be prevented from traveling past the day use parking and staging area into the Reserve by a pipe gate that would be installed as a part of the proposed Project (refer to Figure 3).

The proposed Project would not result in changes to the design of existing roadway configurations or other transportation infrastructure within the vicinity of the Project site. Given that Piedras Road is an existing unpaved roadway, no new road maintenance would be required as a result of the proposed Project. The proposed Project vehicle entrance and exits associated with the proposed day use parking and staging area would not introduce incompatible uses or line-of-sight issues. Additionally, the proposed Project would not result in traffic delays that could substantially increase emergency response times or reduce emergency vehicle access. Therefore, there would be no impact on recreational trails associated with the implementation of the proposed Project.

Mitigation: No mitigation is required.

footprint (i.e., general office building, single tenant office building, office park, and business park) generate or attract an additional 110-124 trips per 10,000 square feet. Therefore, absent substantial evidence otherwise, it is reasonable to conclude that the addition of 110 or fewer trips could be considered not to lead to a significant impact” (OPR 2017).

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
38. Bike Trails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
a) Include the construction or expansion of a bike system or bike lanes?				

Source(s): Riverside County General Plan

Findings of Fact:

a) **No Impact.** The proposed Project would be limited to the construction of the proposed day use parking and staging area and would not include the construction or expansion of a bike system or bike lanes (refer to Section 36, *Recreational Trails*).

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
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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	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Source(s): Extended Phase I Cultural Resources Inventory; Assembly Bill 52 Tribal Consultation Correspondence

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*, Amec Foster Wheeler submitted a Sacred Lands File request to the NAHC on September 27, 2017, to determine whether their files indicate the presence of cultural sites within or immediately adjacent to the APE. On September 29, 2017, the NAHC responded that the Sacred Lands File records search did identify sites within the APE that may be impacted by the proposed Project. The NAHC provided a list of 37 tribal representatives from 24 Native American tribes to contact regarding the proposed Project. Amec Foster Wheeler sent letters to the 37 tribal representatives on October 27, 2017, to request specific information regarding cultural resources within or near the APE. The 24 tribes contacted during the Native American consultation process include:

- Agua Caliente Band of Cahuilla Indians
- Augustine Band of Cahuilla Mission Indians
- Cabazon Band of Mission Indians
- Cahuilla Band of Mission Indians
- Campo Band of Mission Indians
- Ewiiapaayp Tribal Office
- Jamul Indian Village
- La Jolla Band of Luiseno Indian
- La Posta Band of Mission Indian
- Los Coyotes Band of Mission Indians
- Manzanita Band of Kumeyaay Nation
- Morongo Band of Mission Indians
- Pala Band of Mission Indians
- Pauma Band of Luiseno Indians-Pauma & Yuima Reservation
- Pechanga Band of Luiseno Indians
- Ramona Band of Cahuilla Mission Indians
- Rincon Band of Mission Indians
- San Pasqual Band of Mission Indians
- Santa Rosa Band of Mission Indians
- Soboba Band of Luiseno Indians
- Sycuan Band of the Kumeyaay Nation
- Sycuan Band of the Kumeyaay Nation
- Torres-Martinez Desert Cahuilla Indians
- Viejas Band of Kumeyaay Indians

Of the 37 tribal representatives contacted, 12 tribal representatives responded to the letter, including the Pechanga Band, Soboba Band, Viejas Band, Augustine Band, La Jolla Band, Manzanita Band, Morongo Band, Ramona Band, Agua Caliente Band, Rincon Band, Santa Rosa Band, and Pauma Band.

The replies made by mail included those from the Pechanga Band, Soboba Band, and the Viejas Band. Viejas Band Resource Manager Ray Teran stated that the Project site is of little cultural significance to the Tribe but requested to be notified of any cultural resources discovered. Joseph Ontiveros of the Soboba Band stated that the project location is in proximity to known sites, is a shared use area that was used in ongoing trade between the tribes, and is considered to be culturally sensitive by the people of Soboba. He asked that Riverside County initiate and continue correspondence with the Tribe, that he receive project information, that the Tribe have the opportunity to monitor any ground disturbing activities during implementation of the proposed Project, that the proper procedures and requests of the Tribe be honored and included a regulatory framework for the treatment of cultural items and human remains. Planning Specialist Tuba Ebru Ozdil of the Pechanga Band stated that the APE is in a highly sensitive area for cultural resources and human remains and asked that a qualified archaeologist and Pechanga Band tribal monitor be present during future earthmoving activities, including tree removal. She also asked to be notified of the entitlement process and to receive all pertinent archaeological

reports, resource files, and grading plans. Ms. Ozdil also requested formal government-to-government consultation with Riverside County, the Lead Agency.

The administrative assistant to Joseph Hamilton, Chairperson of the Ramona Band deferred to Environmental Coordinator John Gomez. A voicemail was left with Mr. Gomez the same day. On behalf of the Agua Caliente Band, Patricia Garcia-Plotkin deferred to local tribes. The administrative assistant to Chairperson Bo Mazzetti of the Rincon Band deferred to Cultural Resources Department, who stated that they reply to the letter at a later time. The administrative assistant to Chairperson Steven Estrada of the Santa Rosa Band asked that any follow up questions be emailed to him. An email was sent to Chairperson Estrada on November 15, 2017. On behalf of the Pauma Band, Chris Devers stated via email that they would like copy of cultural report when completed and wanted to confirm the Project Area footprint. Reply was sent on November 20, 2017 confirming the APE footprint and offering report once finalized.

RivCoParks distributed tribal consultation notification letters pursuant to AB 52 on June 9, 2020 and received requests for formal government-to-government consultation from the following tribes:

- Morongo Band of Mission Indians
- Pala Band of Mission Indians
- Pechanga Band of Luiseno Indians
- Rincon Band of Mission Indians
- Soboba Band of Luiseno Indians

RivCoParks parks hosted virtual consultation meetings with these tribes in July and August 2020. The proposed cultural resources mitigation measures (Mitigation Measure CUL-3) and tribal cultural resources mitigation measure (Mitigation Measure TC-1) were revised consistent with input from the Soboba Band of Luiseno Indians.

Findings of Fact:

a, b) **Less Than Significant with Mitigation Incorporated.** While the Project site and APE contain no previously recorded tribal cultural resources, the Project site and surrounding vicinity are considered by the local Native American tribes to be highly sensitive areas for tribal sites and resources. No tribal cultural resources were encountered at the Project site during the intensive field survey prepared for the Extended Phase I Cultural Resources Inventory. Potential impacts would be mitigated through the implementation of Mitigation Measures CUL-1 through CUL-6 and TC-1. These mitigation measures would include construction training and would also require both archaeological and Native American monitors to be present during ground disturbing activities, including grading and tree removal. 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 the RivCoParks and an appropriate Native American representative(s). With the implementation of the Mitigation Measures CUL-1 through CUL-6 and TC-1, potential impacts to tribal cultural resources would be less than significant within mitigation incorporated.

Mitigation:

Mitigation Measure TC-1: At the request of the Soboba Band of Luiseno Indians and Pechanga Band of Luiseno Indians during consultation under AB 52, RivCoParks shall enter into an agreement with the

consulting tribe(s) for (a) Native American monitor(s) to provide Luiseno Tribal Monitoring services including observation of all soil disturbance activities (e.g., grading, tree removal, etc.). The frequency of inspections will be based on the rate of excavation, the materials excavated, and the potential presence and abundance of artifacts and features. In the event that a previously unknown buried archaeological resource or human remains are encountered during grading activities, the standard protocols for evaluation and recovery described in CUL-2 though CUL-6 would be implemented.

Monitoring: Compliance with this mitigation measure would be subject to periodic site inspections by the Riverside County Planning Department.

	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Findings of Fact:

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

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
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Findings of Fact:

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

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
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Findings of Fact:

a, b) **No Impact.** Construction of the proposed Project would be limited to minor grading activities at shallow depths (i.e., maximum cut of 2 feet), necessary to level the Project site. No building demolition or other solid waste generating activities would be required during construction. The proposed Project would provide trash receptacles for visitors; however, solid wastes generated at the proposed day use parking and staging area would be minor and would be well within the existing capacity of landfills in the region. For example, Lamb Canyon Landfill, located approximately 21 miles east of the Project site, permits 5,000 tons of solid waste per day (California Department of Resources Recycling and Recovery [CalRecycle] 2018). Therefore, the proposed Project would not have impacts on solid waste generation and complies with regulations around solid waste.

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
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Natural gas?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Communications systems?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Street lighting?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Maintenance of public facilities, including roads?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Other governmental services?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Findings of Fact:

a-d) **No Impact.** The proposed Project would not include structures that would use electricity, natural gas, communication systems, or lighting. Minimal activities would be required to maintain the Project site and Piedras Road.

e) **Less Than Significant.** The proposed day use parking and staging area would trash removal and other minor maintenance activities (e.g., cleaning off picnic tables, etc.). Service would be required intermittently, and mostly often during peak use in the peak Spring and Summer months. However, the impacts of these maintenance would be less than significant. As described in Section 37, *Transportation*, given that Piedras Road is an existing unpaved roadway, no new road maintenance would be required as a result of the proposed Project.

f) **No Impact.** No other government services would be required as a result of the proposed Project and there would be no impact.

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
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Expose people or structures either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The main entrance and trail access points throughout the Reserve have signs that state that hunting, fires, and shooting are prohibited within the Reserve. Similar signage is also placed every 300 feet along Gavilan and Idaleona Road. The Reserve is also regularly cleared of ladder fuels 100 feet from residences. RivCoParks staff also regularly conduct mowing, weeding, and tree trimming near residences.

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

Findings of Fact:

a) **No Impact.** As described in Section 37, *Transportation* the proposed Project would not include any change to roadway designs and would not introduce incompatible uses or line-of-sight issues. The proposed 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 proposed 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 proposed Project would have no impact.

b) **No Impact.** As previously described, the Project site is immediately surrounded by open space. Rural residences, as well as recreational open space, are located in the vicinity of the Project site, including across Idaleona Road. The Project site is located within the Local Responsibility Area Very High Fire Hazard Severity Zone as identified by the CAL FIRE Fire Hazard Severity Zones Map (Riverside County 2019b). However, no new habitable are included as a part of the proposed Project; therefore, no new people or structures would be exposed to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. The proposed Project would have no impact with respect to the potential uncontrolled spread of a wildfire.

c) **No Impact.** The proposed day use parking and staging area does not propose any new infrastructure that would exacerbate fire risk. Picnic tables and trash receptables would be constructed from concrete. Wood pole fencing and existing on-site boulders would border the perimeter of the Project site. Therefore, there would be no infrastructure that would exacerbate fire risks.

d, e) **No Impact.** The proposed Project is relatively flat and would be leveled as during Project construction. Therefore, the proposed Project would not expose people or structures to flooding or landslides (refer to Section 11, *Geology and Soils* and Section 26, *Hydrology and Water Quality*). As previously described, the proposed Project would not result in increased risk of wildfire. Therefore, the implementation of the proposed Project would result in no impact.

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
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Findings of Fact:

Less Than Significant with Mitigation Incorporated. With the implementation of Mitigation Measures BIO-1 through BIO-7, Mitigation Measures CUL-1 through CUL-6, and Mitigation Measure TC-1 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 populations 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.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Findings of Fact:

Less Than Significant with Mitigation Incorporated. As discussed in this Initial Study, the proposed Project would result in no impacts or less than significant impacts to aesthetics, agriculture and forestry resources, air quality, energy, geology and soils, GHG emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation, utilities and service systems, and wildfire.

With the implementation of BMPs described in Section 3, *Air Quality* as well as Mitigation Measures BIO-1 through BIO-7, Mitigation Measures CUL-1 through CUL-6, and Mitigation Measure TC-1,

impacts associated with the implementation of the proposed Project would be less than significant. Since these impacts associated with the proposed Project would not be significant when compared to applicable thresholds, none of the impact associated with the proposed Project would make cumulatively considerable, incremental contributions to significant cumulative impacts.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
47. Have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Findings of Fact:

Less Than Significant. Construction of the proposed Project would generate temporary criteria pollutant emissions and noise. However, as described in Section 6, *Air Quality*, and Section 26, *Noise*, the impacts to construction workers and surrounding residents would be less than significant. The proposed Project would not cause substantial adverse effects on human beings, either directly or indirectly.

III. 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
77588 El Duna Court Unit H
Palm Desert, CA 92211

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APPENDIX A
MSHCP CONSISTENCY ANALYSIS

**HARFORD SPRINGS PARK DAY-USE STAGING AREA PROJECT
ENVIRONMENTAL CONSTRAINTS & WESTERN RIVERSIDE COUNTY MULTIPLE
SPECIES HABITAT CONSERVATION PLAN CONSISTENCY ANALYSIS**



**Unincorporated Riverside County, California
Riverside County Assessor's Parcel Number: 287-280-012**

6 December 2018

Submitted to:

Riverside County Parks Department
4600 Crestmore Road
Jurupa Valley, CA 92509

Attention: Ms. Yun Baird, Park Planner
(951) 955-6515, (951) 955-1383 - fax

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Amec Foster Wheeler Job # 1755400717

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1.0 INTRODUCTION

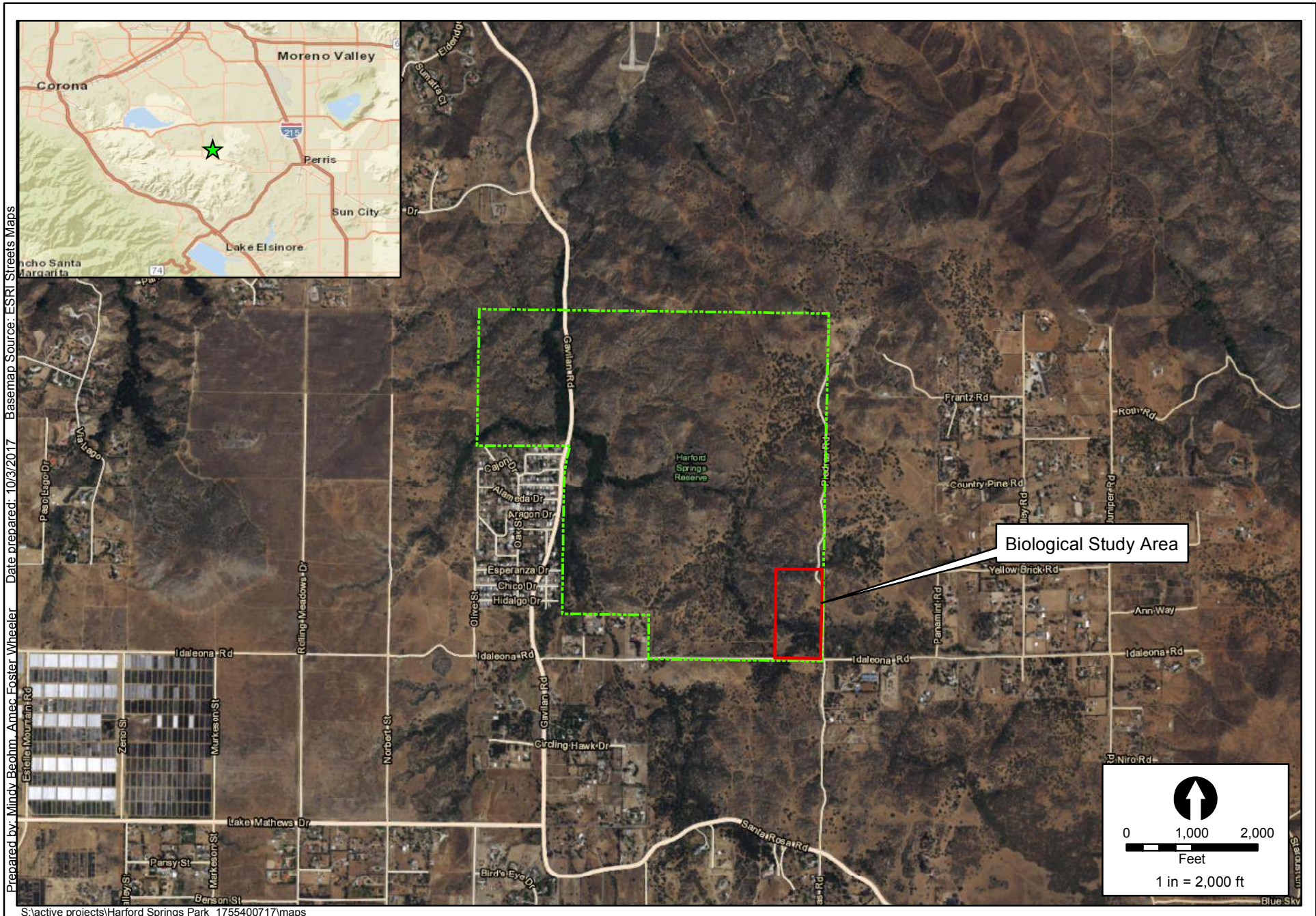
At the request of the Riverside County Regional Park and Open Space District (RCRPOSD), Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler) conducted an analysis of Environmental Constraints and consistency with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). This study was for the Harford Springs Park Day-Use Staging Area Project (project) located in the Lake Mathews community of unincorporated Riverside County, California (see Figure 1). Harford Springs Park is also variously known as Harford Springs County Park or the Harford Springs Reserve. Section 5 of the MSHCP document states that the “Harford Springs Reserve is a 325-acre park located within the Gavilan Hills. This largely undeveloped park is owned and managed by RCRPOSD for equestrian use as well as hiking and wildlife viewing.” The proposed project would be placed in the southerly or southeastern portion of the park (the biological study area, or BSA, as seen on Figure 1). It will provide an equestrian and day-use staging area, which will accommodate a maximum of 15 trailer and truck combinations and 25 automobiles each within separate areas of the site. The project is expected to involve minimal clearing and grubbing, rough and finish grading, base compaction, placement and compaction of porous Class II base material, parking stall delineation, and perimeter control. Future development may include shade shelters, water, and pit style or plumbed toilets.

This document is a review and assessment of the biological resources that have been reported from the vicinity of or have the potential to occur in the BSA in particular and the entire park in general and their relationship to the MSHCP. Preparation included a review of pertinent literature, consultation with biologists having experience on or in close proximity to the site, and a reconnaissance-level site survey to perform a general inventory of flora and fauna and determine habitat suitability for special status flora and fauna.

2.0 PROJECT BACKGROUND/SITE DESCRIPTION

The BSA is at the southeastern corner of the park, northwest of the corner of Idaleona and Piedras Roads. The BSA is in the San Jacinto Land Grant mapped in Township 4 South, Range 5 West, projected Section 24 of the *Steele Peak, Calif.* United States Geologic Service (USGS) 7.5-minute topographic quadrangle map (see Figure 2).

Project elevations in the BSA range from approximately 2,000 to 2,040 feet (610 - 622 meters). The park is undeveloped here, surrounded by undeveloped land and a few rural residences. The biological study area contains relatively flat open areas along with gentle slopes and rock outcrops. A drainage cuts across the lower third of the BSA. On-site elevation ranges from approximately 2,000 – 2,040 feet (610 – 622 meters).



Vicinity & Location

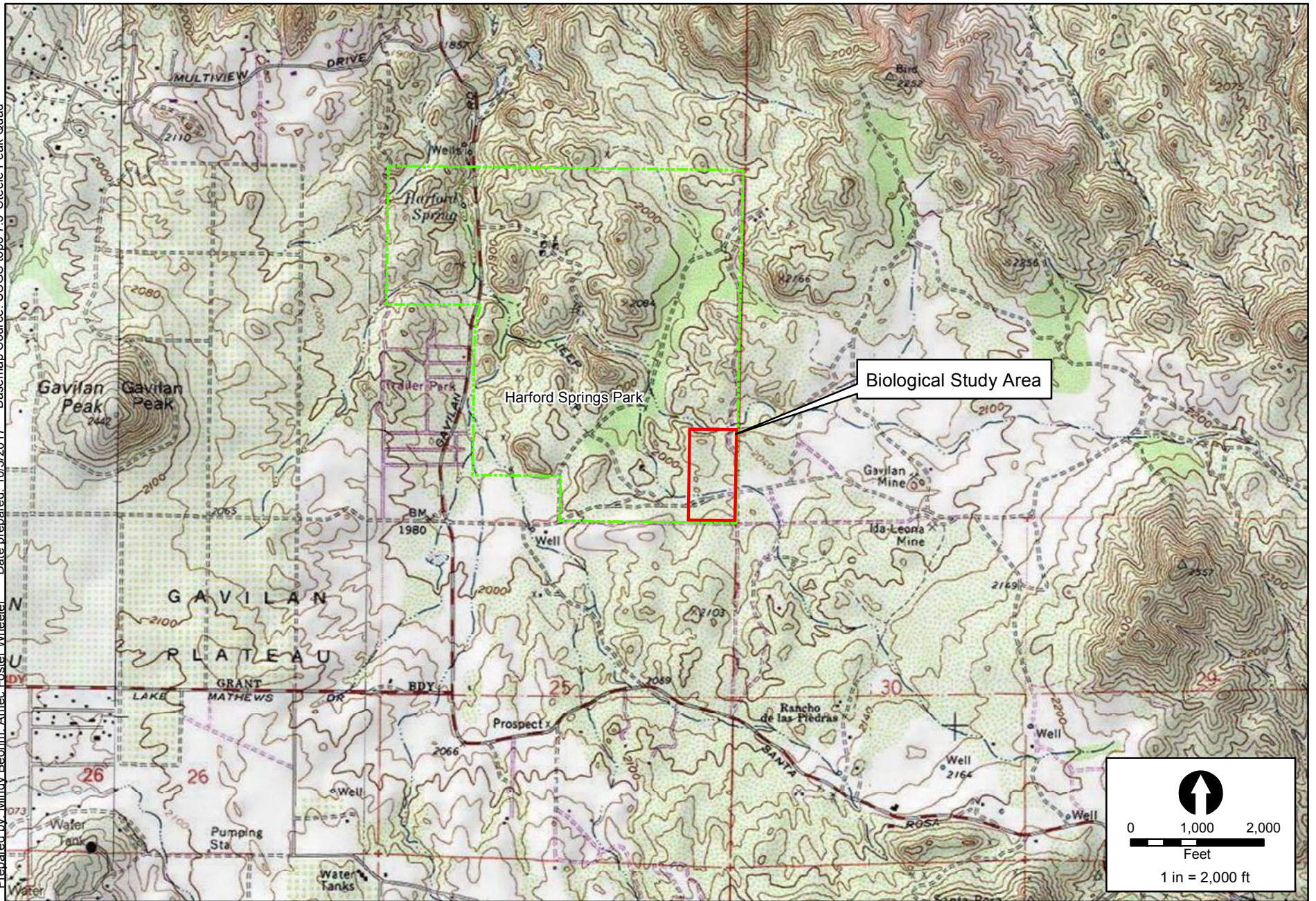
Harford Springs Park Day-Use Staging Area Project

FIGURE

1

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Prepared by: Mindy Boehm, Amec Foster Wheeler Date prepared: 10/3/2017 Basemap Source: USGS topo 7.5' Steele Peak Quad



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Topographic Map

Harford Springs Park Day-Use Staging Area Project

FIGURE

2

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3.0 METHODS

3.1 Literature Review

A literature review was conducted to identify biological resources known from the vicinity (within an approximate 5-mile radius) of the BSA. The BSA consists of the project site plus a 500-foot buffer around it. This included review of literature and searches of the CDFW's California Natural Diversity Data Base (CNDDDB) (CDFW 2017a), the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants of California (CNPS 2017), Soil Survey data (USDA 2016), MSHCP documents (Riverside County 2017), Vegetation mapping (Riverside County 2017), the Critical Habitat portal (USFWS 2017), and pertinent documents from the Amec Foster Wheeler library and project files. A complete list of literature and references is included in Section 7 below.

3.2 Biological Resources and Habitat Assessment

The field reconnaissance survey of the Harford Springs Park day-use staging area BSA was conducted on 26 September 2017 by Amec Foster Wheeler senior biologist John F. Green. The entire BSA was surveyed on foot in favorable weather conditions. Representative photographs of the project site are included in Appendix A. All flora and fauna detected (e.g., through direct observation, vocalizations, presence of scat, tracks, and/or bones) on the project site during the course of the survey were recorded in field notes and are included in Appendix B. Plant species of uncertain identity were collected and identified by Andrew Sanders at the University of California, Riverside Herbarium.

4.0 RESULTS

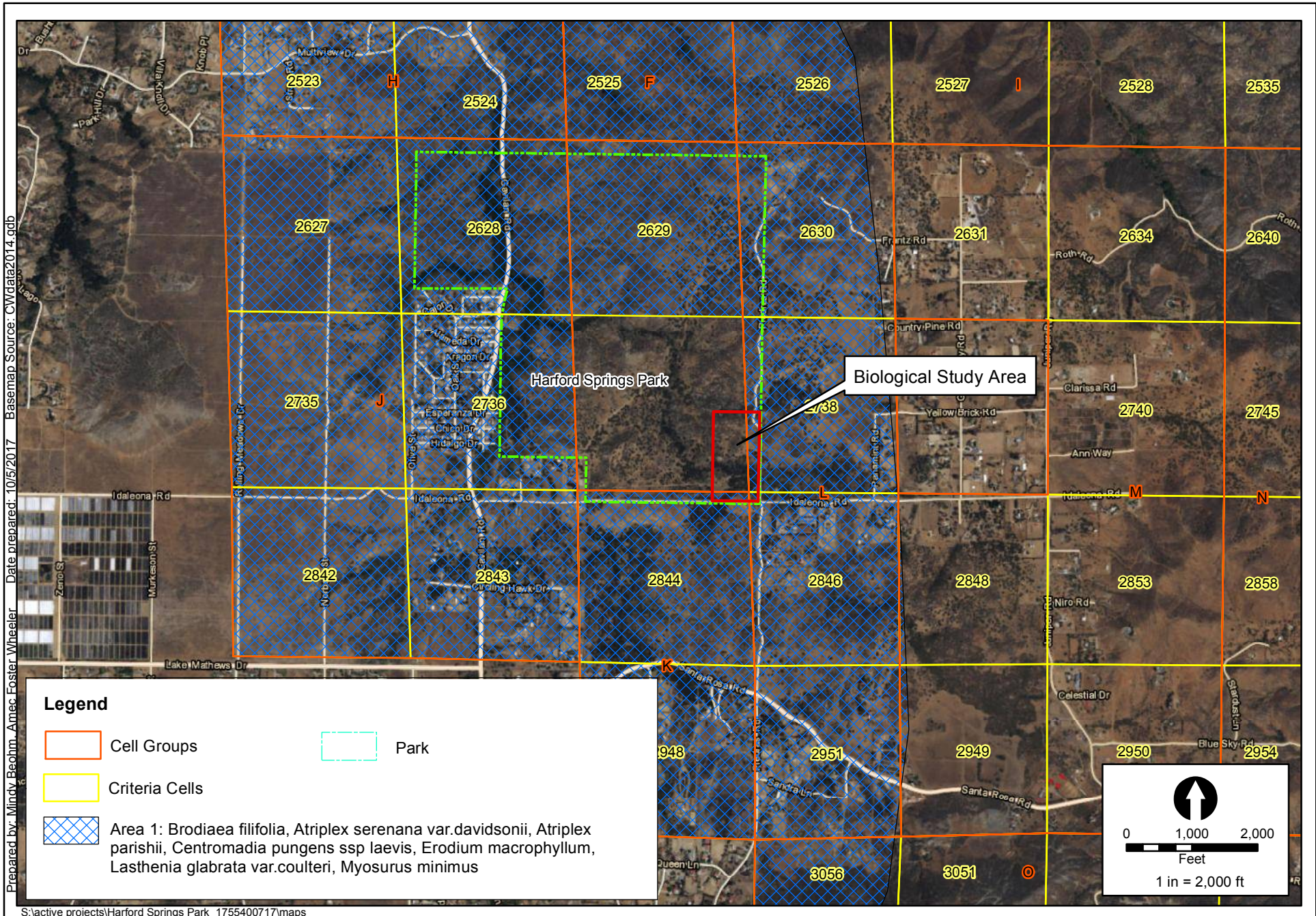
The literature review and field surveys revealed the following information about the MSHCP, critical habitat, soils, wetlands/waters, vegetation, special status species, and the site in general.

4.1 MSHCP

The BSA intersects three criteria cells of the MSHCP (see Figure 3). The entire park is a part of the MSHCP Conservation Area, in the Public-Quasi-Public (PQP) category, and is considered a part of Proposed Linkage 3 (see Figure 4). The BSA is within MSHCP survey areas for several species (see Figures 3 and 5). Project relationship to the MSHCP will be analyzed in detail in Section 5.

4.2 Critical Habitat

No critical habitat is designated within the BSA or park.



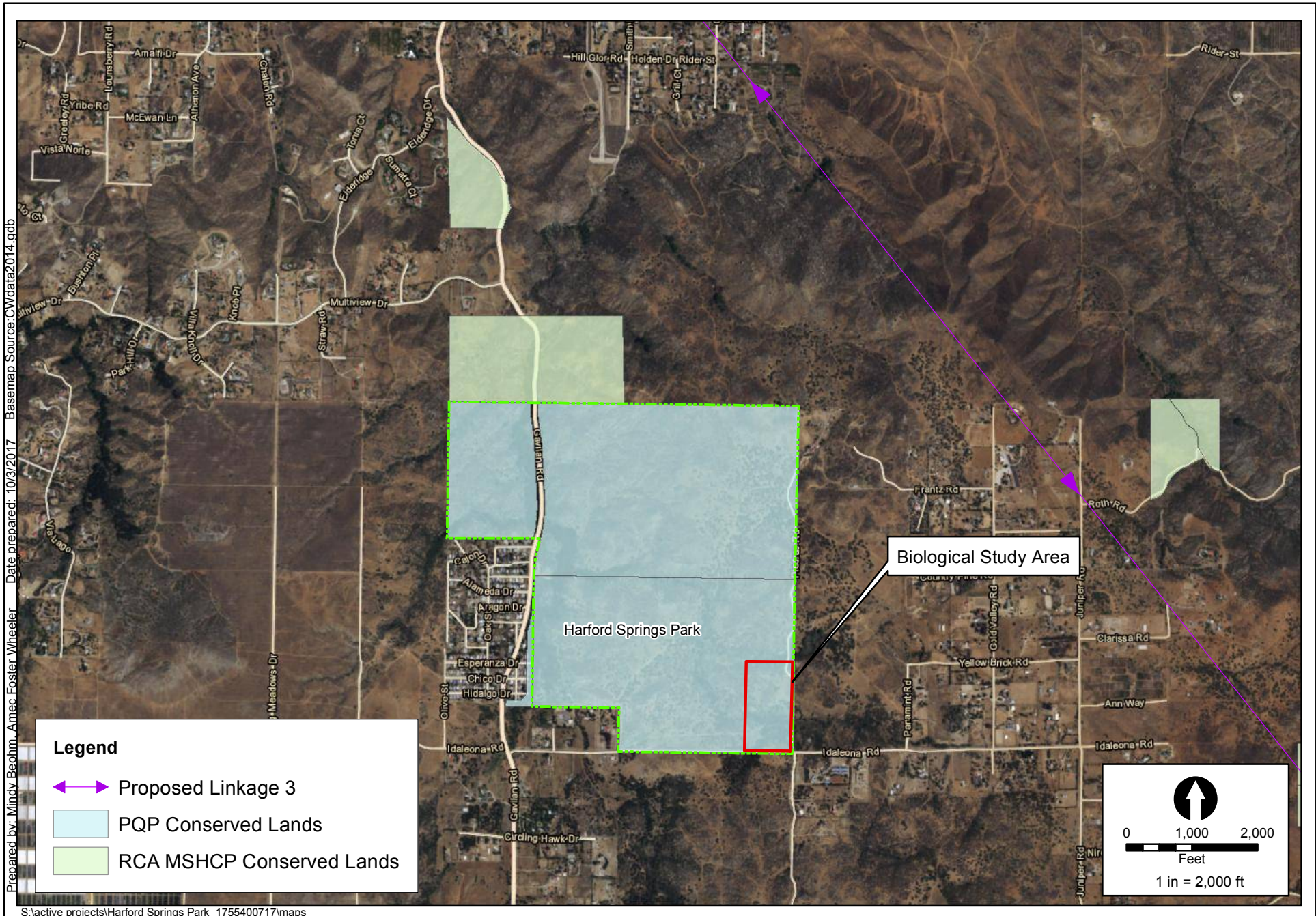
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MSHCP Criteria Area and Criteria Area Plant Surveys Map

Harford Springs Park Day-Use Staging Area Project

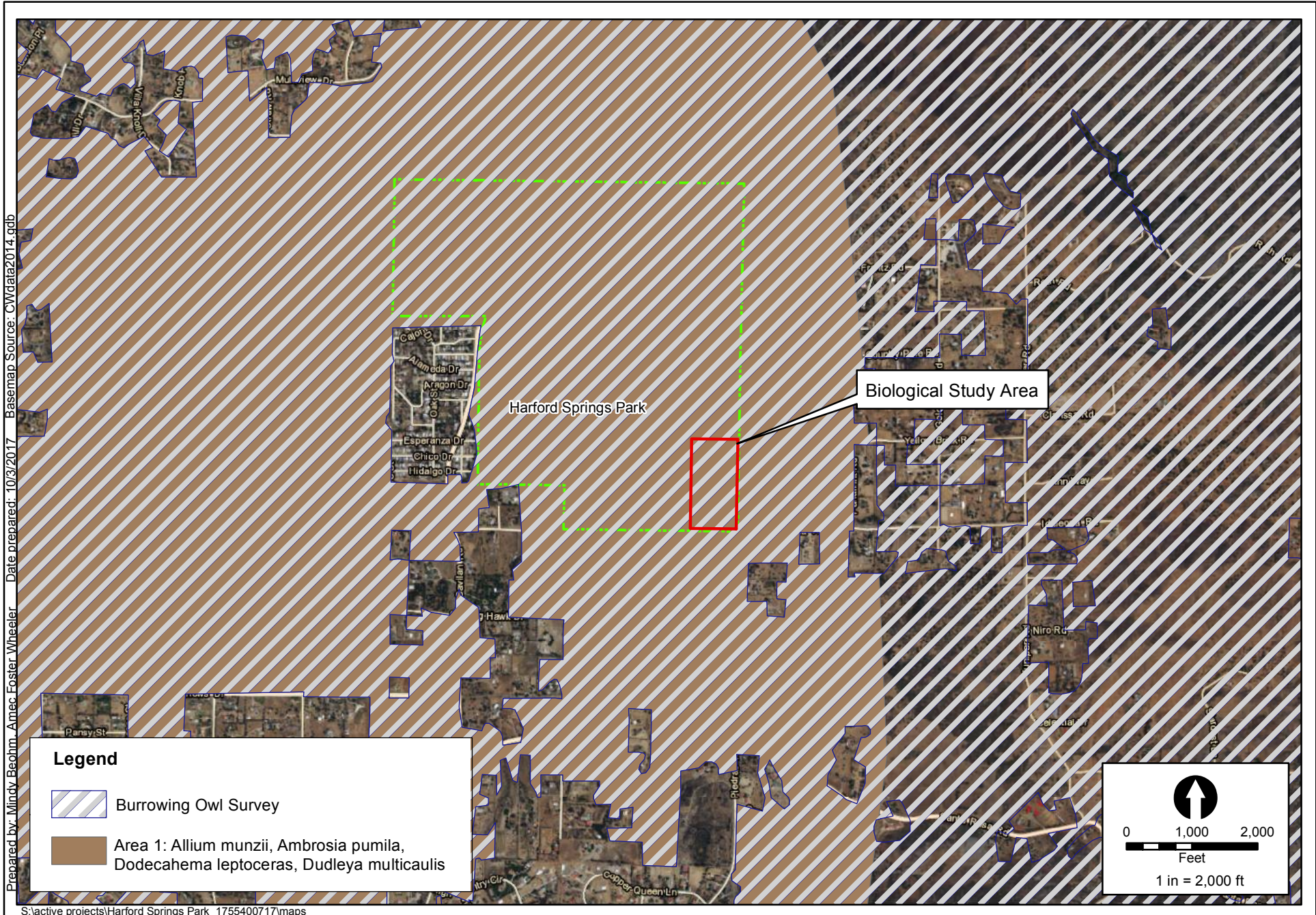
FIGURE
3

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Prepared by: Mindy Boehm, Amec Foster Wheeler Date prepared: 10/31/2017 Basemap Source: CWdata2014.gdb



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MSHCP Additional Survey Areas
Burrowing Owl and Narrow Endemic Plants
Harford Springs Park Day-Use Staging Area Project

FIGURE
5

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4.3 Soils

Six mapped soil types occur in the BSA (see Figure 6). All the soils except one, Bosanko clay, are sandy loams. The clay soil is of particular interest because clay soils are known to be associated with certain special status plant species. Although no soils were mapped as saline or alkaline in the drainage, the presence of saline/alkali associated plant species there appeared to indicate at least slight saline-alkaline soil content. Potential indicator species present included alkali heliotrope (*Heliotropium curassavicum* var. *oculatum*), alkali heath (*Frankenia salina*), salt grass (*Distichlis spicata*), alkali sacaton (*Sporobolus airoides*), bractscale (*Atriplex serenana* var. *serenana*), and saltcedar (*Tamarix ramosissima*).

The Web Soil Survey (USDA, NRCS 2017a) shows the following soil types on the site (see Figure 6):

- Bosanko clay, 8-15% slopes
- ChD2: Cieneba sandy loam, 8-15% slopes, eroded
- CkF2: Cieneba sandy loam, 15-50% slopes, eroded
- PaC2: Pachappa fine sandy loam, 2-8% slopes, eroded
- VsC: Vista coarse sandy loam, 2-8% slopes
- VsD2: Vista coarse sandy loam, 8-15% slopes, eroded

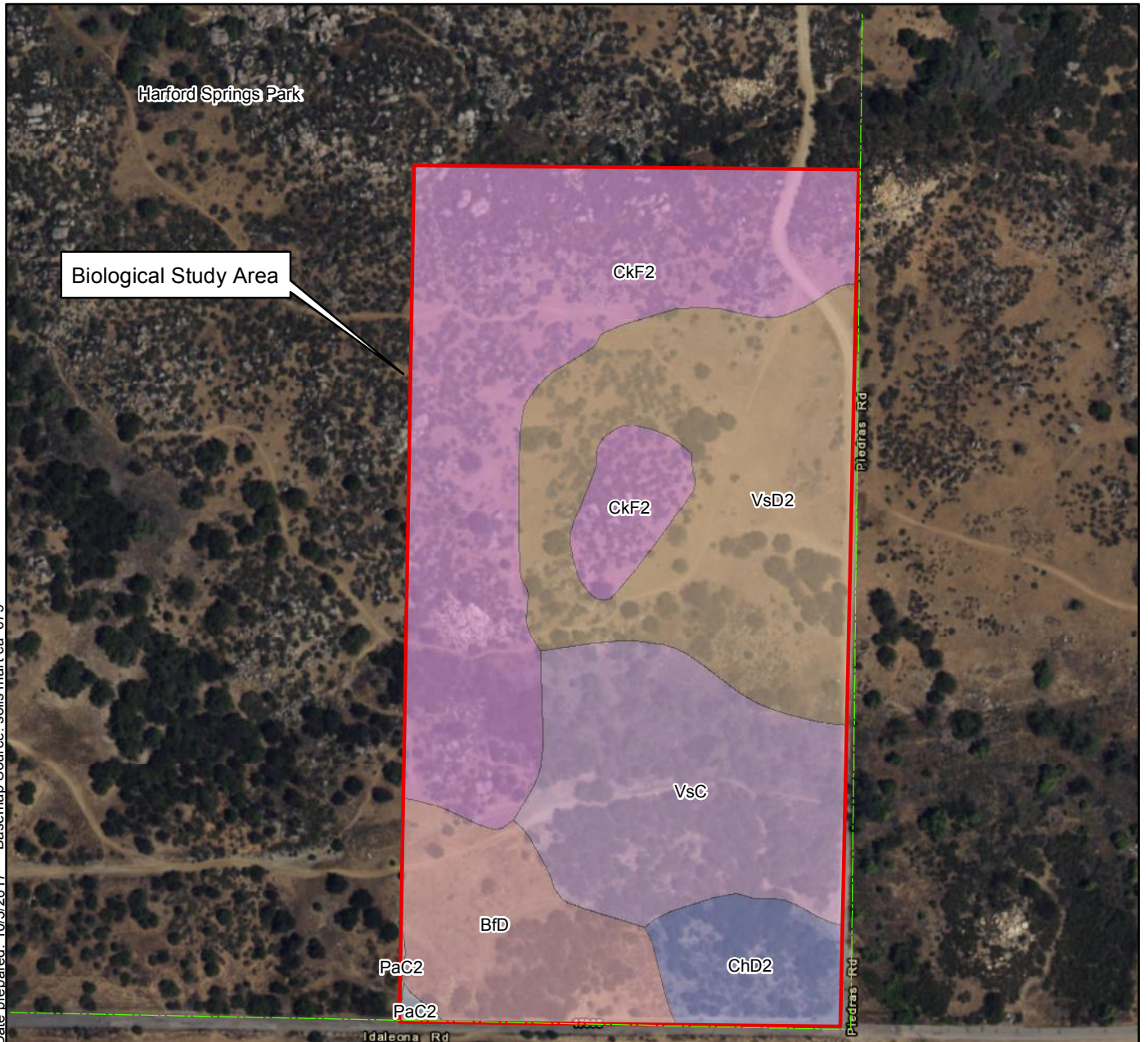
The Bosanko series have gray, slightly acid, neutral, and moderately alkaline clay. Soil between the depths of about 4 and 12 inches usually is moist in some or all parts from about December 1 until sometime in May and usually is dry all the rest of the year. During the dry period, soil cracks 3/8 to 1 inches wide extend from the surface to a depth of 20 to 40 inches. Usually the cracks remain closed from initial wetting until about April or May. The Bosanko soils are gently sloping to moderately steep and are in the uplands at elevations of about 300 to 2,500 feet. Well-drained; slow to rapid runoff depending on slope slow permeability after cracks swell shut.

The Cieneba series consists of very shallow and shallow, somewhat excessively drained soils that formed in material weathered from granitic rock. Cieneba soils are on hills and mountains and have slopes of 9 to 85 percent. Clay content is less than 18 percent. Soil below a depth of about 4 to 6 inches is usually moist after November until sometime in May and is dry the remainder of the year.

The Pachappa series consists of well drained soils developed from moderately coarse textured alluvium. Nearly level to very gently undulating; the coarser textured types where exposed to wind are slightly hummocky and wind-blown. General drainage is good, surface runoff is very slow, and permeability is moderate. In places the soil is subject to occasional overflow and high water table.

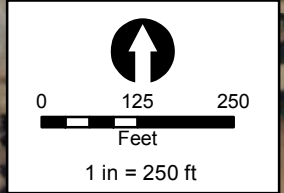
The Vista series consists of moderately deep, well drained soils that formed in material weathered from decomposed granitic rocks. Vista soils are on hills and mountainous uplands and have slopes of 2 to 85 percent. Vista soils are on hilly slopes at elevations of 400 to 3,900 feet in southern California. Slopes range from 2 to 75 percent. They are well drained with slow to rapid runoff and moderately rapid permeability.

Prepared by: Mindy Boehm, Amec Foster Wheeler Date prepared: 10/3/2017 Basemap Source: soils.mart.ca 679



Legend

- BfD: Bosanko clay, 8-15% slopes
- ChD2: Cieneba sandy loam, 8-15% slopes, eroded
- CKF2: Cieneba sandy loam, 15-50% slopes, eroded
- PaC2: Pachappa fine sandy loam, 2-8% slopes, eroded
- VsC: Vista coarse sandy loam, 2-8% slopes
- VsD2: Vista coarse sandy loam, 8-15% slopes, eroded



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4.4 Wetlands and Waters

A branched intermittent drainage cuts across the lower third of the BSA, with another just north of the BSA (see Figure 7 for approximate location). These are likely to be federally and/or state jurisdictional waters and/or considered riparian/riverine by the MSHCP (see below). No vernal pools or fairy shrimp habitat were detectable.

4.5 Vegetation

The vegetation map (Figure 7) utilizes MSHCP consistent nomenclature and descriptions (Riverside County 2017).

4.5.1 Chaparral

This category represents chamise chaparral. This is a shrub-dominated vegetation community that is composed largely of evergreen species that range from three to 12 feet in height. The most common and widespread species within chaparral is chamise (*Adenostoma fasciculatum*). Other common shrub species include oak (*Quercus* spp.), and redberry (*Rhamnus* spp.). Subshrubs are less common in chaparral than in sage scrub but occur within canopy gaps of mature stands. Common species include California buckwheat (*Eriogonum fasciculatum*), sages (*Salvia* spp.), and monkeyflower (*Mimulus* spp.).

4.5.2 Grassland

This category represents non-native grassland, but includes some native grasses as well. This vegetation community is composed primarily of annual plant species dominated by several species of grasses. These include slender wild oat (*Avena barbata*), red brome (*Bromus madritensis* ssp. *rubens*), and soft chess (*Bromus hordeaceus*). There is a component of native and non-native forbs such as Russian thistle (*Salsola tragus*), turkey mullein (*Croton setiger*), and Maltese star-thistle (*Centaurea melitensis*).

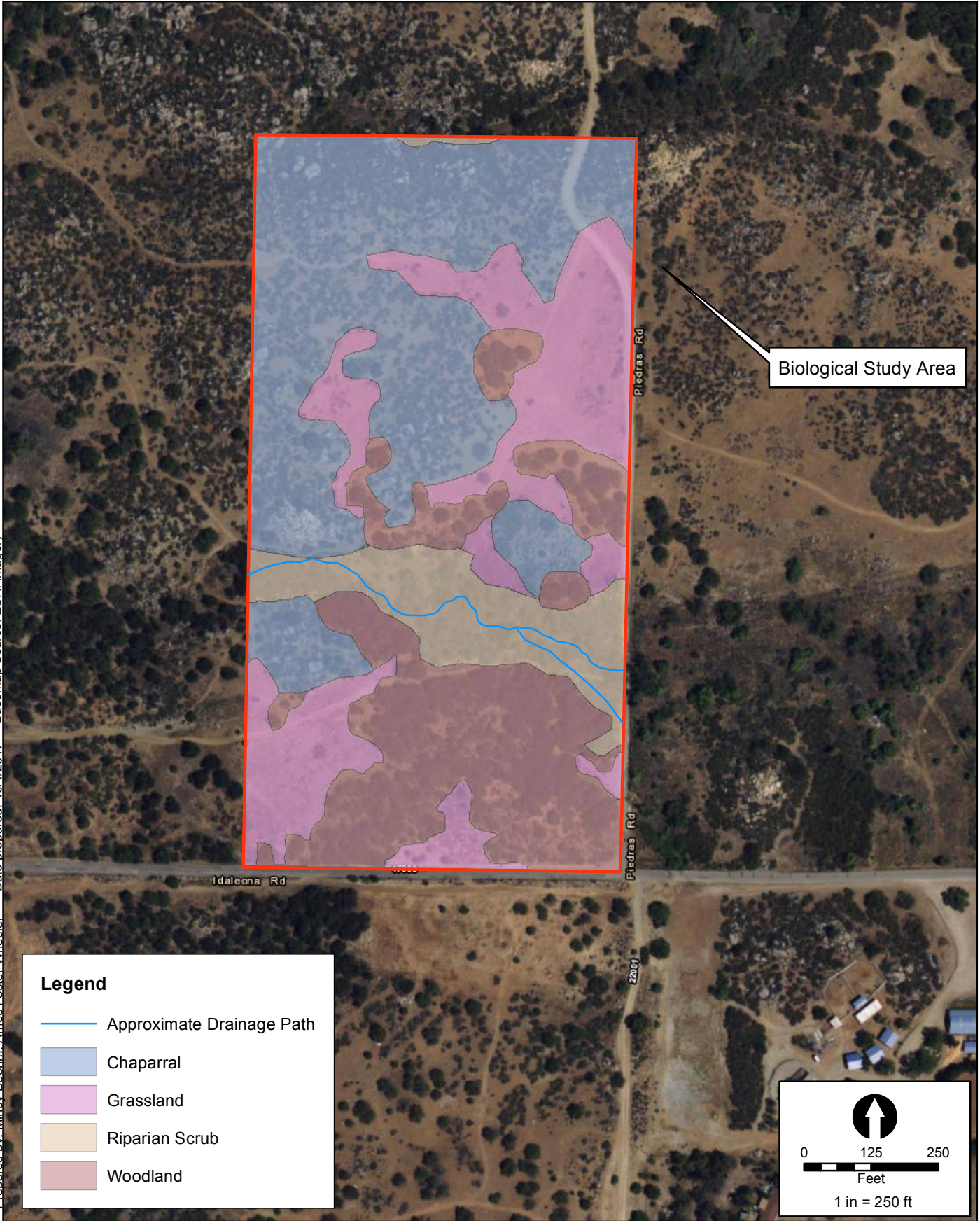
4.5.3 Riparian Scrub

Within the BSA, this category contains elements of southern riparian scrub and southern cottonwood willow riparian forest, considered special-status vegetation communities by the CDFW (see Appendix C). These riparian communities are variously dominated by trees and shrubs, including willows (*Salix* spp.), mule fat (*Baccharis salicifolia*), Fremont cottonwood (*Populus fremontii*), blue elderberry (*Sambucus nigra* ssp. *caerulea*), and saltcedar.

4.5.4 Woodland and Forests

The woodland and forests category is represented in the BSA by patches dominated by scrub oaks (*Quercus berberidifolia*) and California juniper (*Juniperus californica*).

Prepared by: Mindy Boehm, Amec Foster Wheeler Date prepared: 10/4/2017 Basemap Source: ESRI Imagery



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4.6 Plants and Wildlife

Species encountered during the field visit in the BSA included primarily native species expected in the inland southern California habitats present in the BSA and occurring in a wide variety of habitats. A variety of common non-native plant species were also present. A complete list of the flora and fauna observed during the field visits is included in Appendix B.

Representative plant species observed in the BSA included, but were not limited to: California juniper, scrub oak, chamise, small-flowered fiddleneck (*Amsinckia menziesii*), Russian thistle, California buckwheat, red brome, mule fat, and red willow (*Salix laevigata*). Scrub oaks are not protected by the Riverside County Oak Tree Management Guidelines (Riverside County 1999) and no other oak species were detected in the BSA.

Representative vertebrate species detected on-site included, but were not limited to: western fence lizard (*Sceloporus occidentalis*), red-tailed hawk (*Buteo jamaicensis*), Anna's hummingbird (*Calypte anna*), mourning dove (*Zenaida macroura*), black phoebe (*Sayornis saya*), Audubon's cottontail (*Sylvilagus audubonii*), and California ground squirrel (*Otospermophilus beecheyi*).

4.7 Special Status Biological Resources

Plant or animal taxa may be designated as having "special status" by the various regulatory agencies (i.e., CDFW) and/or other conservation organizations (i.e., CNPS) due to declining populations, vulnerability to habitat change or loss, or because of restricted/limited distributions. Some species have been listed as "threatened" or "endangered" and/or a candidate for listing by the USFWS and/or the CDFW, and are thus protected by the federal and state Endangered Species Acts respectively. In addition to plants and animals, some vegetation communities have also received special status designation by the CNPS due to incremental loss and fragmentation resulting from development. Impacts to special status biological resources can be considered significant under the California Environmental Quality Act (CEQA), but many of the species known to occur in the project area are covered by the MSHCP.

The literature review of the CNDDDB, CNPS Inventory, and other sources identified a total of eighty-three (83) special status biological resources known from the vicinity of the BSA. These include twenty-six (26) plants, four (4) vegetation communities, two (2) invertebrates, one (1) amphibian, eight (7) reptiles, twelve (12) birds, and four (4) mammals. See Tables 1 through 3 in Appendix C for a complete list of these sensitive biological resources and their occurrence potential.

4.8 Protection of Native Birds

The federal Migratory Bird Treaty Act (MBTA) consists of treaties signed by the U.S., Great Britain, Mexico, Japan, and the republics of the former Soviet Union and make it unlawful to pursue, capture, kill, and/or possess, or attempt to engage in any such conduct to any migratory bird, nest, egg or parts thereof. State Fish and Game Code Section 3503 makes it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3505.5 makes it unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds-of-prey, i.e.: owls, hawks, eagles, etc.) or to take, possess, or destroy the nest or eggs of any bird-of-prey. Section 3513 makes it unlawful to take or possess any migratory nongame bird as designated in

the MBTA. The MBTA and state code protect virtually all native birds, both common and special status species. In most cases, MSHCP coverage does not override these bird protections.

Potential impacts include direct disturbance to/destruction of nests, eggs, and birds as well as indirect effects such as loud construction noises (e.g., drilling, operation of heavy equipment, etc. in excess of 60 dB over an hours at the nest site) and increased site activities (e.g., moving vehicles, use of guard dogs, presence of personnel) in close proximity to active nests.

5.0 DISCUSSION OF MSHCP GOALS IN THE PROJECT AREA

The MSHCP conservation area is defined in the MSHCP document as “approximately 500,000 acres comprised of approximately 347, 000 acres of PQP lands and approximately 153, 000 acres of additional reserve lands within western Riverside County. The MSHCP conservation area provides for the conservation of the covered species.”

5.1 Specific Relationship between Harford Springs Park and the MSHCP

Section 4 of the MSHCP document, states that the “conservation area incorporates maximum use of existing PQP lands to achieve conservation objectives” and specifically names the Harford Springs Reserve as land “that will contribute to the conservation of covered species.” As PQP land under the plan, any project disturbance within the park will be a direct impact to the conservation area.

Other MSHCP goals specifically identifying Harford Springs Park include an informal gap analysis in Section 3 of the MSHCP document which identified a need to interconnect the Motte-Rimrock Reserve, Steele Peak, Lake Mathews/Estelle Mountain Reserve and Harford Springs Park including a northwesterly connection through the Gavilan Hills/Gavilan Plateau area.

Section 5 of the MSHCP document identifies the Harford Springs Reserve as a part of the Lake Mathews/Lake Skinner Management Unit. This unit is located in the east-central portion of the plan area and includes the communities/regions of La Sierra Hills, Lake Mathews, Estelle Mountain, Gavilan Hills, Good Hope, Alberhill, Meadowbrook, Canyon Lake, Lake Elsinore, Sedco Hills, Wildomar, Antelope Valley, Murrieta Hot Springs, French Valley, Lake Skinner, Diamond Valley Lake, Murrieta Creek, and Pechanga Creek. The North Peak Conservation Bank, El Sobrante Landfill, and other conservation lands such as Granite Homes Conservation Land and Sedco Hills Conservation Bank, are also included in the management unit. Other existing management entities besides Harford Springs include the Lake Mathews/Estelle Mountain Reserve, Southwestern Riverside County Multi-Species Reserve, Santa Margarita Ecological Preserve, Santa Rosa Plateau Nature Reserve, Motte Rimrock Preserve, Kabian Park, and the Emerson Oaks Reserve.

Species-specific management activities are also covered in Section 5 of the MSHCP document. This section identifies the quino checkerspot butterfly (*Euphydryas editha quino*) as a species that is to be specifically managed for at the Harford Springs Reserve.

5.2 Potential Project Options as PQP Land in the MSHCP Conservation Area

Section 7 of the MSHCP document discusses covered activities and allowable uses in the conservation area. The proposed project appears to qualify as a “conditionally compatible use”

under Section 7.4.2 of the MSHCP document. The uses discussed in that section are considered conditionally compatible with the overall conservation goals and objectives of the plan and are covered within the conservation area subject to the guidelines and criteria in the section.

They are compatible because, although the main goal of the conservation area is to protect biological resources, another primary objective is to provide recreational and educational opportunities within the conservation area, while providing adequate protection for the biological resources. 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. Covered public access uses within the conservation area will be comprised of trails, facilities, and passive recreational activities. The primary public access component within the conservation area will be trails, but in addition to trails, three other types of public access facilities will be located within the conservation area: trailheads, interpretive centers, and maintenance facilities.

Trailheads, the category of this project, are access points to trails and resource areas for day use activities and can be selectively specialized to accommodate mountain biking, equestrian use, and/or hiking uses. The MSHCP document includes the assumption that 14 trailheads will be constructed within the conservation area, each being approximately 5 acres. It is unclear from the MSHCP document whether these facilities are conceptual or if they have already been identified and definitively sited. Vegetation communities identified by the MSHCP as anticipated to be impacted included agricultural land, chaparral, coastal sage scrub, and grassland. Two of those communities, chaparral and grassland, occur on-site. Guidelines provided in the Section 7.4.2 of the MSHCP document for the siting and design of facilities and construction guidelines for facilities within the criteria area and PQP lands provided in the Section 7.5.3 of the MSHCP document will be discussed in Section 6 of this document.

In the event that the proposed project is not considered a covered “conditionally compatible use” as described in Section 7.4.2 of the MSHCP document, it could potentially move forward under the process described in Section 7.2.4 of the MSHCP document: “Future Facilities Within PQP Lands.” While this section specifically mentions facilities for water, sewer, electrical, gas and solid waste, it identifies a process of equivalent conservation provided through individual project mitigation. The process would require an equivalency analysis which would address the following categories:

- Effects on habitats
- Effects on covered species
- Effects on core areas
- Effects on linkages and constrained linkages
- Effects on MSHCP conservation area configuration and management
- Effects on ecotones (defined as areas of adjoining vegetation communities, generally characterized by greater biological diversity) and other conditions affecting species diversity (such as invasion by exotics)

The equivalency analysis would be provided for review and concurrence by the wildlife agencies and would compare the effects/benefits of the proposed project including specific mitigation and compensation for lost conservation values, with the conditions prior to facility implementation. The analysis would need to consider specific project design features, including consideration of MSHCP siting and design guidelines as well as MSHCP Best Management Practices. In this case, impacts to habitats within the existing PQP land would be compensated by purchase and dedication into the MSHCP conservation area of land elsewhere.

5.3 General MSHCP Goals and Requirements in the Project Area

Although already a part of the conservation area, the BSA is in or adjacent to criteria cells, cell groups, and an area plan for which the MSHCP has conservation goals, including a linkage (see Figures 3 and 4). Linkages connect areas of suitable habitat that are otherwise separated by human disturbance, changes in vegetation, and/or rugged terrain. The fragmentation of open space areas by urbanization creates isolated “islands” of habitat. In the absence of habitat linkages that allow movement to adjoining open space areas, various studies have concluded that some species, especially larger and more mobile mammals, will not likely persist over time in fragmented or isolated habitat areas because they prohibit the infusion of new individuals and genetic information. Linkages effectively act as connections between different populations of a species. Linkages mitigate the effects of habitat fragmentation by: (1) allowing species to move between remaining habitats, which allows depleted populations to be replenished and promotes genetic diversity; (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk that catastrophic events (such as fires or disease) will result in population or local species extirpation; and (3) serving as travel routes for individual animals as they move within their home ranges in search of food, water, mates, and other needs.

Normally, by participating in the MSHCP, most of the species in Tables 1 and 3 in Appendix C that are designated “MSHCP: Yes” would be covered with no further action necessary. Because the project is part of the MSHCP conservation area, however, impacts to any covered species are a potential issue, although it is unlikely that any of the relatively common covered species of the plan will suffer any significant impacts as a result of this small project. Those covered species already detected on site are designated as such in Appendix B.

Designated survey areas are also present within the BSA for several species (see Figures 3 & 5 and Sections 5.3 and 5.4). Surveys may also required under the MSHCP in riparian/riverine habitat and/or certain circumstances for covered species such as least Bell’s vireo (*Vireo bellii pusillus*), western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), and southwestern willow flycatcher (*Empidonax traillii extimus*). Note that riparian habitat on-site is not currently capable of supporting any of those species, but could be in the future if the habitat recovers from drought damage. The federal permit for the MSHCP requires focused surveys for the covered coastal California gnatcatcher (*Polioptila californica californica*) only if there will be impacts to habitat within conservation areas during the breeding season.

5.4 MSHCP Area Plan

The BSA is in the Lake Mathews / Woodcrest Area Plan and is discussed in Section 3.3.7 of the MSHCP document. Cores and Linkages within the Lake Mathews/Woodcrest Area Plan include

a small portion of Proposed Core 1, a portion of Proposed Extension of Existing Core 2, and a portion of Proposed Linkage 3. Only the proposed linkage is present in the project area. It is generally comprised of upland habitats in the Gavilan Hills, Harford Springs and proposed North Peak Conservation Bank area under PQP and private ownership. This linkage is one of two connections between the Lake Mathews/Estelle Mountain Reserve and core areas in Alberhill.

Part of the BSA is in Subunit 3 of the area plan: "Gavilan Hills West." There are 10 planning species in the subunit: long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*), many-stemmed dudleya (*Dudleya multicaulis*), Munz's onion (*Allium munzii*), Palmer's grapplinghook (*Harpagonella palmeri*), small-flowered microseris (*Microseris douglasii* ssp. *platycarpa*), small-flowered morning-glory (*Convolvulus simulans*), Quino checkerspot butterfly, Bell's (sage) sparrow (*Artemisiospiza belli belli*), bobcat (*Lynx rufus*), and Stephens' kangaroo rat (*Dipodomys stephensi*).

Biological issues and considerations for this subunit include:

1. Conserve upland habitat to form connections between Harford Springs Reserve, Steele Peak Reserve, and Bureau of Land Management (BLM) parcels in the area.
2. Conserve clay soils supporting sensitive plant species known to occur in this subunit, including Munz's onion, Palmer's grapplinghook, small-flowered morning glory, long-spined spine flower, small-flowered microseris, and many-stemmed dudleya.
3. Conserve existing populations of Bell's (sage) sparrow.
4. Provide opportunities for reintroduction of Quino checkerspot butterfly. This includes areas within the Northwest Riverside County Recovery Unit and the Gavilan Hills habitat complex as identified in the January 2001 U.S. Fish and Wildlife Service Draft Recovery Plan for the Quino Checkerspot Butterfly. This focus area generally extends west from the Steele Peak Reserve to Lake Mathews and includes areas identified for conservation between the unnamed BLM parcels north of the Steele Peak Reserve and the Motte-Rimrock Reserve.
5. Maintain linkage area for bobcat.
6. Maintain linkage area for Stephens' kangaroo rat.

All of the planning species have potential for occurrence in the BSA. All biological issues and considerations are potentially relevant to the project.

The BSA intersects three criteria cells with defined MSHCP goals (see Figure 3). Cell 2844 is in Cell Group K, for which no new conservation is anticipated. Cells 2738 and 2846 are in Cell Group L. Conservation within this cell group will contribute to assembly of Proposed Linkage 3. Conservation will focus on a mosaic of habitat types including chaparral, coastal sage scrub, grassland, woodland, and forest habitat. Areas conserved within this group will be connected to chaparral, coastal sage scrub, woodland and forest habitat proposed for conservation in Cell Group I to the north, to coastal sage scrub habitat proposed for conservation in Cell #2629 to the west, and to chaparral, grassland, woodland, and forest habitat proposed for conservation in Cell Group M to the east. Conservation within this cell group will range from 35%-45% of the cell group focusing in the northern portion.

Regarding the goals of this area plan, construction of this project would have a minimal effect on Proposed Linkage 3. It would cause no blockage of the linkage, but would incrementally increase disturbance in the area. Depending on siting, it could cause an incremental loss of potential habitat for the coastal California gnatcatcher, the ten planning species, and other potentially occurring special status species identified in Appendix C. Discussion of potential mitigation will follow in Section 6.

5.5 Protection of Species Associated with Riparian/Riverine Areas & Vernal Pools

Under the MSHCP, “riparian/riverine areas are lands which contain habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby fresh water source; or areas with fresh water flow during all or a portion of the year.” “Vernal pools are seasonal wetlands that occur in depression areas that have wetlands indicators of all three parameters (soils, vegetation and hydrology) during the wetter portion of the growing season but normally lack wetlands indicators of hydrology and/or vegetation during the drier portion of the growing season. Obligate hydrophytes and facultative wetlands plant species are normally dominant during the wetter portion of the growing season, while upland species (annuals) may be dominant during the drier portion of the growing season.” Fairy shrimp habitat can include “stock ponds, ephemeral pools and other features.”

With the exception of wetlands created:

1. for the purpose of providing wetland habitat,
2. as a result of human actions to create open waters, or
3. as a result the alteration of natural stream courses,

areas demonstrating characteristics as described above which are artificially created are not included as riparian/riverine.

Protection of riparian/riverine areas and vernal pools is important to the conservation of certain species listed in Section 6.1.2 of the MSHCP document. Those from that list which are of potential occurrence in the BSA include the following plant species:

- thread-leaved brodiaea (*Brodiaea filifolia*)
- smooth tarplant (*Centromadia pungens* ssp. *laevis*)
- Coulter's matilija poppy (*Romneya coulteri*)

Procedures described in Section 6.1.2 of the MSHCP ensure that the biological functions and values of riparian/riverine/vernal pool areas throughout the MSHCP area are maintained in order to provide habitat value for such species inside the conservation area. This includes effects outside of the conservation area that may affect downstream values related to the conservation of covered species within the conservation area.

No vernal pools are known in the BSA, but this should be verified in the wet season, as vernal pool associated plant species are known from the park. Direct impacts to riparian/riverine areas are expected to be avoided through siting. Indirect impacts due to noise, etc. are possible. Discussion of potential mitigation will follow in Section 6.

In regard to existing wetland regulations, MSHCP projects that affect wetland vegetation communities shall be required to comply with the applicable regulatory standards related to wetlands functions and values. The purpose of this discussion is to identify current regulatory processes and indicate their relationship to the process set forth in the MSHCP. It should be noted that current wetland regulatory processes beyond the process described in this section are not relied upon for coverage of species addressed in the MSHCP. Many wetland communities (e.g., vernal pools, freshwater marsh, riparian forests, riparian woodlands, riparian scrub, open water, disturbed wetlands, flood channel, river and stream beds) within the MSHCP area include areas subject to California Fish and Game Code (CFGC) Section 1600 et seq. and the federal Clean Water Act (Sections 401, 402 and 404). Such areas will continue to be regulated by state and federal agencies. The U.S. Army Corps of Engineers (ACOE) shall continue to consult with the USFWS pursuant to Section 7 of the federal endangered species act on projects that may affect federally listed species within ACOE jurisdictional wetlands and waters. The CDFW shall continue to work closely with ACOE, USFWS, and local jurisdictions to ensure that CFGC Section 1600 et seq. agreements are consistent with the mitigation required for covered species. In addition, other existing regulations related to wetland habitats, such as the Porter-Cologne Act shall continue to apply. This project is expected to avoid impacts to potential wetlands through siting outside of them.

5.6 Protection of Narrow Endemic Plant Species

Protection of Narrow Endemic Plant Species is discussed in Section 6.1.3 of the MSHCP document. The plan states that the existing MSHCP database does not provide the level of detail sufficient to determine the extent of presence or distribution of certain “Narrow Endemic Plant Species” within the MSHCP Area. Additional information regarding the presence of these species must be gathered during the long-term implementation of the MSHCP to ensure that they are appropriately conserved, so survey areas have been established where appropriate habitat may be present. Within identified Narrow Endemic Plant Species survey areas, site-specific focused surveys for Narrow Endemic Plant Species shall be required for all public and private projects where appropriate habitat is present. In the BSA, habitat assessment for four of these species is required: Munz's onion, San Diego ambrosia (*Ambrosia pumila*), slender-horned spineflower (*Dodecahema leptoceras*), and many-stemmed dudleya (see Figure 5). Potential habitat is present for all of these except slender-horned spineflower.

5.7 Additional Survey Needs and Procedures

In addition to Narrow Endemic Plant Species, and the species listed in “Protection of Species Associated with Riparian/Riverine Areas” additional surveys are needed for certain species in order to achieve MSHCP coverage for them. This is discussed in Section 6.3.2 of the MSHCP document. Within designated areas, surveys shall be conducted within suitable habitat for these species. Portions of the BSA are in Criteria Area Species Survey Area 1 (see Figure 5), which includes the following seven species: round-leaved filaree (*California [Erodium] macrophyllum*), smooth tarplant, thread-leaved brodiaea, Davidson's saltscale (*Atriplex serenana* var. *davidsonii*), Parish's brittlescale (*Atriplex parishii*), Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*), and little mousetail (*Myosurus minimus* ssp. *apus*). Portions of the BSA are also in the designated survey area (see Figure 5) for the burrowing owl (*Athene cunicularia*). Surveys shall be conducted

within suitable habitat for these species. Potential habitat is present in the BSA for all of these except the two *Atriplex* species and Coulter's goldfields.

6.0 RECOMMENDATIONS

The proposed project will be located on relatively undisturbed lands of the MSHCP conservation area. For that reason, our first recommendation for this project, and a top priority, is to meet with the Western Riverside County Regional Conservation Authority (RCA) to discuss whether this project is feasible under the MSHCP and if so, whether it would be covered as a compatible use. If not covered, discussion would include identification of what options are available, if any.

6.1 Recommended Measures for MSHCP Consistency

In order to achieve consistency and compliance with the MSHCP, there are additional measures that must be taken, including the following:

6.1.1 Covered Species

During any surveys or monitoring that may be conducted for this project, site usage by any MSHCP covered species should be noted to ensure that any impacts are avoided or minimized. Because of their status as state and/or federally listed as threatened or endangered species, and their potential for occurrence in the BSA, we recommend focused surveys for the following listed species:

The quino checkerspot butterfly is a species that is to be specifically managed for at the Harford Springs Reserve under the terms of the MSHCP. There is a CNDDDB occurrence mapped in the BSA. Focused surveys for this species and its habitat (particularly larval foodplants) should be conducted in the winter/spring survey period.

The coastal California gnatcatcher may occur. If there will be any direct impacts to potential habitat (chaparral in the BSA, see Figure 7) during the breeding season (defined for the MSHCP as 15 February through 30 August), focused surveys should be conducted.

Burrows and other sign consistent with Stephens' kangaroo rat (SKR) are present in the open area associated with Proposed Staging Area 1 and kangaroo rat sign was widespread in the BSA. Stephens' kangaroo rat is known to occur in the area. It should be noted that the SKR is also covered by a separate habitat conservation plan administered by the Riverside County Habitat Conservation Agency (RCHCA) (RCHCA 1990). Harford Springs Park is not a part of the SKR reserve system under that plan. Payment of the SKR Habitat Conservation Plan (SKRHCP) fee is usually all that is required for projects outside of SKRHCP reserve. The RCA and/or RCHCA should be consulted to determine which plan is applicable in this case. If it is determined that the SKRHCP does not apply, focused nocturnal live-trapping surveys would need to be conducted in order to conclusively determine whether the on-site kangaroo rat species include SKR.

Other MSHCP required surveys include:

- Within the criteria area species survey area (Figure 3), focused surveys must be conducted in the blooming seasons for round-leaved filaree (*California [Erodium] macrophyllum*), smooth tarplant, thread-leaved brodiaea, and little mousetail (*Myosurus*)

minimus ssp. apus). Because the site is in the conservation area, however, this survey should be conducted anywhere that may be impacted.

- Within the narrow endemic plant species survey area (Figure 5), focused surveys must be conducted in the blooming season for Munz's onion, San Diego ambrosia and many-stemmed dudleya. Because the site is in the conservation area, however, this survey should be conducted anywhere that may be impacted.
- The project falls within the MSHCP designated burrowing owl survey area (Figure 5) and a potential habitat is present. The MSHCP provides guidelines for initial burrowing owl surveys and pre-construction burrowing owl surveys. This species primarily occupies open areas, such as Proposed Staging Area 1.

If any of the aforementioned species are found, avoidance and/or specific mitigation measures may be required for the project to move forward.

6.1.2 Riparian/Riverine Areas, Wetlands, and Jurisdictional Waters

We recommend that the staging area not be in or immediately adjacent to potentially jurisdictional waters/riparian/riverine (roughly the area mapped as riparian scrub on Figure 7). To minimize indirect disturbance, noise attenuation and/or visual barriers could be utilized as needed.

In a scenario where direct impacts would occur, minimization of direct and indirect effects to potentially jurisdictional waters, riparian/riverine, and vernal pools and their associated functions and values would be required. Those impacts that are unavoidable would need to be mitigated such that the lost functions and values as they relate to covered species are replaced as set forth under a Determination of Biologically Equivalent or Superior Preservation (DBESP). A formal jurisdictional delineation and state and/or federal waters permitting may also be required.

6.1.3 Area Plans

The project is in an area plan with goals for linkages and planning species. The project will not block any linkages, but will remove a small amount of potential habitat, potentially having a small effect on planning species. To minimize disturbance to planning species, the use of noise attenuation and/or visual barriers may be required.

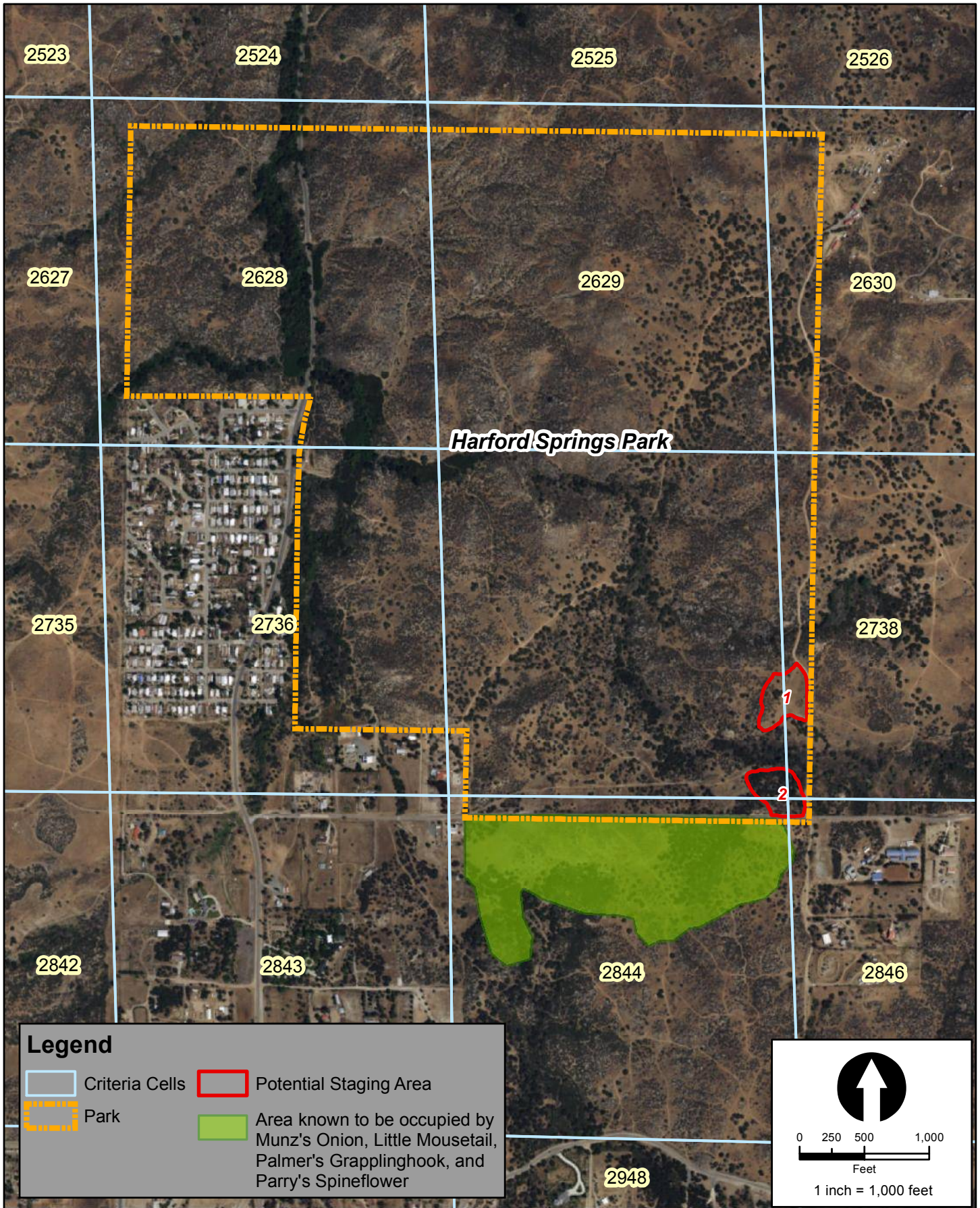
6.1.4 MSHCP Guidelines for Project Siting, Design, and Construction

If the project is approved as a covered "conditionally compatible use" within the conservation area, guidelines are provided in the Section 7.4.2 of the MSHCP document for the siting and design of facilities such as proposed for this project. These guidelines address ways to avoid and minimize impacts to natural resources within the conservation area as a result of the placement and design of such facilities.

1. Trails and facilities will be sited and designed to be compatible with resource protection and in a manner that minimizes impacts to sensitive resources and habitat types covered by the MSHCP. All decisions relating to public access will be made in a manner that is most protective of biological resources.
2. Trails and facilities will be located in the least sensitive areas of the conservation area so that they avoid habitat occupied by species covered by the MSHCP.


3. Prior to design and construction of public access facilities, biological surveys will be conducted within the study area for the facility including vegetation mapping and species surveys and/or wetland delineations based on field conditions as recommended by the project biologists. The results of the biological resources investigation will be mapped and documented. The documentation will include preliminary conclusions and recommendations regarding potential effects of facility construction on conservation area resources and methods to avoid and minimize impacts to conservation area resources in conjunction with project siting, design, construction, and operation. The project biologist will work with facility designers during the design and construction phase to ensure implementation of feasible recommendations.
4. Recreational activities and the construction of trails and facilities on highly erosive soils will be avoided.
5. Trails and facilities will be designed to discourage and prevent intrusion into adjacent environmentally sensitive areas.
6. New trails and facilities will avoid using wildlife crossing points.
7. New trails and facilities will be accessible from existing and planned public roads.
8. New facilities will minimize impacts from lighting.
9. Environmentally sensitive grading techniques, drainage management and vegetation buffers will be used for trail and facility runoff absorption and filtration.
10. When landscaping is required, only native species will be used. The use of nonnative invasive plant species will be prohibited.
11. Trail access points to the MSHCP Conservation Area (e.g., parking lots and staging areas) that are consistent with resource protection goals will be identified.
12. Entry controls and signage at trailhead sites will be used to convey proper resource usage.
13. In most cases, trailheads will be sited at the edge of the resource area.

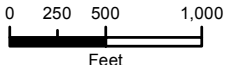
In accordance with the guidelines above, we have designated two potential staging areas within the BSA (see Figure 8). Although Staging Area #1 is an open area that seems like a logical choice for the project, it contains potential biological issues that may preclude its use. Staging Area #2 would require the removal of mature California junipers and scrub oaks, so is an aesthetically displeasing choice, but it has less potential for the presence of special-status biological elements. Elsewhere in the BSA, and indeed in the park as a whole, known presence of rare plants, clay soils known to support rare plants, rock outcrops, and potentially jurisdictional waters prevent usage of those areas for the proposed project.



Legend

- Criteria Cells
- Park
- Potential Staging Area
- Area known to be occupied by Munz's Onion, Little Mousetail, Palmer's Grapplinghook, and Parry's Spineflower





 1 inch = 1,000 feet

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Section 7.5.3 of the MSHCP document has construction guidelines for facilities within the criteria area and PQP lands:

1. Plans for water pollution and erosion control will be prepared for all discretionary projects involving the movement of earth in excess of 50 cubic yards. The plans will describe sediment and hazardous materials control, dewatering or diversion structures, fueling and equipment management practices, use of plant material for erosion control. Plans will be reviewed and approved by the County of Riverside and participating jurisdiction prior to construction.
2. Timing of construction activities will consider seasonal requirements for breeding birds and migratory non-resident species. Habitat clearing will be avoided during species active breeding season defined as March 1 to June 30.
3. Sediment and erosion control measures will be implemented until such time soils are determined to be successfully stabilized.
4. Short-term stream diversions will be accomplished by use of sand bags or other methods that will result in minimal instream impacts. Short-term diversions will consider effects on wildlife.
5. Silt fencing or other sediment trapping materials will be installed at the downstream end of construction activities to minimize the transport of sediments off-site.
6. Settling ponds where sediment is collected will be cleaned in a manner that prevents sediment from re-entering the stream or damaging/disturbing adjacent areas. Sediment from settling ponds will be removed to a location where sediment cannot re-enter the stream or surrounding drainage area. Care will be exercised during removal of silt fencing to minimize release of debris or sediment into streams.
7. No erodible materials will be deposited into water courses. Brush, loose soils, or other debris material will not be stockpiled within stream channels or on adjacent banks.
8. The footprint of disturbance will be minimized to the maximum extent feasible. Access to sites will occur on pre-existing access routes to the greatest extent possible.
9. Equipment storage, fueling and staging areas will be sited on non-sensitive upland habitat types with minimal risk of direct discharge into riparian areas or other sensitive habitat types.
10. The limits of disturbance, including the upstream, downstream and lateral extents, will be clearly defined and marked in the field. Monitoring personnel will review the limits of disturbance prior to initiation of construction activities.
11. During construction, the placement of equipment within the stream or on adjacent banks or adjacent upland habitats occupied by covered species that are outside of the project footprint will be avoided.
12. Exotic species removed during construction will be properly handled to prevent sprouting or regrowth.

13. Training of construction personnel will be provided.
14. Ongoing monitoring and reporting will occur for the duration of the construction activity to ensure implementation of best management practices.
15. When work is conducted during the fire season (as identified by the Riverside County Fire Department) adjacent to coastal sage scrub or chaparral vegetation, appropriate fire-fighting equipment (e.g., extinguishers, shovels, water tankers) shall be available on the site during all phases of project construction to help minimize the chance of human-caused wildfires. Shields, protective mats, and/or other fire preventative methods shall be used during grinding, welding, and other spark-inducing activities. Personnel trained in fire hazards, preventative actions, and responses to fires shall advise contractors regarding fire risk from all construction-related activities.
16. Active construction areas shall be watered regularly to control dust and minimize impacts to adjacent vegetation.
17. All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other toxic substances shall occur only in designated areas within the proposed grading limits of the project site. These designated areas shall be clearly marked and located in such a manner as to contain run-off.
18. Waste, dirt, rubble, or trash shall not be deposited in the conservation area or on native habitat.

The project will be the urban interface with the conservation area wildlands (see Figures 3 through 5). The potential indirect edge effects, which include lighting for night work, 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 treated such as to minimize or eliminate them. These are the MSHCP guidelines intended to address indirect effects associated with locating development in proximity to the conservation area, or in this case, 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.
19. 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.

20. 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.
21. 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.
22. 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.
23. 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.
24. Grading/Land Development: Manufactured slopes associated with proposed site development shall not extend into the MSHCP Conservation Area.

In the event that the proposed project is not considered a covered conditionally compatible use and is instead pursued as a “future facility within PQP lands,” impacts to habitats within the park would be compensated by purchase and dedication into the MSHCP conservation area of land at not less than a ratio of 1:1. On Figure 8 we have identified criteria cells contiguous with the park that could be purchased for addition to the conservation area to contribute to the assembly of Proposed Linkage 3. We have also identified a polygon of land on the south boundary of the park that could be obtained. It supports populations of Munz’s onion, Parry’s spineflower, Palmer’s grapplinghook, and little mousetail. The Guidelines for Project Siting, Design, and Construction above would still apply for minimization of project impacts.

6.2 Special Status Elements Not Covered by the MSHCP

This section will discuss special status elements which occur or potentially occur that are not covered by the MSHCP.

6.2.1 Soils

The area mapped as Bosanko Clay should be avoided (see Figure 6). This soil is known to be associated with rare plants occurring in the park.

6.2.2 Vegetation Communities

As noted above, the area mapped as riparian scrub (see Figure 7) should be avoided because it is associated with riparian/riverine under the MSHCP, potentially jurisdictional waters, and because it is a special-status vegetation community. Certain special-status elements are also potentially associated with chaparral and grassland habitats on-site, which are included in the proposed staging areas. As previously noted, focused surveys would be required to clear such areas for construction.

6.2.3 Nesting Birds

Impacts to nesting birds, both direct and indirect, can be minimized or eliminated by conducting work activities outside of the local breeding season. Although nesting can occur in any month in Southern California, in the project area breeding would primarily be expected from about 1 February through 31 August (note that Section 7.5.3 of the MSHCP document defines the species active breeding season as March 1 to June 30, but that nesting birds are protected no matter what the season). Work from about 1 September through 31 January would therefore be expected to avoid most nesting activity. If work must be done during the breeding season, potential nesting areas should be examined by a qualified biologist prior to disturbance, especially where there could be any direct impacts. If active nests are found, they should be avoided until young have fledged. While there is no established protocol for nest avoidance, when consulted the CDFW generally recommends avoidance buffers of about 500 feet for raptors and threatened/endangered species and 100 – 300 feet for other birds. The use of noise attenuation and/or visual barriers when adjacent to nesting habitat or known nests may allow such buffers to be reduced or eliminated.

If work begins in the nonbreeding season, but extends into the breeding season, nesting bird surveys would need to be conducted prior to moving into new areas, just as they would had the project started in the breeding season. In areas where work is already active, any birds building adjacent nests would be presumed to be unconcerned by the activity, but the biological monitor would be responsible for preventing impacts to them by stopping work or establishing buffers as needed. These measures will benefit birds covered by the MSHCP as well.

6.2.4 Special Status Plant Species

There are six species of occurring or potentially occurring plants (one is actually a lichen) which are not covered by the MSHCP: chaparral sand-verbena (*Abronia villosa* var. *aurita*), Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*), white rabbit-tobacco (*Pseudognaphalium leucocephalum*), San Bernardino aster (*Symphotrichum defoliatum*), paniculate tarplant (*Deinandra paniculata*), and woven-spored lichen (*Texosporium sancti-jacobi*). None are state or federally listed as threatened or endangered, but impacts to them could be significant under CEQA. The first four species have potential habitat in the BSA, but have a low potential for occurrence, having not been found in the park by extensive past surveys. Paniculate tarplant, however, is present abundantly in open areas of the BSA and woven-spored lichen is known to occur in the park. When required focused surveys are conducted for criteria area and narrow endemic plant species, all of these species should be looked for as well. Mitigation measures

such as transplantation, seed collection, or topsoil collection could be utilized to salvage paniculate tarplant and any other species found, with permission from the appropriate agencies.

6.2.5 Special Status Animals

There are five species of potentially occurring animals which are not covered by the MSHCP. Each is discussed below.

Invertebrates – Only one special status insect not covered by the MSHCP, Crotch bumble bee (*Bombus crotchii*), is of potential occurrence within the BSA. Nothing that would cause a significant impact to this species is anticipated as a result of this project. Avoid impacts to the species if encountered during preconstruction surveys or project activities.

Reptiles –Three special status reptiles not covered by the MSHCP could potentially occur within the BSA: San Bernardino ringneck snake (*Anniella pulchra puchra*), California glossy snake (*Arizona elegans occidentalis*), and coast patch-nosed snake (*Salvadora hexalepis virgultea*). There is a moderate possibility of occurrence. With the small area of potential habitat, which may be disturbed by the project, significant impacts to any one of those species are not anticipated. Worker training should include instructions to avoid reptiles, leave them unharmed, and have authorized biologists move them out of harm's way as needed.

Birds – One special status bird not covered by the MSHCP could potentially occur within the BSA: long-eared owl (*Asio otus*). There is a high possibility of occurrence. Measures identified above to protect nesting birds will protect this species as well.

6.3 Conclusion

The presence of extensive habitat for and records of special-status species in Harford Springs Park, and its status as a part of the MSHCP conservation area makes the proposed project challenging. The recommendations above will assist with project implementation if consultation with the RCA finds that the project is feasible.

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APPENDIX A

SITE PHOTOGRAPHS



Photo 1. Looking north from park entrance near the southeast corner of BSA. Potential Staging Area 1 at left.



Photo 2. Looking northwest from intersection of drainage and east park boundary within the BSA. Drought damaged riparian vegetation.



Photo 3. Grassland at Potential Staging Area 1. This area is also seen in the photograph on this report's cover page.



Photo 4. Kangaroo rat burrows in Potential Staging Area 1.



Photo 5. Paniculate tarplants in Potential Staging Area 1.



Photo 6. Chaparral and rock outcrops in northwestern BSA.



Photo 7. Soil cracks in Bosanko clay in southwestern BSA.



Photo 8. Looking north at juniper and oak dominated woodland in Potential Staging Area 2.

APPENDIX B

PLANT AND VERTEBRATE SPECIES LIST

PLANT SPECIES LIST

This list reports only plant species observed in the BSA during the Amec Foster Wheeler site visits for this project. Other species may have been overlooked or undetectable due to their seasonal growth patterns. Nomenclature and taxonomy for fauna observed on site follows the Jepson eFlora (2017). If no common name is listed in Jepson, the United States Department of Agriculture PLANTS database (2017) is followed.

SYMBOLS AND ABBREVIATIONS:

- * Non-native (introduced) species
- ** **Sensitive species** (State or federally listed as endangered, threatened, or candidate; state species of special concern/watchlist/tracked; Bureau of Land Management and/or Forest Service sensitive)
- cf. Uncertain identification, but plant specimen "compares favorably" to named species
- sp. Plant identified only to genus; species unknown (plural = spp.)

GYMNOSPERMS

Cupressaceae

Juniperus californica

Cypress Family

California juniper

DICOT ANGIOSPERMS

Adoxaceae

Sambucus nigra ssp. *caerulea*

Muskroot Family

blue elderberry

Amaranthaceae

*Amaranthus albus**

Amaranth Family

tumbleweed

Anacardiaceae

Rhus aromatica

Sumac Family

skunk bush

Asteraceae

Ambrosia acanthicarpa

Baccharis (salicina) emoryi

Baccharis salicifolia

*Centaurea melitensis**

Ericameria palmeri var. *pachylepis*

Deinandra fasciculata

*Deinandra paniculata***

Erigeron canadensis

Eriophyllum confertiflorum

Gutierrezia californica

Isocoma menziesii

cf. *Lactuca serriola**

Lasthenia gracilis

Corethrogyne filaginifolia

*Oncosiphon piluliferum**

Rafinesquia californica

cf. *Sonchus**

Stephanomeria exigua ssp. *deanei*

Uropappus lindleyi

Sunflower Family

annual bur-sage

Emory's (willow) baccharis

mule fat

Maltese star-thistle

thickbracted goldenbush

clustered tarweed

paniculate tarplant

horseweed

golden-yarrow

California matchweed

coastal goldenbush

prickly lettuce

common goldfields

common sandaster

stinknet

California chicory

sowthistle

Deane's wirelettuce

silver puffs

Boraginaceae

Amsinckia menziesii
Eucrypta chrysanthemifolia
Heliotropium curassavicum var. *oculatum*
Phacelia minor
Phacelia ramosissima

Brassicaceae

*Hirschfeldia incana**
cf. *Sisymbrium irio**

Cactaceae

Cylindropuntia californica var. *parkeri*

Chenopodiaceae

Atriplex serenana var. *serenana*
Chenopodium berlandieri
*Salsola tragus**

Cuscutaceae

Cuscuta californica

Euphorbiaceae

Croton setiger

Fabaceae

Lupinus succulentus

Fagaceae

Quercus berberidifolia

Frankeniaceae

Frankenia salina

Grossulariaceae

Ribes quercetorum

Lamiaceae

*Marrubium vulgare**
Salvia columbariae
Salvia mellifera

Nyctaginaceae

Mirabilis laevis var. *crassifolia*

Onagraceae

Eulobus californica

Polemoniaceae

Eriastrum sapphirinum
Navarretia atractyloides

Polygonaceae

Eriogonum fasciculatum
Eriogonum gracile

Rhamnaceae

Rhamnus crocea

Borage Family

common fiddleneck
spotted hideseed
alkali heliotrope
wild Canterbury bells
branching phacelia

Mustard Family

shortpod mustard
London rocket

Cactus Family

cane cholla

Goosefoot Family

bractscale
pit-seed goosefoot
Russian thistle

Dodder Family

chaparral dodder

Spurge Family

turkey-mullein

Pea Family

arroyo lupine

Oak Family

scrub oak

Frankenia Family

alkali heath

Gooseberry Family

oakwoods gooseberry

Mint Family

horehound
chia
black sage

Four-O'Clock Family

wishbone bush

Evening Primrose Family

California suncup

Phlox Family

sapphire woollystar
hollyleaf pincushionplant

Buckwheat Family

California buckwheat
slender woolly buckwheat

Buckthorn Family

spiny redberry

Rosaceae

Adenostoma fasciculatum

Rubiaceae

Galium angustifolium

Salicaceae

Populus fremontii ssp. *fremontii*

Salix laevigata

Salix lasiolepis

Scrophulariaceae

Keckiella antirrhinoides

Solanaceae

Datura wrightii

Tamaricaceae

*Tamarix ramosissima**

Urticaceae

Urtica dioica ssp. *holosericea*

Viscaceae

Phoradendron juniperinum

MONOCOT ANGIOSPERMS

Juncaceae

Juncus bufonius

Poaceae

*Avena barbata**

*Bromus hordeaceus**

Bromus madritensis ssp. *rubens**

Distichlis spicata

Elymus condensatus

*Hordeum murinum**

*Lamarckia aurea**

*Schismus barbatus**

Sporobolus airoides

Themidaceae

Bloomeria crocea

Dichelostemma capitatum

Rose Family

chamise

Bedstraw Family

narrowly leaved bedstraw

Willow Family

Fremont cottonwood

red willow

arroyo willow

Snapdragon Family

snapdragon penstemon

Nightshade Family

sacred thorn-apple

Tamarisk Family

saltcedar

Nettle Family

hoary nettle

Mistletoe Family

juniper mistletoe

Rush Family

toad rush

Grass Family

slender wild oat

soft chess

red brome

salt grass

giant wild-rye

wall barley

goldentop grass

common Mediterranean grass

alkali sacaton

Brodiaea Family

common goldenstar

blue dicks

VERTEBRATE ANIMALS LIST

This list reports only vertebrate animal species observed in the BSA during the Amec Foster Wheeler site visit for this project. Other species may have been overlooked or undetectable due to their activity patterns. Nomenclature and taxonomy for fauna observed on site follows the American Ornithological Society Checklist and its supplements (through 2017) for birds and CDFW (2016) for herpetofauna and mammals.

SYMBOLS AND ABBREVIATIONS:

- * Non native species
 - ** Sensitive species (State or federally listed as endangered, threatened, or candidate; state species of special concern/watchlist/tracked; USFWS bird of conservation concern; Bureau of Land Management and/or Forest Service sensitive)
 - sp. Identified only to genus; species unknown (plural = spp.)
-

REPTILES

Phrynosomatidae

Uta stansburiana
Sceloporus occidentalis
Sceloporus orcutti (MSHCP Covered Species)

Spiny Lizards

common side-blotched lizard
western fence lizard
granite spiny lizard

BIRDS

Odontophoridae

Callipepla californica

New World Quail

California quail

Columbidae

Zenaidura macroura

Pigeons and Doves

mourning dove

Trochilidae

Calypte anna

Hummingbirds

Anna's hummingbird

Cathartidae

Cathartes aura (MSHCP Covered Species)

New World Vultures

turkey vulture

Accipitridae

*Accipiter cooperii*** (MSHCP Covered Species)
Buteo jamaicensis

Hawks and Relatives

Cooper's hawk
red-tailed hawk

Tytonidae

Tyto alba

Barn Owls

barn owl (feather)

Picidae

Picoides nuttallii
Colaptes auratus

Woodpeckers and Allies

Nuttall's woodpecker
northern flicker

Tyrannidae

Contopus sordidulus
Sayornis saya

Tyrant Flycatchers

western wood-pewee
Say's phoebe

Corvidae

Aphelocoma californica

Jays, Crows, Ravens, Magpies

California scrub-jay

Aegithalidae

Psaltriparus minimus

Troglodytidae

Thryomanes bewickii

Poliophtilidae

Poliophtila caerulea

Mimidae

Toxostoma redivivum

Mimus polyglottos

Fringillidae

Haemorhous mexicanus

Spinus psaltria

Passerelliidae

Pipilo maculatus

Melospiza crissalis

Zonotrichia leucophrys

MAMMALS

Leporidae

Sylvilagus audubonii

Cricetidae

Neotoma sp.

Heteromyidae

Dipodomys sp.

Sciuridae

Otospermophilus beecheyi

Canidae

Canis latrans (MSHCP Covered Species)

Felidae

Lynx rufus (MSHCP Covered Species)

Long-tailed Tits and Bushtits

bushtit

Wrens

Bewick's wren

Gnatcatchers and Gnatwrens

blue-gray gnatcatcher

Mockingbirds, Thrashers, and Allies

California thrasher

northern mockingbird

Finches

house finch

lesser goldfinch

Towhees, New World Sparrows

spotted towhee

California towhee

white-crowned sparrow

Rabbits and Hares

Audubon's (desert) cottontail

Mice, Rats, and Voles

woodrat (nests)

Pocket Mice and Kangaroo Rats

kangaroo rat (burrows and sign)

Squirrels

California ground squirrel (burrows)

Foxes, Wolves and Relatives

coyote (scat)

Cats

bobcat (scat)

APPENDIX C

SPECIAL-STATUS BIOLOGICAL RESOURCES TABLES

Table 1. Special Status Plant Species Potential for Occurrence

Species	Status (F=Federal, C=California)	Habitat	Flowering Period	BSA Occurrence Probability
<i>Abronia villosa</i> var. <i>aurita</i> chaparral sand- verbena	F: BLM, FS C: S2 CNPS: 1B.1 MSHCP: No	In sandy areas in chaparral, coastal dunes and desert dunes, 75 - 1,600 meters elevation above mean sea level (m.).	(January) March- September	Low Habitat present, but not recorded in park.
<i>Allium munzii</i> Munz's onion	F: END C: THR , S1 CNPS: 1B.1 MSHCP: Yes	Heavy clay soils; grows in grasslands & openings within shrublands or woodlands. 375-1040 m.	March – May	High Clay soils & known CNDDDB records in the southwestern BSA. A MSHCP narrow endemic plant survey species & planning species.
<i>Ambrosia pumila</i> San Diego ambrosia	F: END C: S1 CNPS: 1B.1 MSHCP: Yes	Chaparral, coastal scrub, valley and foothill grassland. Sandy loam or clay soil; sometimes alkaline. In valleys; persists where disturbance has been superficial. Sometimes on margins or near vernal pools. 3-580 m.	April - October	Low Not recorded in park, but appropriate soils present. Known locally from CNDDDB record about four miles to southeast. A MSHCP narrow endemic plant survey species.
<i>Atriplex parishii</i> Parish's brittle scale	F: FS C: S1 CNPS: 1B.1 MSHCP: Yes	Alkaline chenopod scrub, playas, and vernal pools. 25 - 1900 m.	June - October	Absent Habitat unsuitable, no known records in ≥ five miles. A MSHCP criteria area survey species.
<i>Atriplex serenana</i> var. <i> davidsonii</i> Davidson's salt scale	F: ND C: S1 CNPS: 1B.1 MSHCP: Yes	Alkaline soils in coastal bluff scrub and coastal scrub. 0 - 460 m.	April - October	Absent BSA is above known elevational range, no known records in ≥ five miles. A MSHCP criteria area survey species.
<i>Brodiaea filifolia</i> thread-leaved brodiaea	F: THR C: END , S2 CNPS: 1B.1 MSHCP: Yes	Chaparral (openings), cismontane woodland, coastal scrub, playas, valley and foothill grassland, vernal pools. 25 - 1120 m.	March - June	Low Habitat present, but no known records in park or within ≥ five miles. A MSHCP criteria area survey species and riparian / riverine associated species.
<i>California macrophylla</i> (<i>Erodium macrophyllum</i>) round-leaved filaree	F: BLM C: S3? CNPS: 1B.2 MSHCP: Yes	Cismontane woodland, valley and foothill grassland on clay soils. 15-1200 m.	May – July	Low Not recorded in park, but clay soils present in BSA. Known locally from a record about five miles to the west. A MSHCP criteria area survey species.

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Species	Status (F=Federal, C=California)	Habitat	Flowering Period	BSA Occurrence Probability
<i>Caulanthus simulans</i> Payson's jewelflower	F: FS C: S4 CNPS: 4.2 MSHCP: Yes	Sandy, granitic areas in chaparral and coastal scrub, 90 - 2,200 m.	(February) March-May (June)	High Habitat present, recorded in park.
<i>Centromadia pungens</i> ssp. <i>laevis</i> smooth tarplant	F: ND C: S2 CNPS: 1B.1 MSHCP: Yes	Annual herb found in alkaline areas within chenopod scrub, meadows, playas, riparian woodland, valley and foothill grassland below 640 m.	April - November	High Known from park. Potential habitat present. A MSHCP riparian / riverine associated species
<i>Chorizanthe leptotheca</i> peninsular spineflower	F: ND C: S3 CNPS: 4.2 MSHCP: Yes	Alluvial fans, granitic areas in chaparral, coastal scrub, & lower montane coniferous forest. 300 - 1900 m.	May-August	High Habitat present, recorded in park.
<i>Chorizanthe parryi</i> var. <i>parryi</i> Parry's spineflower	F: BLM, FS C: S2 CNPS: 1B.1 MSHCP: Yes	Sandy or rocky openings in chaparral, coastal sage scrub, cismontane woodland & valley foothill grassland; 275-1,220 m.	April - June	High Habitat present, recorded in park.
<i>Chorizanthe polygonoides</i> var. <i>longispina</i> long-spined spineflower	F: BLM C: S3 CNPS: 1B.2 MSHCP: Yes	Chaparral, coastal scrub, meadows and seeps, valley and foothill grassland, vernal pools. Gabbroic clay. 30-1540 m.	April - July	High Habitat present, recorded in park. A MSHCP planning species.
<i>Caulanthus simulans</i> Payson's jewelflower	F: FS C: S4 CNPS: 4.2 MSHCP: Yes	Chaparral and coastal scrub. 90 -2200 m.	(February) March-May (June)	High Habitat present, recorded in park.
<i>Convolvulus simulans</i> small-flowered morning-glory	F: ND C: S4 CNPS: 4.2 MSHCP: Yes	Chaparral (openings), coastal scrub, valley and foothill grassland. 30 - 740 m.	March -July	High Habitat present, recorded in park. A MSHCP planning species.
<i>Deinandra paniculata</i> paniculate tarplant	F: ND C: S4 CNPS: 4.2 MSHCP: No	Coastal scrub, valley and foothill grassland, vernal pools. 25 - 940 m.	(March) April- November	Occurs Widespread on-site, especially in open areas.
<i>Dodecahema leptoceras</i> slender-horned spineflower	F: END S: END , S1 CNPS: 1B.1 MSHCP: Yes	Sandy soils in association with mature alluvial scrub or in the Vail Lake area gravel soils of Temecula arkose deposits in association with open chamise chaparral. The ideal habitat appears to be terraces and benches that receive over-bank deposits every 50-100 years. 200 - 760 m.	April – June	Absent No alluvial scrub or known records in ≥ five miles. A MSHCP riparian / riverine associated species and narrow endemic plant survey species.

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 December 2018

Species	Status (F=Federal, C=California)	Habitat	Flowering Period	BSA Occurrence Probability
<i>Dudleya multicaulis</i> many-stemmed dudleya	F: BLM, FS C: S2 CNPS: 1B.2 MSHCP: Yes	Chaparral, coastal scrub, valley and foothill grassland. In heavy, often clay soils or grassy slopes. 15-790 m.	April - July	Low Habitat present, but not recorded in park. Nearest local CNDDDB record about four miles to southwest. A MSHCP narrow endemic plant survey species and planning species.
<i>Harpagonella palmeri</i> Palmer's grapplinghook	F: ND C: S3 CNPS: 4.2 MSHCP: Yes	Chaparral, coastal scrub, valley and foothill grassland. Clay soils; open grassy areas within shrubland. 20-955 m.	March - May	High Habitat present, recorded in park. A MSHCP planning species.
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i> Coulter's goldfields	F: BLM C: S2 CNPS: 1B.1 MSHCP: Yes	Coastal salt marshes, playas, vernal pools Usually on alkaline soils in playas, sinks, coastal salt marshes, vernal pools and grasslands. 1 - 1375 m.	February - June	Absent Habitat unsuitable, no known records in ≥ five miles. A MSHCP criteria area survey species.
<i>Lepidium virginicum</i> var. <i>robinsonii</i> Robinson's pepper- grass	F: ND C: S3 CNPS: 4.3 MSHCP: No	Dry soils in coastal sage scrub and chaparral, 1 - 885 m.	January - July	Low Habitat present, but not recorded in park.
<i>Microseris douglasii</i> ssp. <i>platycarpha</i> small-flowered microseris	F: ND C: S4 CNPS: 4.2 MSHCP: Yes	Cismontane woodland, coastal scrub, valley and foothill grassland, vernal pools. 15 - 1070 m.	March - May	High Habitat present, recorded in park. A MSHCP planning species.
<i>Myosurus minimus</i> ssp. <i>apus</i> little mousetail	F: ND C: S2 CNPS: 3.1 MSHCP: Yes	Vernal pools, valley and foothill grassland. Alkaline soils. 20-640 m.	March - June	High Recorded in the park. A MSHCP criteria area plant survey species.
<i>Pseudognaphalium leucocephalum</i> white rabbit-tobacco	F: ND C: S2 CNPS: 2B.2 MSHCP: No	Chaparral, cismontane woodland, coastal scrub, riparian woodland. 0 - 2100 m.	(July) August – November (December)	Low Habitat present, but not recorded in park.
<i>Romneya coulteri</i> Coulter's matilija poppy	F: ND C: S4 CNPS: 4.2 MSHCP: Yes	Chaparral, coastal scrub. 20 - 1200 m.	March - July	Low Habitat present, but not recorded in park. A MSHCP riparian / riverine associated species
<i>Symphotrichum defoliatum</i> San Bernardino aster	F: BLM, FS C: S2 CNPS: 1B.2 MSHCP: No	Vernally wet sites such as ditches, streams, and springs in many plant communities below 2,040 m.	July - November	Low Habitat present, but not recorded in park.

Species	Status (F=Federal, C=California)	Habitat	Flowering Period	BSA Occurrence Probability
<i>Texosporium sancti-jacobi</i> woven-spored lichen	F: ND C: S1 CNPS: 3 MSHCP: No	Openings in chaparral on soil, small mammal pellets, dead twigs, and <i>Selaginella</i> spp. 290-660 m.	Not applicable	High Habitat present, known from park.

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Moderate: Reported sightings in surrounding region, or site is within the known range of the species and habitat on the site is a type occasionally used by the species.

Low: Site is within the known range of the species but habitat on the site is rarely occupied by the species.

Absent: A focused study failed to detect the species, or, no suitable habitat is present.

Unknown: Distribution and habitat use has not been clearly determined.

Federal designations: (F = federal Endangered Species Act or federal agency designations)

END: Federally listed, Endangered

THR: Federally listed, Threatened

CAN: Candidate for Federal listing

BLM = Bureau of Land Management Sensitive

FS: Forest Service sensitive

ND: No designation

State designations: (C = California Endangered Species Act or CDFG designations)

END: State listed, Endangered

THR: State listed, Threatened

CAN: Candidate for State listing

RARE: State listed, Rare

FP: Fully Protected Species

SSC: Species of Special Concern

WL: Watch List Species

ND: No designation

MSHCP designations (Riverside County only)

Yes: Covered by the plan

No: Not covered by the plan

CDFW state rankings are a reflection of the overall condition of an element throughout its California range. The number after the decimal point represents a threat designation attached to the rank:

S1 = Critically Imperiled. Less than (<) 6 Element Occurrences (EOs) OR < 1,000 individuals OR < 2,000 acres

S1.1 = very threatened

S1.2 = threatened

S1.3 = no current threats known

S2 = Imperiled. 6-20 EOs OR 1,000-3,000 individuals OR 2,000-10,000 acres

S2.1 = very threatened

S2.2 = threatened

S2.3 = no current threats known

S3 = Vulnerable. 21-80 EOs OR 3,000-10,000 individuals OR 10,000-50,000 acres

S3.1 = very threatened

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S4 = Apparently Secure. Uncommon but not rare in the state; some cause for long-term concern.

S5 = Secure. Common, widespread, and abundant in the state.

SH = All known California sites are historical, not extant

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California Native Plant Society (CNPS) designations (Rare Plant Ranks):

Primary Categories (Lists)

1A: Plants presumed extirpated in California and either rare or extinct elsewhere

1B: Plants rare, threatened, or endangered in California and elsewhere

2A: Plants presumed extirpated in California, but common elsewhere

2B: Plants rare, threatened, or endangered in California, but more common elsewhere

3: Plants about which more information is needed - a Review List

4: Plants of limited distribution - a Watch List

Subdivisions within Categories (threat ranks)

0.1: Seriously threatened in California

0.2: Moderately threatened in California

0.3: Not very threatened in California

According to the CDFW (Special Plants): "all California Rare Plant Rank 1 and 2 and some Rank 3 and 4 plants may fall under Section 15380 of CEQA."

Table 2. Special Status Vegetation Communities Potential for Occurrence

Community	Status (F=Federal, C=California)	Habitat	BSA Occurrence Probability
Southern Coast Live Oak Riparian Forest	F: ND C: S4 MSHCP: No	Dense riparian forests dominated by coast live oak located in bottomlands and outer floodplains along larger streams.	Absent Occurs in northeastern corner of park, but not in BSA
Southern Cottonwood Willow Riparian Forest	F: ND C: S3.2 MSHCP: No	Riparian forest community dominated by Fremont cottonwood and any of several species of willows that are generally greater than 20 feet high.	Occurs We have mapped these communities on-site collectively as riparian scrub. It has elements of both, but tends towards small, partly because of severe drought stress to the larger trees.
Southern Riparian Scrub	F: ND C: S3.2 MSHCP: No	Riparian zones dominated by small trees or shrubs (such as <i>Salix</i> spp. and <i>Baccharis</i> spp.).	
Southern Sycamore Alder Riparian Woodland	F: ND C: S4 MSHCP: No	A tall, open, woodland dominated by western sycamore and often white alder (<i>Alnus rhombifolia</i>).	Absent

KEY TO TABLE 2

Definitions of occurrence probability:

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Moderate: Reported sightings in surrounding region, or site is within the known range of the species and habitat on the site is a type occasionally used by the species.

Low: Site is within the known range of the species but habitat on the site is rarely occupied by the species.

Absent: A focused study failed to detect the species, or, no suitable habitat is present.

Unknown: Distribution and habitat use has not been clearly determined.

Federal designations: (F = federal Endangered Species Act or federal agency designations)

ND: No designation

State designations: (C = California Endangered Species Act or CDFG designations)

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S2.1 = very threatened

S2.2 = threatened

S2.3 = no current threats known

S3 = Vulnerable. 21-80 EOs OR 3,000-10,000 individuals OR 10,000-50,000 acres

S3.1 = very threatened

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S4 = Apparently Secure. Uncommon but not rare in the state; some cause for long-term concern.

S5 = Secure. Common, widespread, and abundant in the state.

SH = All known California sites are historical, not extant

Table 3. Special Status Animals

Species	Protective Status (F=Federal; C=California)	Habitat	BSA Occurrence Probability
Invertebrates			
<i>Bombus crotchii</i> Crotch bumble bee	F: ND C: S1S2 MSHCP: No	Known from coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include <i>Antirrhinum</i> , <i>Phacelia</i> , <i>Clarkia</i> , <i>Dendromecon</i> , <i>Eschscholzia</i> , and <i>Eriogonum</i> .	Low/Unknown Habits little known, but food plants occur & there is a CNDDDB record in immediate vicinity of park.
<i>Euphydryas editha quino</i> quino checkerspot butterfly	F: END C: S1S2 MSHCP: Yes	Sunny openings within chaparral & coastal sage shrublands in parts of Riverside & San Diego Counties. Hills and mesas near the coast. Need high densities of food plants <i>Plantago erecta</i> , <i>P. insularis</i> , and <i>Orthocarpus purpureus</i> .	High CNDDDB record in park in 2000. <i>Plantago erecta</i> known to occur in park.
Amphibians			
<i>Spea hammondi</i> western spadefoot	F: BLM C: SSC, S3 MSHCP: Yes	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	Moderate Potential for seasonal pools on-site. Nearest CNDDDB record about 4.5 miles east
Reptiles			
<i>Arizona elegans occidentalis</i> California (coastal) glossy snake	F: ND C: SSC, S2 MSHCP: No	Reported from a range of scrub and grassland habitats, often with loose or sandy soils.	Moderate Suitable habitat present
<i>Aspidoscelis hyperythra</i> (Belding's) orange-throated whiptail	F: FS C: WL, S2S3 MSHCP: Yes	Inhabits low-elevation coastal scrub, chaparral, and valley-foothill hardwood habitats. Prefers washes and other sandy areas with patches of brush and rocks.	High Suitable habitat present and CNDDDB records in immediate vicinity.
<i>Aspidoscelis tigris stejnegeri</i> coastal western whiptail	F: ND C: SSC, S3 MSHCP: Yes	Wide variety of habitats including coastal sage scrub, sparse grassland, and riparian woodland; coastal and inland valleys and foothills.	Moderate Suitable habitat present in BSA.
<i>Crotalus ruber</i> (northern) red-diamond rattlesnake	F: FS C: SSC, S3 MSHCP: Yes	Chaparral, woodland, grassland, & desert areas. occurs in rocky areas and dense vegetation. Needs rodent burrows, cracks in rocks or surface cover objects.	High Habitat present, recorded in park.
<i>Diadophis punctatus modestus</i> San Bernardino ringneck snake	F: FS C: SSC, S2? MSHCP: No	Most common in open, relatively rocky areas. Often in somewhat moist microhabitats near intermittent streams. Avoids moving through open or barren areas by restricting movements to areas of surface litter or herbaceous vegetation.	Moderate Habitat present in BSA. Local CNDDDB records about 1.5 miles to northeast.
<i>Phrynosoma blainvillii</i> coast (San Diego) horned lizard	F: BLM C: SSC, S3S4 MSHCP: Yes	Occurs in many scrub and woodland habitats, grasslands; loose soils. Prefers open country, especially sandy areas, washes, and floodplains. Requires open areas for sunning, bushes for cover, ants.	High Habitat present and CNDDDB record from BSA.

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Species	Protective Status (F=Federal; C=California)	Habitat	BSA Occurrence Probability
<i>Salvadora hexalepis virgulata</i> coast patch-nosed snake	F: ND C: SSC, S2S3 MSHCP: No	Brushy or shrubby vegetation in coastal southern California. Requires small mammal burrows for refuge and overwintering sites.	Moderate Habitat present. Nearest CNDDDB record about 4.5 miles to south.
Birds			
<i>Accipiter cooperi</i> Cooper's hawk	F: MBTA C: WL, S4, FGC MSHCP: Yes	Woodland, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.	Occurs Foraging and nesting habitat present
<i>Agelaius tricolor</i> tricolored blackbird	F: BCC, BLM, MBTA C: CAN , SSC, S1S2, FGC MSHCP: Yes	Breeds near fresh water, in emergent wetland with tall, dense cattails or tules, also in thickets of shrubs or tall herbs. Feeds in grassland and cropland habitats.	Low No nesting habitat, could occur as a forager.
<i>Aimophila ruficeps canescens</i> Southern California rufous-crowned sparrow	F: MBTA C: WL, S3, FGC MSHCP: Yes	Steep, rocky coastal sage scrub and open chaparral habitats, particularly scrubby areas mixed with grasslands. From Santa Barbara County to northwestern Baja California.	Moderate Suitable habitat present
<i>Artemisiospiza belli belli</i> Bell's (sage) sparrow	F: BCC, MBTA C: WL, S3, FGC MSHCP: Yes	Nests in chaparral, usually dominated by fairly dense stands of chamise. Found in coastal sage scrub in south of range.	Moderate Suitable habitat present. A MSHCP planning species within a portion of the BSA.
<i>Asio otus</i> long-eared owl	F: BCC, MBTA C: SSC, S3?, FGC MSHCP: No	Riparian bottomlands grown to tall willows and cottonwoods; also, belts of live oak paralleling stream courses. Requires adjacent open land, productive of mice and the presence of old nests of crows, hawks, or magpies for breeding.	High Suitable habitat present and CNDDDB records in immediate vicinity.
<i>Athene cunicularia</i> burrowing owl	F: BCC, BLM, MBTA C: SSC, S3, FGC MSHCP: Yes	Occupies ground squirrel burrows in open, dry grasslands, agricultural, railroad rights-of-way, and margins of highways, golf courses, and airports. Often utilizes man-made structures, such as earthen berms, cement culverts, cement, asphalt, rock, or wood debris piles. Nests in burrows, drainpipes, and piles of debris in grasslands, scrub habitats, and agricultural areas.	Low Minimal habitat in BSA, local CNDDDB records to east. An MSHCP "Additional Survey Needs" species.
<i>Elanus leucurus</i> white-tailed kite	F: BLM, MBTA C: FP, S3S4, FGC MSHCP: Yes	Rolling foothills and valley margins with scattered oaks & river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	High Habitat present, CNDDDB nesting record in immediate vicinity.
<i>Eremophila alpestris actia</i> California horned lark	F: MBTA C: WL, S4, FGC MSHCP: Yes	Open grasslands and fields, agricultural area, open montane grasslands with very short or no vegetation, including bare agricultural fields. During the breeding season, this species is found in short grassland, short-stature sage shrubland, and desert habitat.	Low Habitat limited. Local CNDDDB record about five miles to northeast.

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Species	Protective Status (F=Federal; C=California)	Habitat	BSA Occurrence Probability
<i>Haliaeetus leucocephalus</i> bald eagle	F: BCC, BLM, BEP, MBTA C: END , FP, S3, FGC MSHCP: Yes	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within one mile of water. Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.	Absent No habitat. Local records are associated with Lake Mathews. A MSHCP riparian / riverine associated species
<i>Lanius ludovicianus</i> loggerhead shrike	F: BCC, MBTA C: SSC, S4, FGC MSHCP: Yes	Found in open habitats with widely spaced vegetation.	Moderate Suitable habitat present, but no CNDDDB records in ≥ five miles.
<i>Polioptila californica californica</i> coastal California gnatcatcher	F: THR , MBTA C: SSC, S2, FGC MSHCP: Yes	Inhabits sage scrub in low-lying foothills and valleys, and sparse chaparral habitats.	Moderate Habitat not ideal, but recorded from park & surrounding area.
<i>Vireo bellii pusillus</i> least Bell's vireo	F: END , MBTA C: END , S2, FGC MSHCP: Yes	Inhabits riparian forests, scrub and thickets.	Absent On-site riparian habitat severely degraded by drought. Future recovery of this habitat could provide marginal habitat. A MSHCP riparian / riverine associated species
Mammals			
<i>Chaetodipus fallax fallax</i> northwestern San Diego pocket mouse	F: ND C: SSC, S3S4 MSHCP: Yes	Found in sandy herbaceous areas, usually associated with rocks or coarse gravel in coastal scrub, chaparral, grasslands, and sagebrush.	Moderate Habitat present. Known locally from CNDDDB records to north and west.
<i>Dipodomys stephensi</i> Stephens' kangaroo rat	F: END C: THR , S2 MSHCP: Yes	Primarily annual & perennial grasslands, but also occurs in coastal scrub & sagebrush with sparse canopy cover. Prefers buckwheat, chamise, brome grass & filaree. Will burrow into firm soil.	High In BSA grassland habitats. A MSHCP planning species.
<i>Lepus californicus bennettii</i> San Diego black-tailed jackrabbit	F: ND C: SSC, S3S4 MSHCP: Yes	Variety of habitats including herbaceous and scrub areas, early stages of open forest and chaparral. Most common in relatively open habitats. Restricted to the cismontane areas of Southern California.	Low Open habitat limited. Nearest CNDDDB record about 4.5 miles to north.
<i>Neotoma lepida intermedia</i> San Diego desert woodrat	F: ND C: SSC, S3S4 MSHCP: Yes	The subspecies "intermedia" is an animal of the coastal slope. Coastal sage scrub and chaparral with rock outcrops, boulders, cactus patches, or dense undergrowth. It is generally now considered a full species, Bryant's woodrat (<i>Neotoma bryanti</i>).	High Habitat and woodrat nests present in BSA.

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THR: Federally listed, Threatened

CAN: Candidate for Federal listing

MBTA: Migratory Bird Treaty Act

BEPA: Bald Eagle Protection Act (also protects Golden Eagles)

BCC: Birds of Conservation Concern

BLM = Bureau of Land Management Sensitive

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SSC: Species of Special Concern

WL: Watch List Species

FGC: Bird species protected by Fish and Game Code

ND: No designation

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APPENDIX B
JURISDICTIONAL DELINEATION

**HARFORD SPRINGS PARK DAY-USE STAGING AREA PROJECT
DELINEATION OF JURISDICTIONAL WATERS**



UNINCORPORATED RIVERSIDE COUNTY, CALIFORNIA

Submitted to:

**Riverside County Parks Department
4600 Crestmore Road
Jurupa Valley, CA 92509**

**Attention: Ms. Yun Baird, Park Planner
(951) 955-6515, (951) 955-1383 - fax**

28 February 2020

Prepared By:

**Dale Hameister, Senior Biologist
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ACRONYMS AND ABBREVIATIONS

AMSL	above mean sea level
CEQA	California Environmental Quality Act
CDFW	California Department of Fish and Wildlife
CWA	Clean Water Act
EPA	Environmental Protection Agency
FAC	facultative
FACU	facultative upland
FACW	facultative wetland
ft.	Feet
GIS	Geographic Information System
HUC	Hydrologic Cataloging Unit
IP	Individual Permit
M	Meters
MSHCP	Multiple Species Habitat Conservation Plan
NEPA	National Environmental Policy Act
NL	not listed
NWI	National Wetlands Inventory
NWP	Nationwide Permit
OBL	obligate
OHWM	ordinary high-water mark
PM	post mile
Rapanos	Rapanos v. U.S. and Carabell v. U.S.
RPW	relatively permanent waterway
RWQCB	Regional Water Quality Control Board
SWANCC	Solid Waste Agency of Northern Cook County v. USACE
TNW	traditionally navigable waterway
UPL	upland
USACE	U.S. Army Corps of Engineers
USDA	United States Department of Agriculture, Natural Resources Conservation Service
USFWS	United States Fish and Wildlife Service
USGS	U.S. Geological Survey
WSC	Waters of the State of California
WUS	Waters of the United States
Wood	Wood Environment and Infrastructure, Inc.

1.0 INTRODUCTION

At the request of the Riverside County Regional Park and Open Space District (RCRPOSD), Wood Environment & Infrastructure, Inc. (Wood) prepared this Delineation of Jurisdictional Waters. The report presents the regulatory framework, methods, and results of a delineation of jurisdictional waters, wetlands, and associated riparian habitat potentially impacted by the implementation of the Harford Springs Park Day-Use Staging Area Project (proposed project). The purpose of the delineation is to determine the extent of state and federal jurisdiction within the project area potentially subject to regulation by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA), Regional Water Quality Control Board (RWQCB) under Section 401 of the CWA and Porter Cologne Water Quality Control Act, and California Department of Fish and Wildlife (CDFW) under Section 1602 of the California Fish and Game Code.

1.1 Project Description

The RCRPOSD proposes to provide an equestrian and day-use staging area to be placed in the southeastern portion of Harford Springs Park. It will provide an equestrian and day-use staging area, which will accommodate a maximum of 15 trailer and truck combinations and 25 automobiles each within separate areas of the site. The project is expected to involve minimal clearing and grubbing, rough and finish grading, base compaction, placement and compaction of porous Class II base material, parking stall delineation, and perimeter control. The existing dirt road will be widened, and an appropriate fence will be installed along the roadside edge. A secondary fence will be installed north of the proposed parking area to minimize vehicle access within the park. Future development may include shade shelters, water, and pit style or plumbed toilets, but are not currently part of current proposed project.

1.2 Project Location

The Harford Springs Park day-use staging area project is located in the Lake Mathews community of unincorporated Riverside County, California (see Figure 1). The project is located in the San Jacinto Land Grant mapped in Township 4 South, Range 5 West, and projected Section 24 of the *Steele Peak, California* 7.5-minute United States Geological Survey (USGS) topographic quadrangle. Section 5 of the MSHCP document states that the “Harford Springs Reserve is a 325-acre park located within the Gavilan Hills. This largely undeveloped park is owned and managed by RCRPOSD for equestrian use as well as hiking and wildlife viewing.” The geographic coordinates at the northern end of the project site is 33.803265° latitude and -117.345485° longitude, the central portion of the project site is 33.802615° latitude and -117.345482° longitude, and the southern portion of the project site is 33.802615° latitude and -117.345193 ° longitude (Figure 2).

2.0 REGULATORY FRAMEWORK

2.1 U.S. Army Corps of Engineers

The USACE regulates the discharge of dredged or fill material in waters of the United States (WUS) pursuant to Section 404 of the CWA.

2.1.1 Waters of the U.S.

CWA regulations (33 CFR 328.3(a)) define WUS as follows:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. All interstate waters including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters: (i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or (ii) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (iii) Which are used or could be used for industrial purpose by industries in interstate commerce;
4. All impoundments of waters otherwise defined as WUS under the definition;
5. Tributaries of WUS;
6. The territorial seas;
7. Wetlands adjacent to WUS (other than waters that are themselves wetlands).

The USACE delineates non-wetland waters in the Arid West Region by identifying the ordinary high-water mark (OHWM) in ephemeral and intermittent channels (USACE 2008a). The OHWM is defined in 33 CFR 328.3(e) as:

“...that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impresses on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.”

Identification of OHWM involves assessments of stream geomorphology and vegetation response to the dominant stream discharge. Determining whether any non-wetland water is a jurisdictional WUS involves further assessment in accordance with the regulations, case law, and clarifying guidance as discussed below.

2.1.2 Wetlands and Other Special Aquatic Sites

Wetlands are defined at 33 CFR 328.3(b) as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.”

Special aquatic sites are geographic areas, large or small, possessing special ecological characteristics of productivity, habitat, wildlife protection, or other important and easily disrupted ecological values. These areas are generally recognized as significantly influencing or positively contributing to the general overall environmental health or vitality of the entire ecosystem of a region. Special aquatic sites include sanctuaries and refuges, wetlands, mud flats, vegetated shallows, coral reefs, and riffle and pool complexes. They are defined in 40 CFR 230 Subpart E.

2.1.3 Supreme Court Decisions

2.1.3.1 Solid Waste Agency of Northern Cook County

On January 9, 2001, the Supreme Court of the United States issued a decision on Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, et al. with respect to whether the USACE could assert jurisdiction over isolated waters. The Solid Waste Agency of North Cook County (SWANCC) ruling stated that the USACE does not have jurisdiction over “non-navigable, isolated, intrastate” waters.

2.1.3.2 Rapanos/Carabell

In the Supreme Court cases of Rapanos v. United States and Carabell v. United States (herein referred to as Rapanos), the court attempted to clarify the extent of USACE jurisdiction under the CWA. The nine Supreme Court justices issued five separate opinions (one plurality opinion, two concurring opinions, and two dissenting opinions) with no single opinion commanding a majority of the Court. In light of the Rapanos decision, the USACE will assert jurisdiction over a traditional navigable waterway (TNW), wetlands adjacent to TNWs, non-navigable tributaries of TNWs that are a relatively permanent waterway (RPW) where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months) and wetlands that directly abut such tributaries. The USACE will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a TNW: non-navigable tributaries that are not relatively permanent, wetlands adjacent to non-navigable tributaries that are not RPWs, and wetlands adjacent to but that do not directly abut a non-navigable RPW.

Flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary indicate whether they significantly affect the chemical, physical and biological integrity of downstream TNWs. Analysis of potentially jurisdictional

streams includes consideration of hydrologic and ecologic factors. The consideration of hydrological factors includes volume, duration, and frequency of flow, proximity to traditional navigable waters, size of watershed, average annual rainfall, and average annual winter snow pack. The consideration of ecological factors also includes the ability for tributaries to carry pollutants and flood waters to a TNW, the ability of a tributary to provide aquatic habitat that supports a TNW, the ability of wetlands to trap and filter pollutants or store flood waters, and maintenance of water quality.

2.1.4 2015 Clean Water Rule

The Obama administration issued the Clean Water Rule in 2015 in order to resolve jurisdictional ambiguity resulting from previous Supreme Court decisions (i.e. SWANNC, Rapanos). On June 22, 2015, the USACE and EPA published the *Clean Water Rule: Definition of "Waters of the United States"; Final Rule* (40 CFR Parts 110, 112, 116, 117, 122, 230, 232, 300, 302, and 401). The Clean Water Rule was put on hold by federal injunction in 2015 but was reinstated in California in August 2018. The Clean Water Rule finds waters to be jurisdictional under the CWA as summarized below:

1. Jurisdictional by Rule: TNWs, Interstate Waters, Territorial Seas, and Impoundments of Jurisdictional Waters.
2. Tributaries: Waters characterized by the presence of physical indicators of flow, including bed and bank and OHWM, that contribute flow directly or indirectly to a waters listed in 1) above.
3. Connected Waters: Adjacent or neighboring waters that have a significant nexus to waters listed in 1) above.
4. Other Waters: waters that, individually or as a group, significantly affect the chemical, physical, or biological integrity of waters listed in 1) above.

The Clean Water Rule was again put on hold by federal injunction in September 2019.

2.2 Regional Water Quality Control Board

The RWQCB regulates activities pursuant to Section 401(a)(1) of the CWA. Section 401 of the CWA specifies that certification from the State is required for any applicant requesting a federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities that may result in any discharge into navigable waters. Through the Porter Cologne Water Quality Control Act, the RWQCB asserts jurisdiction over Waters of the State of California (WSC) which is generally the same as WUS but may also include isolated waterbodies. The Porter Cologne Act defines WSC as "surface water or ground water, including saline waters, within the boundaries of the state".

2.3 California Department of Fish and Wildlife

The CDFW regulates water resources under Section 1600-1616 of the California Fish and Game Code. Section 1602 states:

“An entity may not substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake (CDFW, 2015).”

Evaluation of CDFW jurisdiction followed guidance in the Fish and Game Code and A Review of Stream Processes and Forms in Dryland Watersheds. In general, under 1602 of the Fish and Game Code, CDFW jurisdiction extends to the maximum extent or expression of a stream on the landscape (CDFW, 2010). It has been the practice of CDFW to define a stream as “a body of water that flows perennially or episodically and that is defined by the area in a channel which water currently flows, or has flowed over a given course during the historic hydrologic course regime, and where the width of its course can reasonably be identified by physical or biological indicators” (Brady and Vyverberg, 2013). Thus, a channel is not defined by a specific flow event, nor by the path of surface water as this path might vary seasonally. Rather, it is CDFW's practice to define the channel based on the topography or elevations of land that confine the water to a definite course when the waters of a creek rise to their highest point.

3.0 METHODS

Prior to conducting delineation fieldwork, the following literature and materials were reviewed:

- Aerial photographs of the project site at a scale of 1:1800 to determine the potential locations of jurisdictional waters or wetlands;
- USGS topographic map (Figure 2) to determine the presence of any “blue line” drainages or other mapped water features;
- USDA soil mapping data (Figure 3-Appendix A); and
- USFWS National Wetlands Inventory map to identify areas mapped as wetland features (Figure 4-Appendix A).

Field surveys of the project site were conducted by Wood delineator Dale Hameister on 18 September 2019. Surveys consisted of walking the entire survey area and identifying potentially jurisdictional water features. The survey area consisted of a work area designated as the Day-Use Staging Area, the existing dirt access road (from the south), and a 50-foot buffer surrounding the work area. The survey area was walked to determine if the flows associated with potential drainage features identified in the literature search meet the minimum criteria to be considered under the jurisdiction of USACE, RWQCB, and CDFW. Visual observations of vegetation types, changes in hydrology and changes in soils texture were used to locate areas for evaluation. Weather conditions during delineation fieldwork were conducive for surveying with generally clear skies.

USACE regulated WUS, including wetlands, and RWQCB WSC were delineated according to the methods outlined in *A Field Guide to the Identification of the Ordinary High-Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE, 2008a). The extent of WUS was determined based on indicators of an OHWM. The OHWM width was measured at points wherever clear changes in width occurred.

Federally regulated wetlands were identified based on the *Wetlands Delineation Manual* (USACE, 1987) and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE, 2008b). Additional data was recorded to determine if an area fulfilled the wetland criteria parameters. Three criteria must be fulfilled in order to classify an area as a wetland under the jurisdiction of the USACE: 1) a predominance of hydrophytic vegetation, 2) the presence of hydric soils, and 3) the presence of wetland hydrology. Details of these criteria are described below:

- **Hydrophytic Vegetation.** The hydrophytic vegetation criterion is satisfied at a location if greater than 50% of all the dominant species present within the vegetation unit have a wetland indicator status of obligate (OBL), facultative wetland (FACW), or facultative (FAC) (USACE, 2008b). An OBL indicator status refers to plants that almost always occur in wetlands. A FACW indicator status refers to plants that usually occur in wetlands but may occur in non-wetlands. A FAC indicator status refers to plants that

occur in wetlands and non-wetlands. Other wetland indicator statuses include facultative upland (FACU) which refers to plants that usually occur in non-wetlands, but may occur in wetlands, upland (UPL) for species that almost never occur in wetlands, and NL for plants that are not listed on the *National Wetland Plant List*. The wetland indicator status used for this report follows the 2013 National Wetland Plant List (Arid West Region) (Lichvar, 2014).

- **Hydric Soils.** The hydric soil criterion is satisfied at a location if soils in the area can be inferred or observed to have a high groundwater table, if there is evidence of prolonged soil saturation, or if there are any indicators suggesting a long-term reducing environment in the upper part of the soil profile. Reducing conditions are most easily assessed using soil color. Soil colors were evaluated using the *Munsell Soil Color Charts* (Gretag/Macbeth, 2000). Soil pits were dug in areas where both hydrophytic vegetation and wetland hydrology indicators were observed.
- **Wetland Hydrology.** The wetland hydrology criterion is satisfied at a location based upon conclusions inferred from field observations that indicate an area has a high probability of being inundated or saturated (flooded, ponded, or tidally influenced) long enough during the growing season to develop anaerobic conditions in the surface soil environment, especially the root zone (USACE, 1987 and 2008b).

CDFW jurisdiction was delineated by measuring the elevations of land that confine a stream to a definite course when its waters rise to their highest level and to the extent of associated riparian vegetation.

To determine jurisdictional boundaries, the surveyor walked the length of the drainage within the project area and recorded the centerline with a Trimble GeoXH global positioning system. The width of the drainage was determined by the OHWM and bankfull width measurements at locations where transitions were apparent. Other data recorded included bank height and morphology, substrate type, and all vegetation within the streambed and riparian vegetation adjacent to the streambed. Soils pits were dug in areas that contained hydrophytic vegetation and wetland hydrology to determine if hydric soils were present. Areas that lacked evidence of hydrophytic vegetation, lacked evidence of wetland hydrology, and had no recent disturbance, did not require a soil pit since the other wetland indicators were not present. Upon completion of fieldwork, all data collected in the field were incorporated into a Geographic Information System (GIS) along with basemap data. The GIS was then used to quantify the extent of jurisdictional waters and prepare graphical representations of that data.

4.0 ENVIRONMENTAL SETTING

4.1 Existing Conditions

The survey area consisted of 3.62 acres located in the southeastern corner of the park, north of the intersection of Idaleona Road and Piedras Roads. The elevation of the survey area is approximately 2,000 to 2,040 feet (610 - 622 meters) above mean seal level (AMSL) Appendix A, Figure 2). Surrounding land use includes undeveloped land surrounding the project site and a few rural residences south of the project.

4.2 Hydrology

The average rainfall for the area is 8.23 inches per year (Western Regional Climate Center, 2019). Weather data was recorded nearby at March Field in Riverside County, California. The delineation survey was conducted following a year of above average rainfall in the 2018-2019 rain season.

The study area occurs within two distinct water sheds, the Santa Ana Hydrologic Cataloging Unit (HUC 18070203) (Figure 3). Runoff from the project site flows north for 4 miles before entering Lake Mathews, a TNW and then west for approximately 4 miles before reaching the Temescal Creek, a Relatively Permanent Water (RPW). The drainage continues for approximately 6 miles until flows reach the Prado Flood Control Basin. Water then flows approximately 29 miles southwest along the Santa Ana River until it reaches the Pacific Ocean.

4.3 Vegetation

A total of four (4) vegetation communities were observed within the survey areas. These included: Chaparral, grasslands, riparian scrub, and woodland and forest areas.

4.3.1 Chaparral

This category represents chamise chaparral. This is a shrub-dominated vegetation community that is composed largely of evergreen species that range from three to 12 feet in height. The most common and widespread species within chaparral is chamise (*Adenostoma fasciculatum*). Other common shrub species include oak (*Quercus* spp.), and redberry (*Rhamnus* spp.). Subshrubs are less common in chaparral than in sage scrub but occur within canopy gaps of mature stands. Common species include California buckwheat (*Eriogonum fasciculatum*), sages (*Salvia* spp.), and monkeyflower (*Mimulus* spp.).

4.3.2 Grassland

This category represents non-native grassland but includes some native grasses as well. This vegetation community is composed primarily of annual plant species dominated by several species of grasses. These include slender wild oat (*Avena barbata*), red brome (*Bromus madritensis* ssp. *rubens*), and soft chess (*Bromus hordeaceus*). There is a component of native and non-native forbs such as Russian thistle (*Salsola tragus*), turkey mullein (*Croton setiger*), and Maltese star-thistle (*Centaurea melitensis*).

4.3.3 Riparian Scrub

Within the BSA, this category contains elements of southern riparian scrub and southern cottonwood willow riparian forest, considered special-status vegetation communities by the CDFW (see Appendix C). These riparian communities are variously dominated by trees and shrubs, including willows (*Salix* spp.), mule fat (*Baccharis salicifolia*), Fremont cottonwood (*Populus fremontii*), blue elderberry (*Sambucus nigra* ssp. *caerulea*), and saltcedar.

4.3.4 Woodland and Forests

The woodland and forests category is represented in the BSA by patches dominated by scrub oaks (*Quercus berberidifolia*) and California juniper (*Juniperus californica*).

4.4 Soils

The USDA General Soil Map (Soil Survey Staff, 2019) was consulted to determine the soil associations and soil types mapped as occurring within the study areas. The study area contains six soil types; all the soils except one, Bosanko clay, are sandy loams. The soil types within the project area include Bosanko clay, ChD2: Cieneba sandy loam, CkF2: Cieneba sandy loam, PaC2: Pachappa fine sandy loam, VsC: Vista coarse sandy loam, and VsD2: Vista coarse sandy loam (Figure 5).

None of the on-site soil series are classified as hydric soils by the National List of Hydric Soils. (USDA, 2019b).

4.5 National Wetlands Inventory

The United States Fish and Wildlife Service (USFWS) is the principal Federal agency that provides information to the public on the extent and status of the Nation's wetlands. The USFWS has developed a series of maps, known as the National Wetlands Inventory (NWI) to show wetlands and deep-water habitat. This geospatial information is used by Federal, State, and local agencies, academic institutions, and private industry for management, research, policy development, education, and planning activities. The NWI program was neither designed nor intended to produce legal or regulatory products; therefore, wetlands identified by the NWI program are not the same as wetlands defined by the USACE.

The NWI Mapper (USFWS, 2019) was accessed online to review mapped wetlands within the project study area. The study area crosses one NWI feature that is associated with an ephemeral drainage or wash. The NWI feature that intersects the project survey area is categorized as riverine, intermittent streambed, seasonally flooded wetlands (R4SBC), and riverine, unknown perennial, unconsolidated bottom, semi-permanently flooded, excavated wetlands based on Cowardin Classification (Cowardin et. al. 1979). (Figure 6).

System Riverine (R): The Riverine System includes all wetlands and deepwater habitats contained within a channel, with two exceptions: (1) wetlands dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens, and (2) habitats with water containing ocean-derived salts of 0.5 ppt or greater. A channel is an open conduit either naturally or

artificially created which periodically or continuously contains moving water, or which forms a connecting link between two bodies of standing water.

Subsystem Intermittent (4): This Subsystem includes channels that contain flowing water only part of the year. When the water is not flowing, it may remain in isolated pools or surface water may be absent.

Class Streambed (SB): Includes all wetlands contained within the Intermittent Subsystem of the Riverine System and all channels of the Estuarine System or of the Tidal Subsystem of the Riverine System that are completely dewatered at low tide.

Water Regime Seasonally Flooded(C): Surface water is present for extended periods especially early in the growing season but is absent by the end of the growing season in most years. The water table after flooding ceases is variable, extending from saturated to the surface to a water table well below the ground surface.

5.0 RESULTS

The project survey area contains the headwaters of a downstream drainage feature. However, there is no evidence of flows within the project site. There is no ordinary high-water mark and no definable bed and bank features. The project site sits on an area known for underground springs, hence the name of the park Harford Springs. There are sparse individual willows within the headwaters but are in extremely poor health and are likely associated with deep roots that tap into the underground springs. In years of drought, these trees die-back. During years of average to above average rainfall, these willows may show signs of recovery. Within the project site and adjacent areas, the individual willows are sparse and would not be classified as a riparian habitat.

Therefore, based on the site visit, there are no areas within the project site or immediately vicinity that meet the minimum criteria to be under USACE, CDFW, and RWQCB jurisdiction. Also, there are no areas within the project site that meet the minimum criteria to be considered Riparian/Riverine under the Western Riverside County Multiple Species Habitat Conservation Plan.

The USACE, in combination with the Environmental Protection Agency (EPA), when necessary, reserves the ultimate authority in making the final jurisdictional determination of WUS and the RWQCB reserves the ultimate authority in making the final jurisdictional determination of WSC. Additionally, CDFW has ultimate discretion in the determination of their jurisdiction. RCA has the discretion for determining riparian/riverine limits.

5.1 Drainages

The project site is located at the headwaters of an un-named drainage that conveys natural flows and urban run-off. The area was identified as a R4SBC drainage in the National Wetland Inventory. This area was surveyed to determine if the feature contained any evidence of a drainage feature. Natural run-off sheet flows within the project site (road crossing) with no evidence of an ordinary high-water mark and/or definable bed and bank feature. Two partially buried culverts were observed under the access road within the survey area. The culverts have not conveyed any flows lately and showed no sign of OHWM. A clearly defined bed and bank feature was observed approximately 0.5 mile downstream of the proposed road crossing within the project site, which is where the drainage feature begins.

The sheet flow within the project site is conveyed in an area that has scattered red willow (*Salix laevigata*) (FACW) but does not have sufficient cover to be considered a riparian habitat. The majority of the vegetation within the area consists of grasses, herbaceous shrubs, and scattered woody shrubs and trees. The majority of the vegetation consists of fourwing saltbush (*Atriplex canescens*) (UPL), giant wild rye (*Leymus condensatus*) (FACU), common sandaster (*Corethrogyne filaginifolia*) (UPL), clustered tarweed (*Deinandra fasciculata*) (FACU), shortpod mustard (*Hirschfeldia incana*) (UPL). Other plant species observed during the survey blue elderberry (*Sambucus nigra* ssp. *caerulea*) (FACU), tarragon (*Artemisia dracunculus*) (UPL),

shortpod mustard (*Hirschfeldia incana*) (UPL), sacred datura (*Datura wrightii*) (UPL), salt heliotrope (*Heliotropium curassavicum*) (FACU), and saltcedar (*Tamarix ramosissima*) (FAC). Based on the list of plant species, this area does not meet the minimum criteria for hydrophytic vegetation.

A soil pit was attempted, but the soil was extremely hard and a pit of approximately 3 to 4 inches was completed. There was no evidence of hydric soils. Also, there was no evidence of any noticeable wetland hydrology indicators. The project site has no evidence of isolated wetlands. There was also no change in soil texture or vegetation coverage, often associated with a drainage feature with no definable bed and bank feature.

Table 1
Photo Location Points

Photo ID	Latitude	Longitude	Direction	Relevance
Photo 1	33.800362	-117.345205	4° N	Looking north from park entrance near the southeast corner of BSA.
Photo 2	33.801137	-117.345198	180° S	Looking south at park entrance
Photo 3	33.801326	-117.345309	315° NW	Showing vegetation within depression and lack of channel
Photo 4	33.801287	-117.345347	330° NW	Attempted soil pit
Photo 5	33.803741	-117.345380	352° N	Showing vegetation and dying willows
Photo 6	33.801446	-117.345228	272° W	Showing vegetation and dying willows
Photo 7	33.801589	-117.34190	191° S	Entry road from NE corner of the BSA looking south
Photo 8	33.801589	-117.34190	5° N	Entry road from NE corner of the BSA looking north

5.2 Jurisdictional Determination

All flows within the project site are considered sheet flows with no identifiable bed or banks. There is no evidence of an ordinary high-water mark. There is also no evidence of any riverine or riparian habitat.

6.0 IMPACTS TO JURISDICTIONAL AREAS

The proposed project design will not impact any areas identified under the jurisdiction of the USACE, CDFW, RWQCB, and WRCMSHCP.

6.1 Permitting Requirements

The proposed project requires temporary vegetation removal and road widening at an area that was identified in the literature review as a potential drainage feature. Based on the lack of evidence of any drainage features within the project site, regulatory permits from the USACE, RWQCB, and CDFW are not required.

6.1.1 U.S. Army Corps of Engineers

If the USACE asserts jurisdiction over the on-site drainage, then a 404 permit may be required as described below.

The two most common types of permits issued by USACE under Section 404 of the CWA to authorize the discharge of dredged or fill material into WUS are: a nation-wide permit (NWP) or an individual permit (IP).

NWPs are general permits for specific categories of activities that result in minimal impacts to aquatic resources.

NWP 14 can be used for linear transportation projects. The discharge cannot cause the loss of greater than ½ acre of WUS. The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) the loss of WUS exceeds 0.1 acre; or (2) there is a discharge in a special aquatic site including wetlands. The proposed project would likely qualify under NWP 14 and would require a pre-construction notification.

If the project area changes and do not meet the provisions of an existing NWP, the USACE would require an IP. An IP requires detailed analysis and compliance with the USACE formal review process. This process includes preparation of an alternatives analysis as required by EPA Section 404(b) (1) Guidelines and the National Environmental Policy Act (NEPA) and requires compliance with NEPA's environmental review process. This process provides opportunities for public notice and comment.

The USACE must comply with the federal Endangered Species Act and Section 106 of the National Historic Preservation Act when issuing an NWP or IP. Based on the current site conditions and even if all of the drainage features were impacted, an NWP is recommended.

Wood recommends utilizing the NWP if the project impacts are less than a ½ acre of WUS.

6.1.2 Regional Water Quality Control Board

The project areas occur in the Santa Ana RWQCB (Region 8). Under Section 401 of the CWA, the RWQCB must certify that the discharge of dredged or fill material into WUS does not violate state water quality standards.

The RWQCB also regulates impacts to WSC under the Porter Cologne Water Quality Control Act through issuance of a Construction General Permit, State General Waste Discharge Order, or Waste Discharge Requirements, depending upon the level of impact and the properties of the waterway.

The project proponent would need to obtain a Water Quality Certification, if impacts occur to a drainage feature determined to be a WSC. In addition to the formal application materials and fee (based on area of impact), a copy of the appropriate California Environmental Quality Act (CEQA) documentation must be included with the application.

6.1.3 California Department of Fish and Wildlife

A 1602 Streambed Alteration Agreement is required for all activities that alter streams, lakes and their associated riparian habitat, regardless of the extent of impacts. In addition to the formal application materials and fee (based on cost of the project), a copy of the appropriate CEQA documentation must be included with the application, if a permit is required.

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Riverside County Parks Department
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28 February 2020

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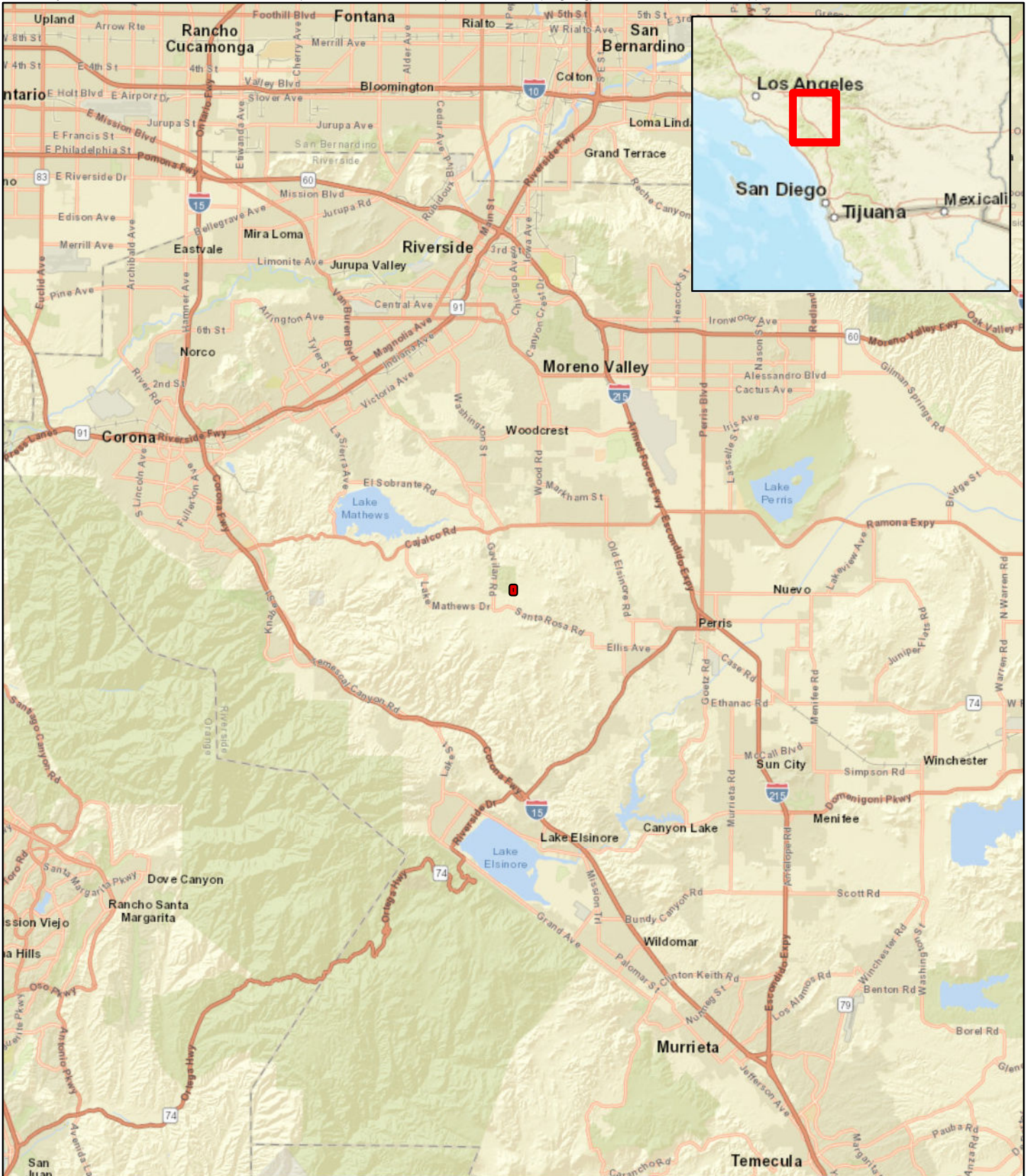
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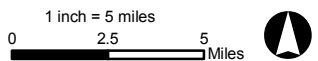
Riverside County Parks Department
Delineation of Jurisdictional Waters
Harford Springs Park Day-Use Staging Area Project
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28 February 2020

APPENDIX A

JURISDICTIONAL DELINEATION MAPS



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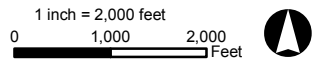


 Project Boundary

FIGURE 1
Regional Location
Jurisdictional Delineation
Harford Park
Riverside County, CA

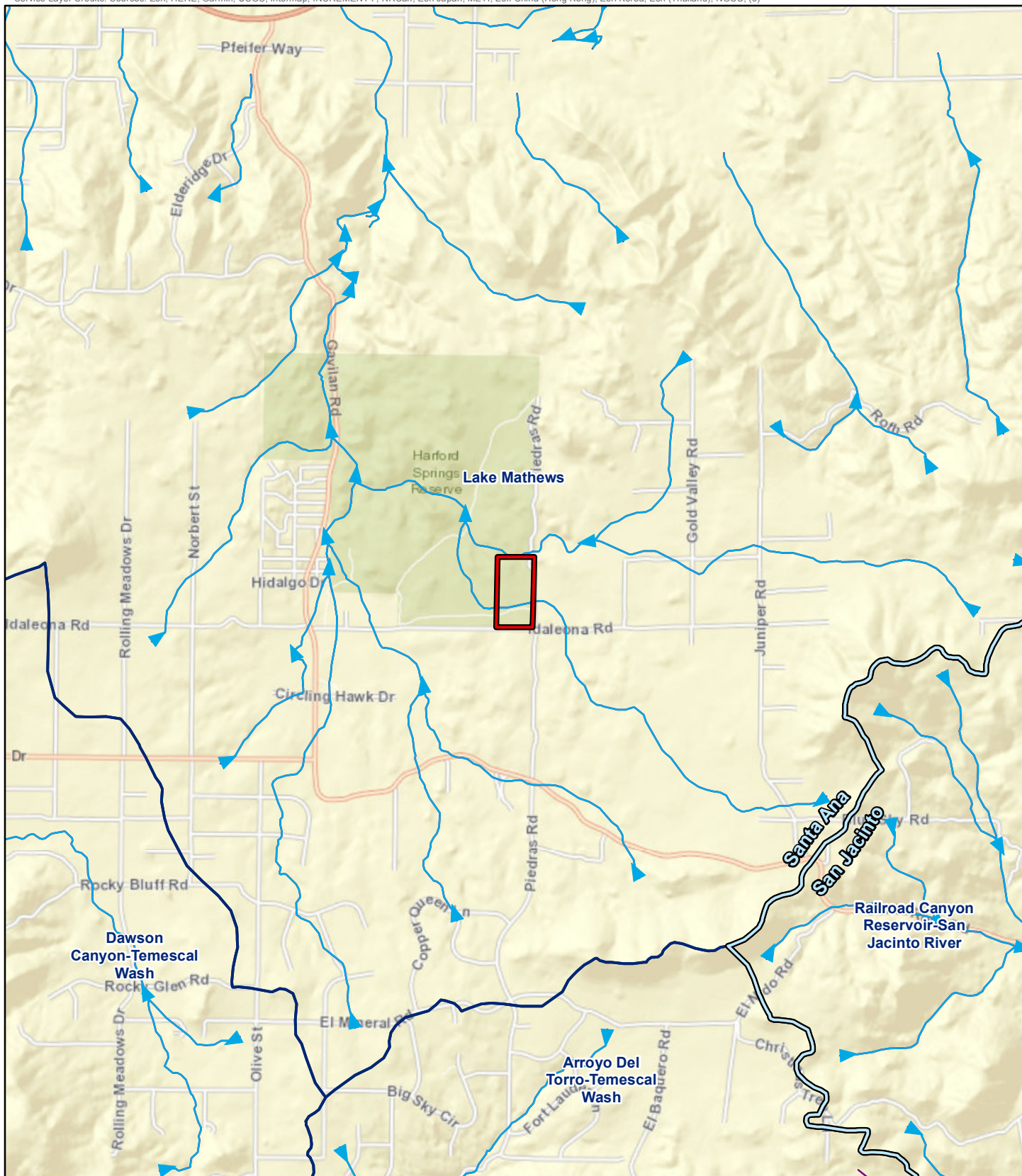


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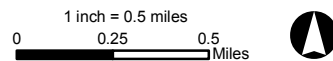


 Project Boundary

FIGURE 2
Project Location on USGS Topographic Map
Jurisdictional Delineation
Hartford Park
Riverside County, CA



Path: Q:\3554_NaturalResources\HartfordPark_1755400717\MXD\ReportFigures\JD\Fig3_Hydrology.mxd, chris.nixon 10/10/2019







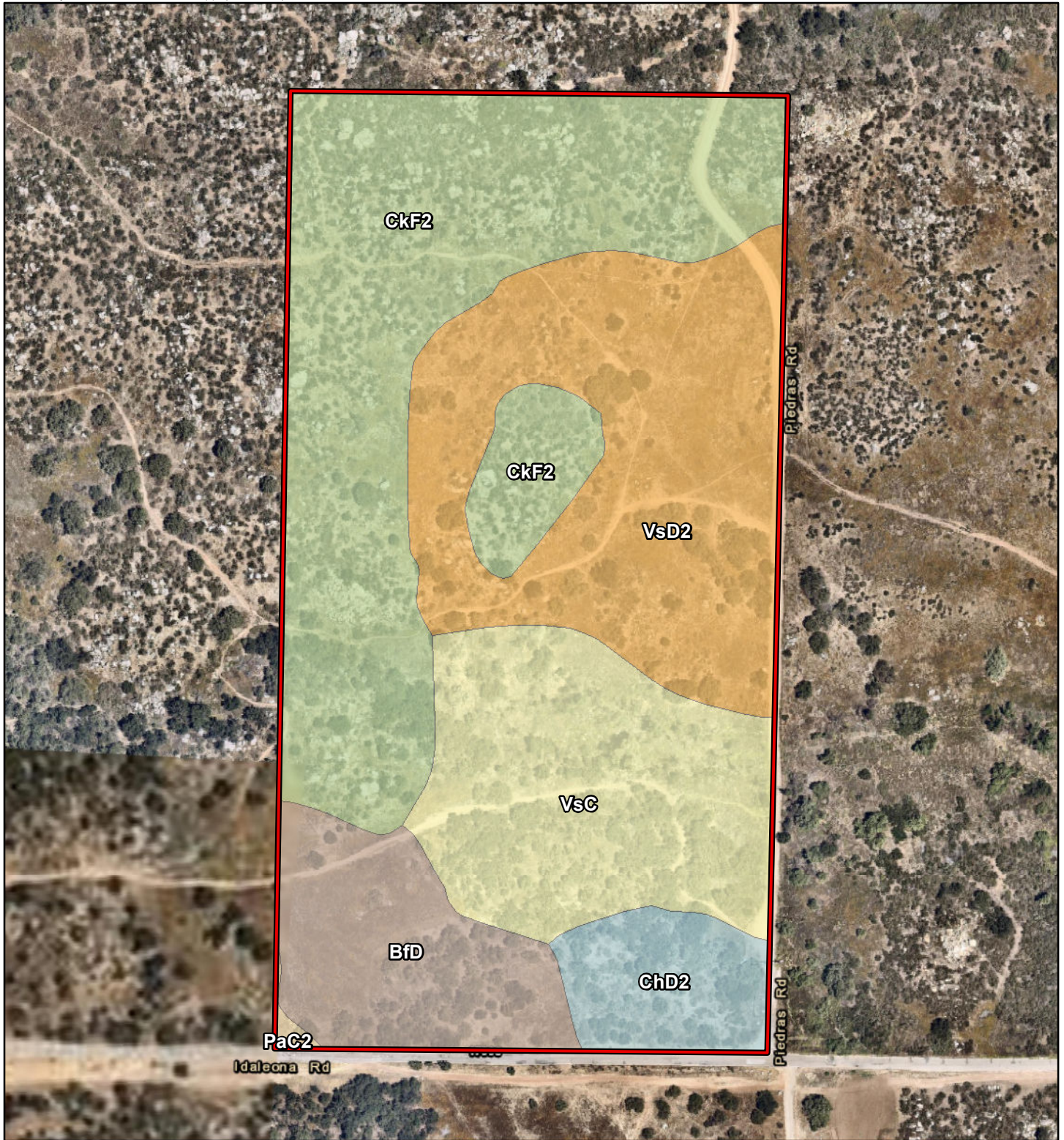
-  Project Boundary
-  Flow Direction
-  HUC 8 Watershed Boundary
-  HUC 12 Watershed Boundary



FIGURE 3
Hydrology
Jurisdictional Delineation
Hartford Park
Riverside County, CA



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Project Boundary

Soil Types

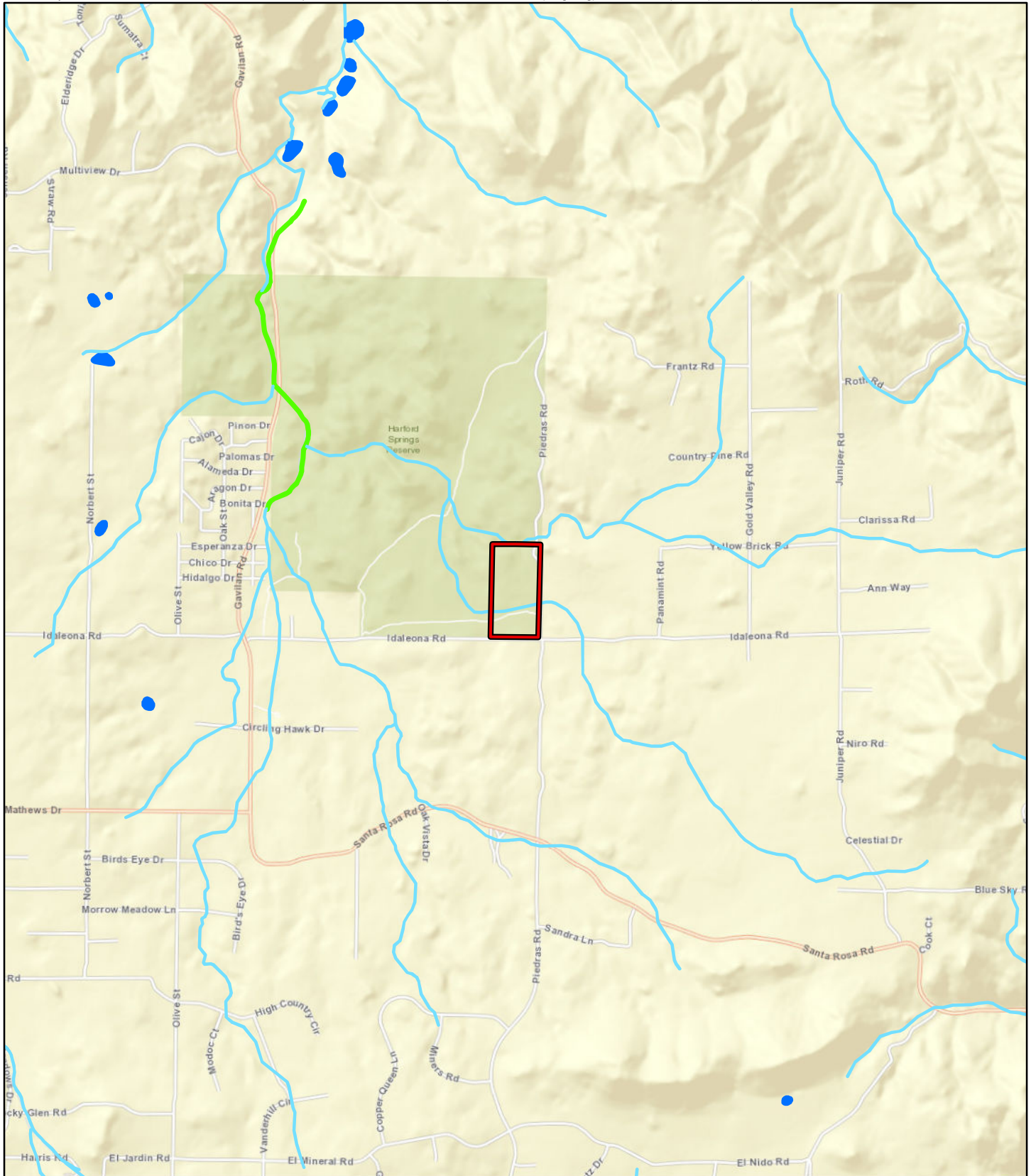
- BfD - Bosanko clay, 8 to 15 percent slopes
- ChD2 - Cieneba rocky sandy loam, 15 to 50 percent slopes, eroded
- CkF2 - Cieneba sandy loam, 8 to 15 percent slopes, eroded
- PaC2 - Pachappa fine sandy loam, 2 to 8 percent slopes, eroded
- VsC - Vista coarse sandy loam, 2 to 8 percent slopes
- VsD2 - Vista coarse sandy loam, 8 to 15 percent slopes, eroded

1 inch = 200 feet
 0 100 200 Feet







FIGURE 4

Soil Types
 Jurisdictional Delineation
 Harford Park
 Riverside County, CA



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-  Project Boundary
- National Wetlands Inventory**
-  Freshwater Forested/Shrub Wetland
-  Freshwater Pond
-  Riverine

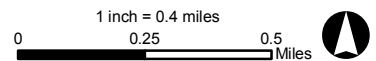
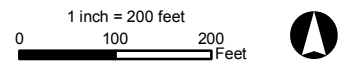


FIGURE 5
National Wetlands Inventory
Jurisdictional Delineation
Hartford Park
Riverside County, CA



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- Sheet Flow Area
- Partially Buried Culverts
- ▭ Project Boundary

FIGURE 6
Jurisdictional Areas
Jurisdictional Delineation
Harford Park
Riverside County, CA

Riverside County Parks Department
Delineation of Jurisdictional Waters
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APPENDIX B

SITE PHOTOGRAPHS



Photo 1. Looking north from park entrance near the southeast corner of BSA. Potential Staging Area on the left.



Photo 2. Looking northwest from intersection of sheet flow area and east park boundary within the survey area. Drought damaged riparian vegetation occurs adjacent to the road.



Photo 3. Grassland at Potential Staging Area. This area is also seen in the photograph on this report's cover page. No evidence of flows at this location.



Photo 4. A Soil pit was attempted within the sheet flow area, but the soil was too hard and compact. No signs of hydric soils were observed.



Photo 5. Looking south west showing the sheet flow area dominated by saltbush and giant wild rye.



Photo 6. Chaparral and rock outcrops in northwestern portion of the survey area.



Photo 7. Soil cracks in Bosanko clay in southwestern portion of survey area.



Photo 8. Looking north at juniper and oak dominated woodland in potential Staging Area.

APPENDIX C
EXTENDED PHASE I CULTURAL RESOURCES INVENTORY

**EXTENDED PHASE I CULTURAL RESOURCES INVENTORY
HARFORD SPRINGS PARK DAY-USE STAGING AREA PROJECT
UNINCORPORATED RIVERSIDE COUNTY, CALIFORNIA**

**Submitted to:
Riverside County Regional Park and Open Space District
4600 Crestmore Road
Jurupa Valley, CA 92509**

**Submitted by:
Amec Foster Wheeler Environment & Infrastructure, Inc.
3120 Chicago Avenue, Suite 110
Riverside, California 92507**

**Jesse Yorck, M.A., RPA – Principal Investigator
Stephen Marts – Project Archaeologist**

June 2018

Amec Foster Wheeler Project No./Proposal No. 1755400717

CONFIDENTIAL

USGS Steel Peak, Calif. 7.5' quadrangle. Acreage: approximately 16.79 acres

Keywords: Extended Phase I Cultural Resources Inventory; San Jacinto Land Grant, Township 4 South, Range 5 West, projected Section 24; Lake Mathews Neighborhood of unincorporated Riverside County; no historical resources per CEQA

EXECUTIVE SUMMARY

Between the months of September, 2017 and March 2018, and at the request of the Riverside County Regional Park and Open Space District (RCRPOSD), Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler) performed an Extended Phase I Cultural Resources Inventory of approximately 16.79 acres of undeveloped and semi-developed land at Harford Springs County Park (Park) in the Lake Mathews Neighborhood of unincorporated Riverside County, California. The Park is also variably known as the Harford Springs County Park or the Harford Springs Reserve and is a 325-acre park located within the Gavilan Hills, approximately four miles south of the Riverside City limits. The Park is largely undeveloped park is owned and managed by RCRPOSD for equestrian use as well as hiking and wildlife viewing. The Project Area is situated at the southeastern corner of the park, northwest of the corner of Idaleona and Piedras Roads, in Township 4 South, Range 5 West, as projected Section 24, and as depicted in the U.S. Geological Survey Steel Peak, California, 7.5' quadrangle.

The RCRPOSD is proposing to provide an equestrian and day-use staging area at the Park, which will accommodate a maximum of 15 trailer and truck combinations and 25 automobiles each within separate areas of the Project Area. The scope the proposed Project requires that an Extended Phase I Cultural Resources Inventory survey be completed. The fieldwork for the Extended Phase I Cultural Resources Inventory was conducted on November 22, 2017 and February 23, 2018 and covered the entire 16.79 -acre study area.

The study is being conducted as a part of the environmental review process for a proposed equestrian and day-use staging area at the Park. The RCRPOSD is the lead agency for the Project and required the study to support the preparation of California Environmental Quality Act (CEQA)-compliant documentation for the proposed Project. The purpose of this study is to provide the RCRPOSD with the necessary information and analysis to determine whether the Project would cause a significant adverse impact to any "historical resources," as defined by CEQA, that may exist in or around the Project Area. In order to identify such resources, Amec Foster Wheeler conducted historical background research, completed an archaeological and historical resources records search, consulted the Native American Heritage Commission and appropriate tribal representatives and carried out an Extended Phase I Cultural Resources Inventory.

Through the research approaches listed above, this study encountered two cultural, an isolated hole-in-top can (P-33-028090) and a campsite, (P-33-028089). Two STPs were excavated at the historic period campsite to ascertain whether or not the site contained a subsurface cultural resource component confirming that they rock assemblages were from the historic period and were used for campfires. Amec Foster Wheeler recommends that the afore listed resources are not eligible for NRHP or CRHP listing under criteria 1, 2, 3, or 4, therefore, these resources do not qualify as "historical resources" under CEQA or as "Riverside County Landmark" under Title 20 of the Riverside Municipal Code. No prehistoric or Tribal Cultural Resources were encountered in the project area.

Riverside Regional Park and Open Space District
Harford Springs Park Day-Use Staging Area Project
Unincorporated Riverside County, California
Amec Foster Wheeler No. 1755400717
June 2018

Amec Foster Wheeler recommends to the RCRPOSD that no historical resources exist within the Project Area for the purposes of CEQA and that no further cultural resource studies are necessary at this time. If further resources are encountered during the undertaking, all work shall cease and the RCRPOSD will be notified immediately and will task a qualified archaeologist with assessing the nature of the find.

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APPENDIX D NATIVE AMERICAN SCOPING DOCUMENTATION

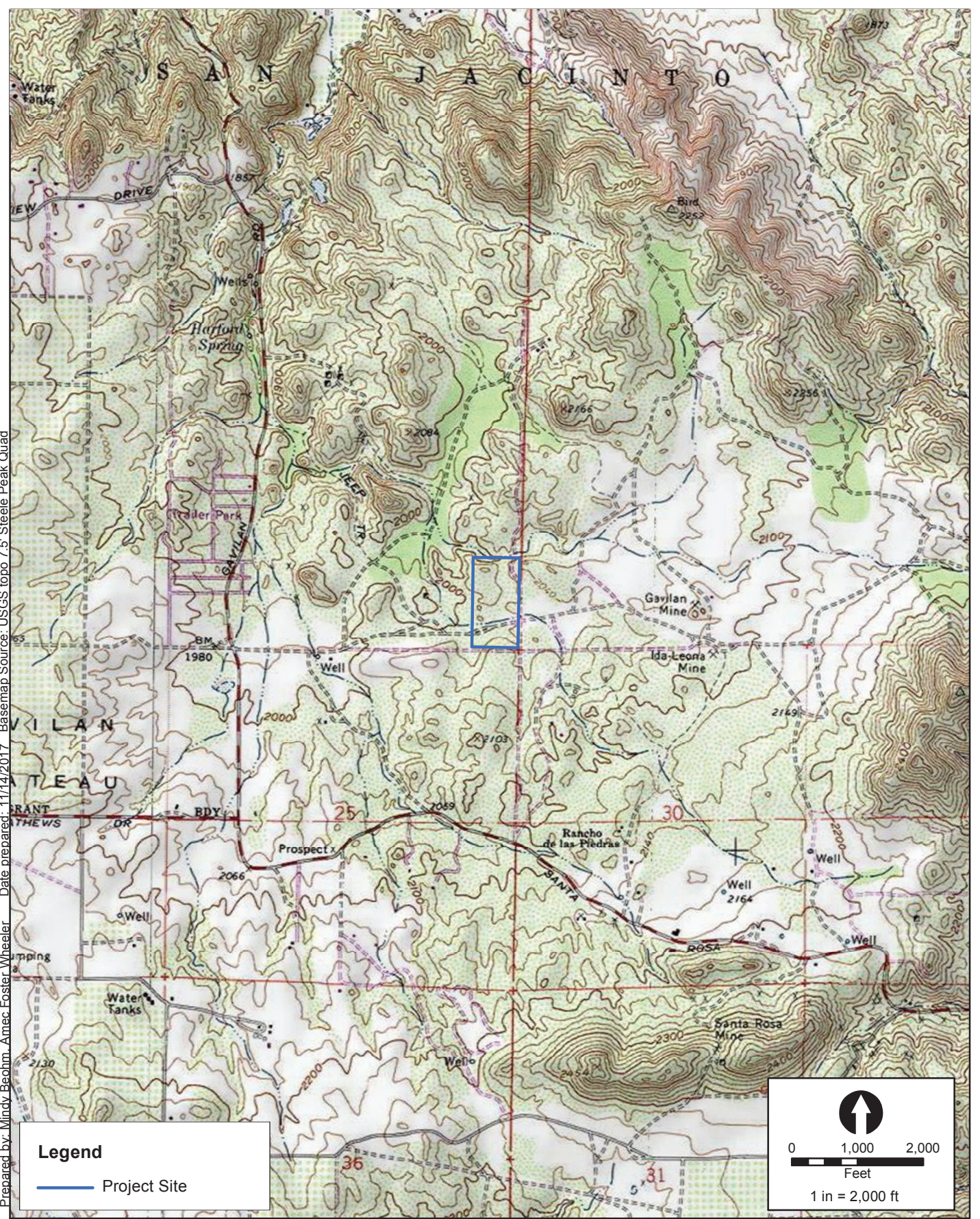
1.0 INTRODUCTION

Between the months of September, 2017 and March 2018, and at the request of the Riverside County Regional Park and Open Space District (RCRPOSD), Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler) performed an Extended Phase I Cultural Resources Inventory of approximately 16.79 acres of undeveloped and semi-developed land at Harford Springs County Park (Park) in the Lake Mathews Neighborhood of unincorporated Riverside County, California. The Park is also variably known as the Harford Springs County Park or the Harford Springs Reserve and is a 325-acre park located within the Gavilan Hills, approximately four miles south of the Riverside City limits. The Park is largely undeveloped park is owned and managed by RCRPOSD for equestrian use as well as hiking and wildlife viewing. The Project Area is situated at the southeastern corner of the park, northwest of the corner of Idaleona and Piedras Roads, in Township 4 South, Range 5 West, as projected Section 24, and as depicted in the U.S. Geological Survey Steel Peak, California, 7.5' quadrangle. (**Figure 1**).

The study is being conducted as a part of the environmental review process for a proposed equestrian and day-use staging area at the Park. The RCRPOSD is the lead agency for the Project and required the study to support the preparation of California Environmental Quality Act (CEQA)-compliant documentation for the proposed Project. The purpose of this study is to provide the RCRPOSD with the necessary information and analysis to determine whether the Project would cause a significant adverse impact to any "historical resources," as defined by CEQA, that may exist in or around the Project Area. The Project will include the development of an equestrian and day-use staging area, which will accommodate a maximum of 15 trailer and truck combinations and 25 automobiles each within separate areas of the site. The project is expected to involve minimal clearing and grubbing, rough and finish grading, base compaction, placement and compaction of porous Class II base material, parking stall delineation, and perimeter control. Future development may include shade shelters, water, and pit style or plumbed toilets.

In order to identify any potential "historical resources," Amec Foster Wheeler conducted historical background research, completed an archaeological and historical resources records search, consulted the Native American Heritage Commission and appropriate tribal representatives and carried out an Extended Phase I pedestrian field survey. The qualifications of staff who participated in this study are detailed in **Appendix A** of the following report.

Prepared by: Mindy Boehm, Amec Foster Wheeler Date prepared: 11/14/2017 Basemap Source: USGS topo 7.5' Steele Peak Quad



Legend

- Project Site

0 1,000 2,000
Feet
1 in = 2,000 ft

C:\Users\mindy.boehm\Desktop\larcho\Harford Springs 1755400717\study.mxd

2.0 NATURAL SETTING

The Project Area situated on land owned by the Riverside County Regional Park and Open Space District (RCRPOSD), and is located in the Lake Mathews Neighborhood of unincorporated Riverside County, California, in the Gavilan Hills just northwest of the corner of Idaleona and Piedras Roads. The Project Area is undeveloped, containing relatively flat open areas and with gentle slopes and rock outcrops and is surrounded by undeveloped land and a few rural residences. The Project Area has moderate annual temperatures ranging from over 100°F in the summertime to just above freezing in the winter. The Project Area also contains an intermittent drainage at its southern boundary that flows to the southwest.

The Project Area contains Chaparral, Grassland, Riparian Scrub and Woodland and Forrest vegetation communities and a variety of other noxious and ruderal weeds and grasses. Disturbed areas (i.e., barren dirt roads and trails), as well as stretches of grubbed and graded land are also intermittently present throughout various areas of the Project Area. The majority of the surface sediments comprising the Project Area are comprised of 10YR 3/2 very dark gray brown sandy clay loam. It is estimated that the ground surface of the Project Area is 10% disturbed. The Project Area is currently vacant and is at an elevation of approximately 2,000 – 2,040 feet (610 – 622 meters)) above mean sea level (ASML). (**Figure 2**)



Figure 2. Representative Photograph of the Project Area, View Southwest

3.0 PREHISTORIC AND HISTORIC SETTING

3.1 Prehistoric Context

Numerous chronological sequences have been proposed for southern California, of these, two primary regional syntheses are commonly used in the archaeological literature. The first was proposed by Wallace in 1955, which is organized as four cultural horizons. They are Early Man Horizon, Millingstone, Intermediate, and Late Prehistoric. In 1986 Warren proposed a more ecological approach which defined five periods in southern California prehistory: Lake Mojave, Pinto, Gypsum, Saratoga Springs, and Protohistoric (**Table 1**).

Table 1.
Characteristics of the Prehistoric Periods of Riverside County

Colorado Desert ¹			Westernmost County ²		
Period	Chronological Range	Diagnostic Projectile Points	Period	Chronological Range	Diagnostic Artifacts/Features
Proto-historic	A.D. 1200 – 1850	Desert Side-notched	Late Prehistoric	A.D. 500 – historic	Ceramics, Cottonwood Triangular and Desert side-notched projectile points (arrow points), cremations
Saratoga Springs	A.D. 500 – 1200	Rosegate series; pottery	Intermediate	2000 B.C. – A.D. 500	Mortars, pestles, discoidals, abundant projectile points (dart points), land and sea mammal bone
Gypsum	2000 B.C. – A.D. 500	Elko Series, Gypsum, Humboldt series; T-shaped drills, occasional large scraper planes, mortar and pestle	Millingstone	6500 – 2000 B.C.	Metates, manos, cogstones, discoidals, core tools, paucity of projectile points, inhumations
Pinto	5000 – 2000 B.C.	Pinto series; heavy keeled scrapers, flat millingstones	Early Man	9000 B.C.? – 6500 B.C.	Large, often fluted, points, such as Clovis and Folsom types in association with extinct fauna
Lake Mojave	7000 – 5000 B.C.	Lake Mojave series; well-made bifacial knives and other cutting tools, large domed or keeled scrapers			

¹Warren 1984, 1986.

²Wallace 1955, 1962.

Warren presented cultural continuity and change in terms of various significant environmental shifts. These shifts were defined by a cultural ecological approach for archaeological research of the California deserts and coast. Cultural adaptations to a changing environment have resulted in adaptations in settlement patterns and subsistence that began with the gradual environmental warming in the late Pleistocene, the drying of the desert lakes during the early Holocene, the short return to pluvial conditions during the middle Holocene, and the general warming and drying trend, with periodic reversals, that continues to this day (Warren 1986).

Early Holocene Period

In southern California the Early Holocene Period is generally characterized as a hunting tradition, which dates from the earliest human presence, around 10,000 or 9000 B.C. in some areas, to approximately 5000 B.C. The Early Holocene Period focuses on big game hunting. This period is the earliest cited for the coast (Wallace 1955) as well as the California high desert (Warren 1984), but may actually be absent in California. With only a few isolated Clovis and Folsom points known for the desert region, the typical Clovis occupation, based on the hunting of large late Pleistocene megafauna, has yet to be demonstrated for California or neighboring areas.

In the California desert, the Lake Mojave Period (7000 to 5000 B.C.) is associated with the now-dry lakes. The Lake Mojave Period material culture is dominated by stylized dart points of the Lake Mojave and Silver Lake series, well-made bifacial knives and other cutting tools, large domed or keeled scrapers, and other characteristic artifact types (Wallace 1962). Ground stone tools are rare or absent at most sites.

Middle Holocene Period

Southern Coastal Millingstone traditions enjoyed a long history during the Early Holocene Period. In the desert, the Pinto Period (5000 to 2000 B.C.) followed the Lake Mojave Period. Climatic stress, with resultant changes in environment and staple resources, appears to have affected cultural adaptations. Plant and animal resources changed as lakes and rivers dried up. Warren (1984) postulated the populations adjusted to hostile arid conditions by moving to oases in the deserts or to the edges of the desert. This dry period was followed by a moister period in which people returned to the deserts and more plant resources were utilized (Wallace 1962; Warren 1984).

Milling equipment became more prevalent, but dart points, especially Pinto series points, still dominated the material culture. Heavy keeled scrapers, flat milling stones, and manos are still found and associated with sites from this period. Desert populations decreased during another dry spell that followed this wet period. This subsequently led into the Little Pluvial at about 2000 B.C. (Warren 1984). Sites in the Mojave Desert associated with the Pinto Period are generally small and usually limited to surface debris (Warren 1984).

The Millingstone Period persists until approximately 2000 or 1500 B.C. The Millingstone tools consist of metates and manos, informal cobble and flake tools but little to no bifacial tools. Diagnostic artifacts include discoidal and cogstone artifacts. This tool assemblage continues

into Intermediate times (Wallace 1955). Characteristic mortuary practice of the Millingstone Period includes interment beneath a cairn of milling stones or rocks.

An increase in exchange and interregional trade is noted in the Middle Holocene/Late Holocene transition. In inland regions, the start of the Little Pluvial and the start of the Gypsum Period (2000 B.C. to A.D. 500) coincide with Elko series points. The mortar and pestle are introduced during this period. This new tool set was an important innovation in seed processing technology. Manos and milling stones are commonly found at Gypsum Period sites. Flake scrapers see wider use, although the occasional large scraper plane is also found (Warren 1984). Minor (1975) suggests that the first of the pit and groove petroglyphs were produced during the latter half of the Gypsum Period.

During this time the earliest Takic migrations may have proceeded across the desert to the coast. The change from flexed burials to cremations is viewed as a Takic cultural trait. A shift in settlement patterns may also indicate the Takic migration into former Hokan territory (Moratto 1984).

Late Holocene Occupations

The Late Prehistoric Period began around A.D. 500 or 600 in the southern California coastal region. This period is marked by the introduction of small projectile points used with the bow and arrow (Wallace 1955). It continued until the time of European contact in A.D. 1769 with establishment of the Mission San Diego de Alcalá in San Diego, the first of 21 missions established by the Spanish in California. In the southern California desert region, cultural periods in this time frame include the Saratoga Springs Period (A.D. 500 to 1200) and the Protohistoric Period (A.D. 1200 to historic times, which is as late as 1850 in some locales) (Warren 1984).

The Saratoga Springs Period continues the successful adaptation to a desert environment through increasingly complex subsistence strategies and technology. These adaptations were influenced by the Hakataya Culture of the lower Colorado River area (Warren 1984). Pottery and projectile point types are distinguishing characteristics of the Saratoga Springs culture. Ceramic vessel technology appear first on the lower Colorado River approximately A.D. 800 and spread west into the southern California deserts by A.D. 900. Brown Ware and Buff Ware ceramics are found at Saratoga Springs Period sites. Associated with the use of ceramics are Desert Side-notched and Cottonwood triangular projectile points. Increased use of steatite for ornaments, beads, and pendants is also characteristic of this period (Warren 1984).

The Protohistoric Period sites contain flaked stone assemblages made almost exclusively of pressure flaked cryptocrystalline silicates (CCS). Sites of the Protohistoric Period exhibit an increase in the quantity of flake cores and large flake blanks, and a decrease density in flaked stone density. The Protohistoric Period is characterized by the continuation of the generalized archaic lifestyle based on hunting and gathering practices with a strong reliance on plant foods and small game (Warren 1984; Warren and Crabtree 1986). Another indicator of the Protohistoric Period is the presence of Obsidian Butte obsidian, especially at southern California sites (Wilke 1978).

3.2 Ethnographic Context

The Project Area is situated near the intersection of the traditional tribal boundaries of the Cahuilla, Gabrielino, and Luiseño (Bean and Smith 1978; Kroeber 1925). According to Bean (1978), the Cahuilla probably occupied the Project Area at the time of Spanish contact.

Typically, the native culture groups in southern California are named after nearby Spanish period missions, and such is the case for these coastal Takic populations. For instance, the term “Gabrielino” is applied to the natives inhabiting the region around Mission San Gabriel, and “Luiseño” was given to those native people living within the “ecclesiastical jurisdiction of Mission San Luis Rey ... [and who shared] an ancestral relationship which is evident in their cosmogony, and oral tradition, common language, and reciprocal relationship in ceremonies” (Oxendine 1983). The Cahuilla are one exception to this naming convention, as their territory was distant enough from the missions for them to be only marginally affected/assimilated by the missions in the last few years of the Spanish period.

The territory of the Cahuilla included most of Riverside County and portions of San Bernardino, San Diego, and Imperial Counties (Bean 1978). The territory of the Gabrielino included portions of Los Angeles, Orange, and San Bernardino Counties during ethnohistoric times, and also extended inland into northwestern Riverside County (Kroeber 1925; Bean and Smith 1978). The territory of the Luiseño included portions of San Diego, Riverside, and Orange Counties (Kroeber 1925; Bean and Smith 1978).

The Gabrielino, Cahuilla, and Luiseño were all hunters and gatherers; these Native American groups shared similar semi-sedentary lifestyles. They caught and collected seasonally available food resources, living in permanent communities along watercourses. Individuals from these villages took advantage of the varied resources available. Seasonally, as foods became available, native groups moved to temporary camps to collect plant foods and to conduct communal rabbit and deer hunts. Unlike the landlocked Cahuilla, the territories of the Gabrielino and Luiseño included coastline, allowing them to establish seasonal camps along the coast and near bays and estuaries to gather shellfish and hunt waterfowl (Hudson 1971).

Gabrielino

The Gabrielino were hunters and gatherers who utilized food resources along the coast as well as inland areas of Los Angeles, Orange, San Bernardino and Riverside Counties during ethnographic times (Kroeber 1925; Heizer 1968).

The lifestyle of the Gabrielino was considered semi-sedentary, living in permanent communities near inland watercourses and coastal estuaries. They caught and collected seasonally available food, and moved to temporary camps to collect plant resources such as acorns, buckwheat, berries, and fruit as well as conducting communal rabbit and deer hunts. Seasonal camps were also established along the coast and near estuaries where they would gather shellfish and hunt waterfowl (Hudson 1971).

Social organization for the Gabrielino was focused on families living in small communities. Patrilineally organized, extended families would occupy villages; both clans and villages would marry outside of the clan or village (Heizer 1968). The villages were administered by a chief whose position was patrilineal, passed from the father to the son. Spiritual and medical activities were guided by a shaman; group hunting and fishing were supervised by individually appointed male leaders (Bean and Smith 1978).

Cahuilla

The other Native American tribe inhabiting the Santa Ana River area was the Cahuilla, whose traditional territory encompassed diverse topography ranging from the Salton Sink to the San Bernardino Mountains and San Geronio Pass (Bean 1978; Kroeber 1925). The Cahuilla were generally divided into three groups: Desert Cahuilla, Mountain Cahuilla and Pass Cahuilla (Kroeber 1925). Like other Southern California Native American tribes, the Cahuilla were semi-nomadic peoples leaving their villages and using temporary camps near available plant and animal resources.

Cahuilla villages usually were in canyons or near adequate sources of water and food plants. The immediate village territory was owned in common by a lineage group or band. The other lands were divided into tracts owned by clans, families, or individuals. Trails used for hunting, trading, and social interaction connected the villages. Each village was near numerous sacred sites that included rock art panels (Bean and Shipek 1978).

Social organization of the Cahuilla was patrilineal clans and kinships groups known as moieties. Lineages within a clan cooperated in defense, subsistence activities, and religious ceremonies. Most lineages owned their own village sites and resource plots; although the majority of their territory was open to all Cahuilla people (Bean 1978).

Luisefño

Prior to Spanish occupation of California, the territory of the Luisefño extended along the coast from Agua Hedionda Creek to the south, Aliso Creek to the northwest, and the Elsinore Valley and Palomar Mountain to the east. These territorial boundaries were somewhat fluid and changed through time. They encompassed an extremely diverse environment that included coastal beaches, lagoons and marshes, inland river valleys and foothills, and mountain groves of oaks and evergreens (Bean 1978; Bean and Shipek 1978).

The Luisefño lived in small communities, which were the focus of family life. Patrilineally linked, extended families occupied each village (Kroeber 1925; Bean and Shipek 1978). The Luisefño believed in the idea of private property. Property rights covered items and land owned by the village as well as items (houses, gardens, ritual equipment, trade beads, eagle nests, and songs) owned by individuals. Trespass against any property was punished (Bean and Shipek 1978). Luisefño villages were politically independent, and were administered by a chief, who inherited his position from his father.

Luiseño subsistence was based primarily on seeds like acorns, grass seed, manzanita, sunflower, sage, chía, and pine nuts and game animals such as deer, rabbit, jackrabbit, wood rat, mice, antelope, and many types of birds (Bean and Shipek 1978). Seeds were dried and ground to be cooked into a mush. The Luiseño utilized fire for crop management and communal rabbit drives (Bean and Shipek 1978).

3.3 Historic Context and Overview

In California, the historic era is generally divided into three periods: the Spanish Period (1769 to 1821), the Mexican Period (1821 to 1848), and the American Period (1848 to present). Early exploration of the Riverside County area began slowly until 1772 when Lieutenant Pedro Fages, then the military governor of San Diego, crossed through the San Jacinto Valley.

Spanish Period

Substantial European settlement of California began with the establishment of 21 missions and 4 presidios between San Diego and Sonoma, most of which were located along the coast. The missions dominated economic and political life over most of the California region (Castillo 1978). During the Spanish Period, Riverside County was too far inland to include any missions or *asistencias* within its limits. The Juan Bautista de Anza expedition crossed the Colorado River and into California in January of 1774. This was his second expedition into Riverside County. Bautista de Anza, with his group of soldiers and their families, would ultimately form the new community at the Presidio of San Francisco (Beattie 1925).

With the Spanish intrusion of the late 18th century came a drastic change in lifestyle for the natives of Southern California. Incorporation of the indigenous populations into the mission system generally led to the disruption of native cultures and changes in subsistence and land use practices (Harley 1988).

Mexican Period

In 1821, Mexico overthrew Spanish rule and the missions began to decline. By 1833, the Mexican government passed the Secularization Act, and the missions, reorganized as parish churches, lost their vast land holdings, and released their neophytes. In 1834, a prominent group of Californians, including the Lugos, the Vallejos, the Picos, and the Ortegas, coerced Governor Figueroa in to creating the “Provisional Regulations.” These regulations made mission lands available for their occupation (Beattie and Beattie 1939).

During the Mexican Period, the ranchos were predominantly devoted to cattle, with great tracts of land used for grazing. Until the Gold Rush of 1849, livestock and horticulture dominated the economics of California. Sixteen ranchos were granted in Riverside County; one of these was the El Sobrante de San Jacinto, granted to Miguel de Pedorena and Rosario Estudillo de Aguirre, comprising over one hundred thousand acres (Beattie and Beattie 1939). The other nearby rancho from which the Riverside community and project development takes its name is La Sierra (meaning “the saw-toothed mountain range”). Sepulveda was granted by Mexican

Governor Pio Pico to Vicente Yorba in 1846. The Project Area is situated between the La Sierra and the El Sobrante de Jacinto Rancho lands (Beattie 1925; Beattie and Beattie 1951).

American Period

As travel along the Santa Fe Trail during the early American Period brought more settlers, the pattern of settlement developed along the Santa Ana and San Jacinto waterways. The Southern Pacific Railroad completed its line from Los Angeles through the San Geronio Pass in 1876. The trains were eventually used to transport settlers into the area, creating a period of agricultural and land development, ultimately resulting in the establishment of Riverside County in 1893. Transportation, agriculture, and the control of water have continued to be central themes in the settlement, development, and growth of Riverside County (Robinson 1979).

Riverside and Vicinity

The Project Area is located approximately 4 miles south of the riverside City limits in unincorporated Riverside County. The name Riverside was chosen at the first meeting of stockholders of Judge John W. North's newly-formed Southern Californian Colony Association in December 1870. Until that date, the colony had been called Gurupi because of its location on part of the Gurupi Rancho (North 1900:468) and mail had been delivered under that name. Dr. James P. Greves, Secretary of the Association, later recalled that the minority at the first meeting still favored Gurupi as the name. On June 19, 1889, the Riverside Press and Horticulturist, in an article detailing the history of the town, states that Dr. Greves, the "Father of Riverside," was the one to whom "we owe the name." In Judge North's 1871 pamphlet advertising the new town he wrote that "The Association have laid out a town ... east of the River, which, from its location, is called Riverside." Many years later, his son John G. North stated that the name Riverside was "more euphonious" than Gurupi because of its "reference to the Santa Ana River, from which the water supply of the new colony was derived" (North 1900; Gunther 1984).

Riverside lies nearly 50 miles southeast of Los Angeles among a series of foothills including Victoria Hills, Pedley Hill, and Jurupa, Spring, and Rubidoux Mountains. A system of arroyos leads from these foothills toward the Santa Ana River, which runs through the center of the Riverside plain. The largest of which, the Tesquesquite Arroyo, confined the development of the original town site of Riverside for over 40 years (Gunther 1984).

In September of 1870, John W. North and the Southern California Colony Association founded the City of Riverside. Lands were purchased from the Jurupa Rancho, surveyed and platted, and work began on an irrigation canal. A one-mile square town site, known as Mile Square, was the center of the commercial development and was surrounded by residential areas and 10-acre parcels to the north and south (Patterson 1996).

In 1888, after acquiring extensive water rights in the Riverside area, Matthew Gage constructed the canal that would bear his name to its terminus between the southern ends of John and McAllister Streets just east of the Project Area. The canal was a major facilitator of the development of the Riverside area (Lech 2004). Gage was not only a 'water baron' but also a

land speculator, acquiring 3,200 acres of land above the level of the Riverside Land & Irrigating Company canals in 1887. Arlington Heights was serviced by the canal and was first developed during the 1890s by Gage as a highly productive agricultural area specializing in citrus crops. The canal trends northeast to southwest passing through Grand Terrace, Highgrove, Canyon Crest Heights, and Arlington Heights; a distance of about 20 miles. The Gage Canal contributed extensively to the growth and development of the City of Riverside (Wlodarski 1992).

The Project Area is located approximately 4 miles south of the City of Riverside in the Harford Springs County Park. The Park is also variably known as the Harford Springs County Park or the Harford Springs Reserve and is a 325-acre park located within the Gavilan Hills, approximately four miles south of the Riverside City limits. The Park is largely undeveloped park is owned and managed by RCRPOSD for equestrian use as well as hiking and wildlife viewing. It remains relatively undeveloped and in a natural state.

4.0 METHODS AND RESULTS

4.1 Record Search

A record search for this study was conducted September 8, 2017 by Amec Foster Wheeler archaeologist Stephen Marts, B.S., at the Eastern Information Center (EIC) of University of California, Riverside. Information regarding previously identified resources and existing cultural resources reports within a mile radius of the Project Area were compiled, the results of which are provided below.

Resources consulted by the EIC indicate that no archaeological studies have been conducted within the Project Area and that 18 resource studies have been conducted within a mile of the Project Area, all of which have been cultural resource inventory surveys (**Table 2**). There have been no previously identified cultural resources recorded within the Project Area. The previous cultural resource studies conducted within a mile of the Project Area are listed below.

Table 2.
Previous Cultural Resource Studies within the Scope of the Records Search

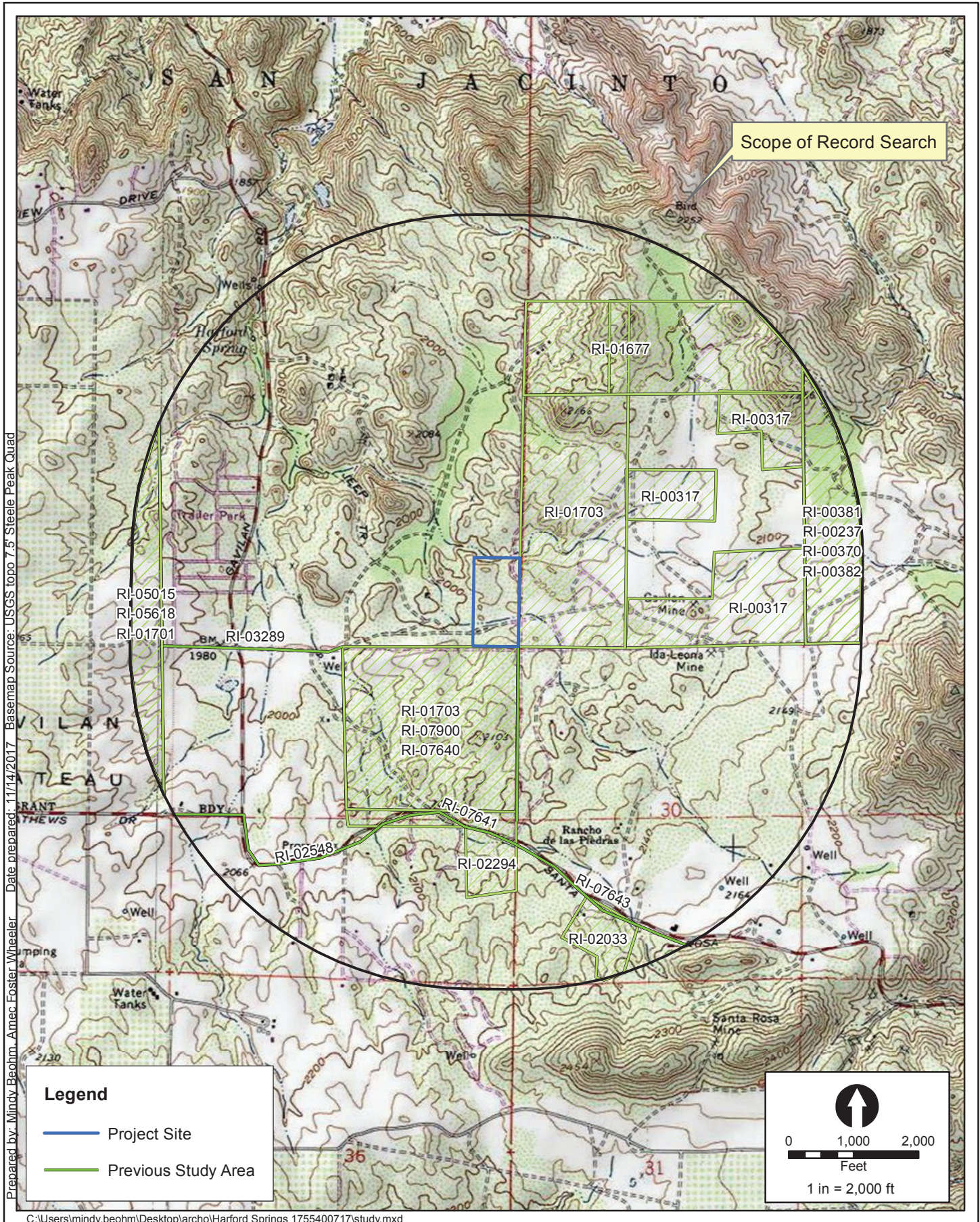
Previously Conducted Archaeological Studies within Scope of the Records Search		
Report Number	Author/Year	Report Title
RI-00237	Kenneth Daly 1977	Archaeological Assessment Of The W 1/2 Of The NW 1/4 Of Section 20, T4S, R4W, Steele Peak Quadrangle, Riverside County, California
RI-00317	Stephen Bouscaren 1978	Environmental Impact Evaluation: Archaeological Assessment Of 220 Acres INT The Ida Leona And Gavilan Mine Area, Riverside County, California
RI-00370	Ken Daly 1978	Results Of Surface Collection And Test Excavation At The Fiandaca Site (CA-Riv-1241_, Gavilan Plateau, Riveside County, California
RI-00381	Robert M. Laidlaw 1978	Environmental Impact Evaluation: Archaeological Assessment Of Tentative Tract 12326, Gavilan Hills Area Of Riverside County, California
RI-00382	Christopher E. Dover 1978	Environmental Impact Evaluation: Archaeological Assessment Of Tentative Tract 12326 And Surrounding Half-Section, Gavilan Hills Area Of Riverside County, California
RI-01677	Mccarthy, Daniel F. 1983	An Archaeological Assessment Of Tentative Parcel 19225, Gavilan Plateau Area Of Riverside County, California
RI-01701	Scientific Resource Surveys, Inc. 1983	Archaeological Assessment Report On: TPM 19283 Approximately 880 Acres, A Part Of Rancho El Sobrante And Idaleona Estates, Riverside County, California
RI-01703	Scientific Resource Surveys, Inc. 1983	Archaeological Assessment Report On: TPM 19284, Approximately 580 Acres , A Part Of Rancho El Sobrante And Idaleona Estates, Riverside County, California
RI-02033	Drover, C.E. 1986	An Archaeological Assessment Of Tentative Tract 21498, Gavilan Plateau, Riverside County, California
RI-02294	Mccarthy, Daniel F. 1988	An Archaeological Assessment Of TP 23149 Located In The Gavilan Plateau Area Of Western Riverside County, California
RI-02548	Mitchell, Mike 1989	Cultural Resource Inventory And Evaluation Of 19310 Santa Rose Mine Road Perris, California.

Previously Conducted Archaeological Studies within Scope of the Records Search		
Report Number	Author/Year	Report Title
RI-03289	Drover, Christopher E. 1991	A Cultural Resource Assessment: Western Municipal Water District, Ultimate Water System Project, Lake Mathews, Riverside County, California
RI-05015	Smith, Brian F. And Kyle M. Guerrero 2002	A Cultural Resources Study For The Gavilan Hills Project, County Of Riverside
RI-05618	Drover, Christopher E. 1997	Cultural Resources Impact And Constraints Assessment, The Gavilan Hills Golf Course Project, Riverside County, Ca
RI-07640	Smith, Brian F. And Shannon Gilbert 2003	An Archaeological Survey For The Gavilan Hills Parcel 160 Project And The Santa Rosa Mine Road Access Corridor
RI-07641	Cooley, Theodore And Andrea Craft 2008	Archaeological Survey Reportr For Southern California Edison Company Pawnee 12 Kv Oh Rebuild And Reconductor Dsp Project, Riverside County, California (Wo#6177-5421, Ai #5014)
RI-07643	Cooley, Theodore And Andrea Craft 2008	Archaeological Survey Report For Southern California Edison Company Pawnee 12 Kv Oh Rebuild And Reconductor Dsp Project, On Blm Parcel 321240007, Riverside County, California (Wo#6177-5421, Ai#6-5014)
RI-07900	Smith, Brian F. And Shannon Gilbert 2003	An Archaeological Survey For The Parcel 160 Project, County Of Riverside

A total of 35 resources have been previously recorded within a mile of the Project Area, with no resources previously recorded within the Project Area. A summary table and graphic representation detailing the previously recorded resources within the scope of the record search can be viewed in **Appendix B** of this report.

Thirty-three of the previously recorded resources within a mile of the proposed Project Area were prehistoric in origin and two were historic-era resources. Milling features are ubiquitous throughout the region and accounted for over 80% of the resources documented within a mile of the Project Area. Within a mile of the Project Area, the documented prehistoric sites include more than 100 milling features, lithic debitage, bone artifacts, lithic tools, and an occupation site containing milling features and at least two midden deposits. The two previously documented historic-era resources within a mile radius of the Project Area include a historic refuse scatter, mining features, a bridge and a dam.

Given the results of previous archaeological studies in the vicinity of the Project Area and the proximity of previously documented resources, the historic archaeological sensitivity of the Project Area and surrounding vicinity appear to be low-to-moderate, while the prehistoric archaeological sensitivity appears to be high.

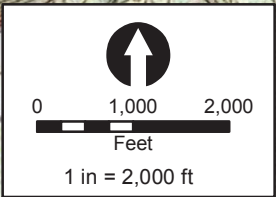


Prepared by: Mindy Boehm, Amec Foster Wheeler. Date prepared: 11/14/2017. Basemap Source: USGS topo 7.5' Steele Peak Quad

Scope of Record Search

Legend

- Project Site
- Previous Study Area



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Topographic Map
Previous Studies
Harford Springs Park

FIGURE

3

4.2 Native American Consultation

On September 27, 2017, Amec Foster Wheeler submitted a sacred lands file request to the Native American Heritage Commission (NAHC) to determine whether their files indicate the presence of cultural sites within or immediately adjacent to the Project Area. On September 29, 2017, the NAHC responded that the sacred lands record search did identify sites within the APE that may be impacted by the Project. The NAHC recommended that Amec Foster Wheeler contact the Pechanga Band of Luiseño Indians for more information about the sites within the APE. As noted in Section 4.1 of this report, no cultural resources have been previously documented within the Project Area per the SCCIC. In their September 29, 2017 letter, the NAHC also provided a list of thirty seven tribal representatives to contact regarding the Project and potential Native American resources within and surrounding the Project Area. With this information, Amec Foster Wheeler sent consultation letters on October 27, 2017, to the thirty seven NAHC-recommended tribal representatives to ascertain whether they had specific information regarding resources in or near the Project Area. Follow-up phone calls to each representative were made on November 15, 2017.

The NAHC-recommended tribal representatives contacted during the Native American consultation process are:

- Jeff Grubbe, Chairperson, Agua Caliente Band of Cahuilla Indians
- Patricia Garcia-Plotkin, Director, Agua Caliente Band of Cahuilla Indians
- Amanda Vance, Chairperson, Augustine Band of Cahuilla Mission Indians
- Doug Welmas, Chairperson, Cabazon Band of Mission Indians
- Daniel Salgado, Chairperson, Cahuilla Band of Mission Indians
- Ralph Goff, Chairperson, Campo Band of Mission Indians
- Michael Garcia, Vice Chairperson, Ewiiapaayp Tribal Office
- Robert Pinto, Chairperson, Ewiiapaayp Tribal Office
- Erica Pinto, Chairperson, Jamul Indian Village
- Thomas Rodriguez, Chairperson, La Jolla Band of Luiseño Indians
- Javaughn Miller, Tribal Administrator, La Posta Band of Mission Indians
- Gwendolyn Parada, Chairperson, La Posta Band of Mission Indians
- John Perada, Environmental Director, Los Coyotes Band of Mission Indians
- Shane Chapparosa, Chairperson, Los Coyotes Band of Mission Indians
- Nick Elliott, Cultural Resources Coordinator, Manzanita Band of Kumeyaay Nation
- Angela Elliot Santos, Chairperson, Manzanita Band of Kumeyaay Nation
- Robert Martin, Chairperson, Morongo Band of Mission Indians
- Denisa Torres, Cultural Resources Manager, Morongo Band of Mission Indians

- Shasta Gaughen, Tribal Historic Preservation Manager, Pala Band of Mission Indians
- Temet Aguilar, Chairperson, Pauma Band of Luiseño Indians-Pauma & Yuima Reservation
- Paul Macarro, Cultural Resources Coordinator, Pechanga Band of Luiseño Indians
- Mark Macarro, Chairperson, Pechanga Band of Luiseño Indians
- Joseph Hamilton, Chairperson, Ramona Band of Cahuilla Mission Indians
- John Gomez, Environmental Coordinator, Ramona Band of Cahuilla Mission Indians
- Jim McPherson, Tribal Historic Preservation Officer, Rincon Band of Mission Indians
- Bo Mazzetti, Chairperson, Rincon Band of Mission Indians
- Allen E. Lawson, Chairperson, San Pasqual Band of Mission Indians
- John Flores, Environmental Coordinator, San Pasqual Band of Mission Indians
- Steven Estrada, Chairperson, Santa Rosa Band of Mission Indians
- Carrie Garcia, Cultural Resources Manager, Soboba Band of Luiseño Indians
- Joseph Ontiveros, Cultural Resources Department, Soboba Band of Luiseño Indians
- Scott Cozart, Chairperson, Soboba Band of Luiseño Indians
- Lisa Haws, Cultural Resources Manager, Sycuan Band of the Kumeyaay Nation
- Cody J. Martinez, Chairperson, Sycuan Band of the Kumeyaay Nation
- Michael Mirelez, Cultural Resources Coordinator, Torres-Martinez Desert Cahuilla Indians
- Julie Hagen, Viejas Band of Kumeyaay Indians
- Robert Welch, Chairperson, Viejas Band of Kumeyaay Indians

As of this time, 12 tribal representatives have responded to the October 27, 2017, consultation letter. Three replied via letter, two by email and seven via telephone. The replies made by mail included those from the Pechanga Band, Soboba Band and the Viejas Band. Viejas Band Resource Manager Ray Teran stated that the Project Area is of little cultural significance to the Tribe, but requested to be notified of any cultural resources discovered. Joseph Ontiveros of the Soboba Band stated that the project location is in proximity to known sites, is a shared use area that was used in ongoing trade between the tribes, and is considered to be culturally sensitive by the people of Soboba. He asked that the lead agency initiate and continue correspondence with the Tribe, that he receive project information, that the Tribe have the opportunity to monitor any ground disturbing activities during project implementation, that the proper procedures and requests of the Tribe be honored and included a regulatory framework for the treatment of cultural items and human remains. Planning Specialist Tuba Ebru Ozdil of the Pechanga Band stated that the Project Area is in a highly sensitive area for cultural resources and human remains and asked that a qualified archaeologist and Pechanga Tribe monitor be present during future earthmoving activities (including tree removal). She also asked to be notified of the

entitlement process, asked to receive all pertinent archaeological reports, resource files and grading plans. Ms. Ozdil also requested formal government-to-government consultation with the Lead Agency.

All telephone conversations took place on November 15, 2017. Amanda Vance's staff member (of the Augustine Band) stated that she would reply to the letter at a later time. Chairperson Rodriguez, of the La Jolla Band, deferred to the Pechanga Band. Veronica Santos of the Manzanita Band stated that Mr. Elliot is no longer serving as Cultural Resources Coordinator and she wrote down a message for Angela Elliot Santos. Denisa Torres from the Morongo Band stated that she would reply to the letter at a later time.

The administrative assistant to Joseph Hamilton, Chairperson of the Ramona Band deferred to Environmental Coordinator John Gomez. A voicemail was left with Mr. Gomez the same day. On behalf of the Agua Caliente Band, Patricia Garcia-Plotkin deferred to local tribes. The administrative assistant to Chairperson Bo Mazzetti of the Rincon Band deferred to Cultural Resources Department, who stated that they reply to the letter at a later time. The administrative assistant to Chairperson Steven Estrada of the Santa Rosa Band asked that any follow up questions be emailed to him. An email was sent to Chairperson Estrada on November 15, 2017. On behalf of the Pauma Band, Chris Devers stated via email that they would like copy of cultural report when completed and wanted to confirm the Project Area footprint. Reply was sent November 20, 2017 confirming Project Area footprint and offering report once finalized.

The remaining Tribal representatives were called on November 15, 2017, but have not replied as of this time.

4.3 Field Survey

An intensive field survey of the Project Area was conducted on November 22, 2017, and limited subsurface testing along Features B and C (two cobble concentrations) of Site-001 (P-33-028089) was conducted on February 23, 2018. The work was conducted by Amec Foster Wheeler senior archaeologist Jesse Yorck, RPA and Stephen Marts, B.A. The Pechanga Band of Luiseño Indians were contacted prior to the field survey and invited to participate, and were able to have Pechanga Band lead monitor Tony Foussat make a site visit during the February 23, 2018 shovel testing effort. The methodology of the pedestrian survey included walking east-west transects of the entire Project Area, spaced no more than 15 meters (approximately 49.2 ft.) apart. The ground surface was visually inspected for any signs of human use dating to more than 50 years old. Areas with disturbed or exposed soils were particularly scrutinized for indications of cultural materials. Ground visibility was generally fair-to-good (60-70%). Modern trash including rusted metal objects and cans used for target practice were observed on the ground surface. These items did not have historic or archaeological value. It appears as though approximately 10% of the Project Area ground surface has been previously disturbed by the construction and maintenance of access roads and trails.

Two historic-era resources were encountered during the intensive field survey. The resources were comprised of an isolated hole-in-top can (ISO-001 [P-33-028090]) and SITE-001 (P-33-028089), which is a historic campsite. SITE-001 (P-33-028089) is comprised of a can scatter measuring 31 feet north/south by 8 feet east/west and two fire pits. The site and isolate have

been documented on California Department of Parks and Recreation Series 523 site forms, which can be found in **Appendix C** of this report.

In order to establish whether a subsurface component of Features A & B, SITE-001 (P-33-028089) exists, a subsurface testing effort, in the form of two 50 cm diameter shovel test probes (STPs) was conducted. All sediments were excavated in arbitrary 10 centimeter (cm) levels and sifted through a ¼ inch mesh screen. Two shovel test probes (STPs) were excavated, one each adjacent to Feature B and Feature C, during which a small amount of historic refuse and evidence of a localized fire was found adjacent to Feature C. No cultural materials were found in STP 1 adjacent to Feature B. The sediments encountered in the two STPs consisted of 10 YR 3/2 to 3/3 (brown to dark brown) sandy clay loam from approximately 0-3 centimeters below surface (cmbs), 10 YR 4/3 brown cemented silty clay with large roots from approximately 3-25 cmbs and 7.5 YR 4/3 heavily cemented brown silty clay with decomposing granite inclusions from approximately 25-50 cmbs. STP 1 (at Feature B) was terminated at 53 cmbs and STP 2 (at Feature C) was terminated at 50 cmbs due to impenetrable, cemented clay and decomposing granite. STP 2 contained charcoal, ash, melted glass, a wire nail and a staple from 0-3 cmbs. These are all indicative of a localized fire and associated camping activities. No other cultural materials were encountered during the subsurface testing effort. SITE-001 (P-33-028089) is interpreted as a mid-20th century campsite comprised of a can scatter and two fire rings. The locations of STP 1&2 and their proximity to SITE-001 (P-33-028089) can be found in **Appendix C** of this report.

5.0 DISCUSSION AND RECOMMENDATIONS

5.1 Discussion

The purpose of the subject study is to establish whether resources dating to the historic and/or prehistoric periods exist near or immediately adjacent to the Project Area to support the City of Riverside in determining whether the proposed Project will have any significant effects on historical resources.

The California Environmental Quality Act (CEQA), as established in the State of California's Public Resources Code (PRC) defines the criteria for historical resources. As defined by to PRC §5020.1(j), a historical resource consist 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 (Title 14 CCR §15064.5(a)(1)-(3)). A resource may be eligible for listing in the California Register if it meets any one of the ensuing criteria:

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. (PRC §5024.1(c))

In addition to CEQA Criteria, Riverside County has established criteria for listing a resource as a Riverside County Historical Landmark (*Riverside County Historical Landmarks* 2008). To be eligible for this distinction the historical resource must be significant under one or more of the following criteria in order to qualify for listing as a Riverside County Historical Landmark.

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.

During the Extended Phase I Cultural Resources Inventory, an isolated hole-in-top can (ISO-001 [P-33-028090]) and a historic campsite, SITE-001 (P-33-028089), were encountered. Two STPs were excavated at SITE-001 (P-33-028089), one each at Features A&B, to ascertain whether or not the Site contained a subsurface cultural resource component.

5.2 Recommendations

Through the research and inventory methodologies described in this report, this study did not encounter any historical resources, as defined by CEQA, or any historic properties, as defined by NHPA, within the Project Area. During the Extended Phase I Cultural Resources Inventory, two resources, comprised of a hole-in-top can (ISO-001 [P-33-028090]) and a historic campsite (SITE-001 [P-33-028089]) were encountered. Features B&C of SITE-001 underwent shovel testing with positive results at Feature C (STP 2). The ash, charcoal and historic artifacts found in the top 3 centimeters of STP 2 strongly support that Features C is a historic fire ring and is temporally and spatially associated with Feature A (can scatter). Feature B is almost identical to Feature C in appearance and likely also functioned as a fire ring.

By definition ISO-001 (P-33-028090) is an isolate and is not eligible for the CRHR. SITE-001 (P-33-028089) is older than 50 years, but is not associated with a significant historic event or broad patterns in history (Criterion 1 of the CRHR), is not associated with persons of historical significance (Criterion 2 of the CRHR), does not have distinctive characteristics (Criterion 3 of the CRHR), and isn't likely to yield important data (Criterion 4 of the CRHR). Therefore, SITE-001 (P-33-028089) does not appear eligible for the CRHR or the NRHP and does not qualify as a "historical resource" under CEQA, nor is it eligible as a Riverside County Historical Landmark.

Through the research approaches listed above, this study did not encounter any "historical resources" within the Project Area. Aside from SITE-001 (P-33-028089) and ISO-001 (P-33-028090), no other historic or prehistoric resources were encountered within the Project Area during this study. Amec Foster Wheeler recommends to the RCRPOSD that no historical resources exist within the Project Area for the purposes of CEQA. No further cultural resource studies are necessary at this time. If cultural resources are encountered during the undertaking, all work shall cease and the RCRPOSD will be notified immediately and will retain a qualified archaeologist to assess the nature of the find.

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Harford Springs Park Day-Use Staging Area Project
Unincorporated Riverside County, California
Amec Foster Wheeler No. 1755400717
June 2018

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APPENDIX A

PERSONNEL QUALIFICATIONS



amec
foster
wheeler

Jesse Yorck, M.A., RPA

Senior Archaeologist / Principal Investigator

Professional summary

Mr. Yorck is a Principal Investigator who meets the federal standards (per 36 CFR, Part 61) for archaeology and has been listed as a Registered Professional Archaeologist. With over 18 years of experience in cultural resource management, he has worked primarily in the private sector but also for federal, state and Native American agencies. This has given him experience in serving clients as a private consultant and also as a government compliance officer. He currently serves as a Principal Investigator for Amec Foster Wheeler, overseeing the California cultural resources program. Mr. Yorck has extensive experience writing and reviewing NEPA, CEQA and NHPA Section 106 documents and in all forms archaeological fieldwork, research and reporting. This includes archival research, editing and reviewing cultural assessments, cultural resource inventory surveys, monitoring reports, burial treatment plans and literature review reports in addition to drafting proposals and scopes of work. He has extensive experience in leading and performing burial treatment efforts, archaeological monitoring, archaeological assessments, archaeological inventory surveys, data recovery, predeterminations and cultural impact assessments.

Professional qualifications/registration(s)

Registered Professional Archaeologist (RPA)

Extensive Experience as Principal Investigator in California, Oregon, Idaho, Washington and Hawaii. Has overseen NEPA-compliant archaeological context studies in Minnesota, Michigan, Mississippi, New Mexico, Oklahoma, South Dakota and Tennessee.

Education

MA, the Center for Pacific Island Studies (archaeology focus), University of Hawaii, 2009

BA, Anthropology, University of Hawaii, 2002

Memberships/affiliations

Register of Professional Archaeologists

Society for American Archaeology

Society for California Archaeology

Employment history

AMEC Foster Wheeler, Santa Barbara, CA, Senior Archaeologist/Principal Investigator, 2015-current

CRM TECH, Colton, CA, Archaeologist/Report Writer, 2015-2016

Environmental Science Associates, Seattle, WA, Senior Archaeologist/Principal Investigator, 2014-2015

Bonneville Power Administration, Portland, OR, Archaeologist/Principal Investigator, 2012-2014

Warm Springs Geo Visions, Warm Springs Indian Reservation, OR, Lead Archaeologist, 2012

Willamette Cultural Resource Associates, Ltd, Portland, OR, Archaeologist, 2011

Pacific Consulting Services, Honolulu, HI, Senior Archaeologist, 2010-2011

Office of Hawaiian Affairs, Honolulu, HI, Lead Advocate-Historic Preservation, 2007-2009

Office of Hawaiian Affairs, Honolulu, HI, Policy Advocate-Native Rights, Land and Culture, 2005-2007

Cultural Surveys Hawaii, Inc., Kailua, HI, Supervising Archaeologist, 1998-2005

Representative projects:

Ventura Downtown Triangle Project, Ventura County, CA -2017

Mr. Yorck oversaw the record search and archival material collection and analysis as Principal Investigator for the development project. Recommendations for appropriate cultural resources considerations were made to the City of Ventura, who serve as the lead agency for the proposed development

Twinberry Wireless Collocation Project, San Bernardino County, CA -2017

As Principal Investigator for the Federal Communications Commission-compliant archaeological study, Mr. Yorck oversaw and conducted archival research, Native American and local jurisdiction consultation, project-specific legal advertisement and a Phase I cultural resources inventory survey.

Leviathan Mine Superfund Project, Alpine County, CA -2017

Mr. Yorck served as the Principal Investigator for the multi-year environmental clean-up project in Alpine County, California. The scope of cultural resource management responsibilities entail overseeing and conducting pedestrian surveys and

submitting NRHP-eligibility determinations for documented resources, as well as coordinating and overseeing the on-site archaeological and Native American monitoring of construction activities.

West Los Angeles Veteran's Affairs Hospital Geotechnical Borings, Los Angeles County, CA – 2017

Mr. Yorck served as the Principal Investigator and oversaw archaeological monitoring and reporting for a geotechnical study in support of the LA Metro Purple Line extension project in Los Angeles.

Sweetwater Dam and South Dike Improvements Project, San Diego County, CA – 2017

Mr. Yorck served as the Principal Investigator for the Dam improvements project on behalf of the Sweetwater Authority. The Phase I cultural resources inventory included the assessment of the dam and dike facilities as related to their historic significance and integrity. The Sweetwater Dam, built between 1886 and 1888, in conjunction with the National City & Otay Railway, brought commerce to the area and enabled the transformation of the Sweetwater Valley into a major citrus production and farming center of San Diego County. The Dam was recommended eligible for the National Register of Historic Places in 1988.

Phillips 66 Pipeline Anomaly Project, San Luis Obispo County, CA -2017

Mr. Yorck Served as the Principal Investigator for an archaeological constraints study in Nipomo, CA.

Tesoro Line 1 Drain Down Project, Angles and Los Padres National Forest, Los Angeles County, CA – 2017

Mr. Yorck conducted the pre-construction archaeological survey and served as the Principal Investigator and assistant Project Manager for the repair to an abandoned oil pipeline which was found to have been leeching contaminants into the surrounding ground water.

Kinder Morgan Energy Partners, LP, CalNev Pipeline Exposure Repair Project, San Bernardino County, CA – 2017

Mr. Yorck served as the field director and Project Manager for a pipeline exposure repair project near Baker and Mountain Pass, CA. During the Class III study, various historic and prehistoric cultural resources were identified and evaluated in and near the APE.

Southern California Gas Company, Public Safety Enhancement Plan, Line 38-1102 Remediation, Kern County, CA - 2016

Mr. Yorck served as Principal Investigator for the identification and evaluation of historical and archaeological resources within the vicinity of the Line 38-1102 easement. He analyzed the archaeological and historical sensitivity of the proposed project area and made recommendations to avoid and minimize effects to them.

Ruth-Zenia and Van Duzen Road Rehabilitation Project, Trinity County, CA -2016

As Principal Investigator for a Federal Highways Administration road improvement project within the Six Rivers National Forest, Mr. Yorck oversaw and contributed to a Phase I cultural resources inventory resulting in the recordation of several historic-era resources.

Baron Ranch Trail Realignment Project, Santa Barbara County, CA -2016

Mr. Yorck served as the Principal Investigator for the proposed trail improvement project, documenting and mitigating the impacts to prehistoric cultural resources documented during the Phase I cultural resources inventory.

Panoche Valley Solar Project, San Benito County, CA -2017

Mr. Yorck serves as the Principal Investigator for the multi-year renewable energy project in San Benito County. Mr. Yorck's responsibilities include serving as the lead of cultural resources staff and cultural resources liaison to the Santa Rosa Rancheria Tribe and the lead agency.

Perris Valley Line Positive Train Control Project, Riverside County, CA -2016

Mr. Yorck prepared Federal Communication Commission Forms 620 and 621 for the evaluation on historic properties within the Area of Potential Effect for the Southern California Regional Rail Authority light rail communications improvement project in Riverside County. The evaluations were conducted per Section 106 of the NHPA and the FCC National Programmatic Agreement.

Southern California Gas Company Line 3000 Deep Well Anode Project, San Bernardino County, CA -2016

Mr. Yorck Served as field director and Project Manager for a Class III survey of five well anode locations along an existing transmission line within lands owned and managed by the U.S. Bureau of Land Management. Several historic-era resources were documented, but did not require additional mitigation for the project to move forward.

Sorrel Trail Tower, U.S. Bureau of Land Management, Near the City of Victorville, San Bernardino County, CA. -2016

Conducted Class III pedestrian survey on BLM land resulting in the identification of historic-era cultural resources.

Phelan Piñon Hills Community Service District Water Blending Project, Near the Communities of Phelan and Piñon Hills, San Bernardino County, CA. -2016

Conducted Phase I inventory survey and authored corresponding NHPA cultural resources inventory report. Historic highway segment and powerline addressed during study.

Tuscan Hills Residential Community, City of Desert Hot Springs Riverside County, CA.

Authored Phase I cultural resources inventory report summarizing the identification and evaluation of historic properties for a CEQA compliant study.

Victor Valley Wastewater Reclamation Authority New Laboratory Project, Near the Community of Oro Grande, San Bernardino County, CA.

Authored report summarizing the identification and evaluation of historic properties for a NHPA compliant study.

Hesperia Reclamation Pipeline Alignment Project, City of Hesperia, San Bernardino County, CA. -2015

Oversaw the subsurface testing of a known prehistoric lithic site and authored report detailing the findings.

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APPENDIX B

PREVIOUSLY RECORDED CULTURAL RESOURCES

(CONFIDENTIAL)

Riverside Regional Park and Open Space District
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APPENDIX C

DEPARTMENT OF PARKS AND RECREATION SERIES 523 SITE FORMS

(CONFIDENTIAL)

Riverside Regional Park and Open Space District
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APPENDIX D

NATIVE AMERICAN SCOPING DOCUMENTATION

(CONFIDENTIAL)

APPENDIX D
CalEEMod AIR QUALITY MODELING

Harford Springs Staging Area Project - Riverside-South Coast County, Annual

Harford Springs Staging Area Project
Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	78.72	1000sqft	1.81	78,720.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	702.44	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Harford Springs Staging Area Project - Riverside-South Coast County, Annual

Project Characteristics -

Land Use -

Construction Phase - Based on Construction Details provided by the County. Assume installation of site furnishings and signage and striping occur concurrent with fencing installation. Assume 7-day work week due to lack of policy prohibiting work on Saturdays and Sundays.

Off-road Equipment - Crew Trucks

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Reduction to 2 tractors due to limited scope of site

Off-road Equipment - Crew Trucks

Trips and VMT - Vendor trips for deliver of fencing, site furnishings, and signs

On-road Fugitive Dust - Changed % paved based on gravel/dirt entrance to Project site

Demolition - No demolition

Grading - Balanced site, per County-provided materials

Vehicle Trips - ITE Trip Generation Rate for Public Park is 0.11 per acre. (0.11 * 527 acres = 57.97 trips per day) and divided by 78.72 to present for the size metric

Trip length, and trip diversion rates based on default CalEEMod assumptions for a City Park land use

Road Dust - Based on gravel/dirt entrance to Project site

Construction Off-road Equipment Mitigation - SCAQMD Fugitive Dust Rule

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	10.00	7.00
tblConstructionPhase	NumDays	200.00	21.00
tblConstructionPhase	NumDays	200.00	7.00
tblConstructionPhase	NumDays	4.00	21.00
tblConstructionPhase	NumDays	10.00	14.00

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tblConstructionPhase	NumDays	2.00	7.00
tblConstructionPhase	NumDays	2.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblGrading	AcresOfGrading	10.50	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOnRoadDust	HaulingPercentPave	100.00	95.00
tblOnRoadDust	HaulingPercentPave	100.00	95.00
tblOnRoadDust	HaulingPercentPave	100.00	95.00
tblOnRoadDust	HaulingPercentPave	100.00	95.00
tblOnRoadDust	HaulingPercentPave	100.00	95.00
tblOnRoadDust	HaulingPercentPave	100.00	95.00
tblOnRoadDust	VendorPercentPave	100.00	95.00
tblOnRoadDust	VendorPercentPave	100.00	95.00
tblOnRoadDust	VendorPercentPave	100.00	95.00
tblOnRoadDust	VendorPercentPave	100.00	95.00

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tblOnRoadDust	VendorPercentPave	100.00	95.00
tblOnRoadDust	VendorPercentPave	100.00	95.00
tblOnRoadDust	WorkerPercentPave	100.00	95.00
tblOnRoadDust	WorkerPercentPave	100.00	95.00
tblOnRoadDust	WorkerPercentPave	100.00	95.00
tblOnRoadDust	WorkerPercentPave	100.00	95.00
tblOnRoadDust	WorkerPercentPave	100.00	95.00
tblOnRoadDust	WorkerPercentPave	100.00	95.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblRoadDust	RoadPercentPave	100	95
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	13.00	4.00
tblTripsAndVMT	VendorTripNumber	13.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	8.00	10.00
tblTripsAndVMT	WorkerTripNumber	5.00	14.00
tblTripsAndVMT	WorkerTripNumber	33.00	10.00
tblTripsAndVMT	WorkerTripNumber	33.00	10.00
tblTripsAndVMT	WorkerTripNumber	7.00	4.00
tblVehicleTrips	CC_TTP	0.00	48.00
tblVehicleTrips	CNW_TTP	0.00	19.00
tblVehicleTrips	CW_TTP	0.00	33.00
tblVehicleTrips	DV_TP	0.00	28.00
tblVehicleTrips	PB_TP	0.00	6.00
tblVehicleTrips	PR_TP	0.00	66.00
tblVehicleTrips	ST_TR	0.00	0.74
tblVehicleTrips	SU_TR	0.00	0.74

Harford Springs Staging Area Project - Riverside-South Coast County, Annual

tblVehicleTrips	WD_TR	0.00	0.74
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2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0383	0.2763	0.1783	3.7000e-004	0.6275	0.0132	0.6407	0.0886	0.0122	0.1007	0.0000	32.4912	32.4912	8.4100e-003	0.0000	32.7015
Maximum	0.0383	0.2763	0.1783	3.7000e-004	0.6275	0.0132	0.6407	0.0886	0.0122	0.1007	0.0000	32.4912	32.4912	8.4100e-003	0.0000	32.7015

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0383	0.2763	0.1783	3.7000e-004	0.1951	0.0132	0.2083	0.0311	0.0122	0.0432	0.0000	32.4912	32.4912	8.4100e-003	0.0000	32.7014
Maximum	0.0383	0.2763	0.1783	3.7000e-004	0.1951	0.0132	0.2083	0.0311	0.0122	0.0432	0.0000	32.4912	32.4912	8.4100e-003	0.0000	32.7014

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	68.91	0.00	67.49	64.91	0.00	57.07	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	7-1-2020	9-30-2020	0.3146	0.3146
		Highest	0.3146	0.3146

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	6.2800e-003	1.0000e-005	1.0100e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.9500e-003	1.9500e-003	1.0000e-005	0.0000	2.0800e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0196	0.1674	0.2440	1.0000e-003	3.6598	9.5000e-004	3.6607	0.3764	8.9000e-004	0.3773	0.0000	92.5277	92.5277	4.9100e-003	0.0000	92.6504
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0259	0.1674	0.2450	1.0000e-003	3.6598	9.5000e-004	3.6607	0.3764	8.9000e-004	0.3773	0.0000	92.5297	92.5297	4.9200e-003	0.0000	92.6524

Harford Springs Staging Area Project - Riverside-South Coast County, Annual

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	6.2800e-003	1.0000e-005	1.0100e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.9500e-003	1.9500e-003	1.0000e-005	0.0000	2.0800e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0196	0.1674	0.2440	1.0000e-003	3.6598	9.5000e-004	3.6607	0.3764	8.9000e-004	0.3773	0.0000	92.5277	92.5277	4.9100e-003	0.0000	92.6504
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0259	0.1674	0.2450	1.0000e-003	3.6598	9.5000e-004	3.6607	0.3764	8.9000e-004	0.3773	0.0000	92.5297	92.5297	4.9200e-003	0.0000	92.6524

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

3.0 Construction Detail

Construction Phase

Harford Springs Staging Area Project - Riverside-South Coast County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Mobilization and Securing Site	Site Preparation	7/1/2020	7/7/2020	7	7	
2	Grading and Boulder Placement	Grading	7/8/2020	7/28/2020	7	21	
3	Concrete Forming and Placing	Paving	7/29/2020	8/11/2020	7	14	
4	Fencing and Hitching Posts	Building Construction	8/11/2020	8/31/2020	7	21	
5	Installing Site Furnishings	Building Construction	8/17/2020	8/23/2020	7	7	
6	Signage and Striping	Architectural Coating	8/18/2020	8/24/2020	7	7	
7	Clean Up and Demobilization	Site Preparation	9/1/2020	9/7/2020	7	7	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 1.81

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 4,723 (Architectural Coating – sqft)

OffRoad Equipment

Harford Springs Staging Area Project - Riverside-South Coast County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Mobilization and Securing Site	Off-Highway Trucks	1	1.00	402	0.38
Mobilization and Securing Site	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading and Boulder Placement	Graders	1	8.00	187	0.41
Grading and Boulder Placement	Plate Compactors	1	8.00	8	0.43
Grading and Boulder Placement	Rubber Tired Dozers	1	7.00	247	0.40
Grading and Boulder Placement	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Concrete Forming and Placing	Cement and Mortar Mixers	1	8.00	9	0.56
Concrete Forming and Placing	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Fencing and Hitching Posts	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Installing Site Furnishings	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Signage and Striping	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Clean Up and Demobilization	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Mobilization and Securing Site	3	10.00	2.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading and Boulder Placement	4	10.00	0.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT
Concrete Forming and Placing	2	14.00	0.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT
Fencing and Hitching Posts	1	10.00	4.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT
Installing Site Furnishings	1	10.00	4.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT
Signage and Striping	1	4.00	2.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT
Clean Up and Demobilization	1	3.00	0.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Mobilization and Securing Site - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7600e-003	0.0175	0.0176	3.0000e-005		1.0300e-003	1.0300e-003		9.5000e-004	9.5000e-004	0.0000	2.4174	2.4174	7.8000e-004	0.0000	2.4370
Total	1.7600e-003	0.0175	0.0176	3.0000e-005	0.0000	1.0300e-003	1.0300e-003	0.0000	9.5000e-004	9.5000e-004	0.0000	2.4174	2.4174	7.8000e-004	0.0000	2.4370

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3.2 Mobilization and Securing Site - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-005	7.6000e-004	1.5000e-004	0.0000	3.8100e-003	0.0000	3.8100e-003	3.9000e-004	0.0000	3.9000e-004	0.0000	0.1899	0.1899	1.0000e-005	0.0000	0.1903
Worker	2.0000e-004	1.5000e-004	1.5600e-003	0.0000	0.0476	0.0000	0.0476	4.8300e-003	0.0000	4.8300e-003	0.0000	0.4311	0.4311	1.0000e-005	0.0000	0.4314
Total	2.2000e-004	9.1000e-004	1.7100e-003	0.0000	0.0514	0.0000	0.0514	5.2200e-003	0.0000	5.2200e-003	0.0000	0.6210	0.6210	2.0000e-005	0.0000	0.6216

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7600e-003	0.0175	0.0176	3.0000e-005		1.0300e-003	1.0300e-003		9.5000e-004	9.5000e-004	0.0000	2.4174	2.4174	7.8000e-004	0.0000	2.4370
Total	1.7600e-003	0.0175	0.0176	3.0000e-005	0.0000	1.0300e-003	1.0300e-003	0.0000	9.5000e-004	9.5000e-004	0.0000	2.4174	2.4174	7.8000e-004	0.0000	2.4370

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3.2 Mobilization and Securing Site - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-005	7.6000e-004	1.5000e-004	0.0000	1.1400e-003	0.0000	1.1500e-003	1.2000e-004	0.0000	1.3000e-004	0.0000	0.1899	0.1899	1.0000e-005	0.0000	0.1903
Worker	2.0000e-004	1.5000e-004	1.5600e-003	0.0000	0.0142	0.0000	0.0142	1.5000e-003	0.0000	1.5000e-003	0.0000	0.4311	0.4311	1.0000e-005	0.0000	0.4314
Total	2.2000e-004	9.1000e-004	1.7100e-003	0.0000	0.0154	0.0000	0.0154	1.6200e-003	0.0000	1.6300e-003	0.0000	0.6210	0.6210	2.0000e-005	0.0000	0.6216

3.3 Grading and Boulder Placement - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0564	0.0000	0.0564	0.0305	0.0000	0.0305	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0175	0.1953	0.0832	1.9000e-004		8.7200e-003	8.7200e-003		8.0300e-003	8.0300e-003	0.0000	16.2113	16.2113	5.1700e-003	0.0000	16.3405
Total	0.0175	0.1953	0.0832	1.9000e-004	0.0564	8.7200e-003	0.0651	0.0305	8.0300e-003	0.0386	0.0000	16.2113	16.2113	5.1700e-003	0.0000	16.3405

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3.3 Grading and Boulder Placement - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.1000e-004	4.4000e-004	4.6900e-003	1.0000e-005	0.1427	1.0000e-005	0.1427	0.0145	1.0000e-005	0.0145	0.0000	1.2933	1.2933	3.0000e-005	0.0000	1.2940
Total	6.1000e-004	4.4000e-004	4.6900e-003	1.0000e-005	0.1427	1.0000e-005	0.1427	0.0145	1.0000e-005	0.0145	0.0000	1.2933	1.2933	3.0000e-005	0.0000	1.2940

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0241	0.0000	0.0241	0.0131	0.0000	0.0131	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0175	0.1953	0.0832	1.9000e-004		8.7200e-003	8.7200e-003		8.0300e-003	8.0300e-003	0.0000	16.2112	16.2112	5.1700e-003	0.0000	16.3405
Total	0.0175	0.1953	0.0832	1.9000e-004	0.0241	8.7200e-003	0.0328	0.0131	8.0300e-003	0.0211	0.0000	16.2112	16.2112	5.1700e-003	0.0000	16.3405

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3.3 Grading and Boulder Placement - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.1000e-004	4.4000e-004	4.6900e-003	1.0000e-005	0.0427	1.0000e-005	0.0427	4.4900e-003	1.0000e-005	4.5000e-003	0.0000	1.2933	1.2933	3.0000e-005	0.0000	1.2940
Total	6.1000e-004	4.4000e-004	4.6900e-003	1.0000e-005	0.0427	1.0000e-005	0.0427	4.4900e-003	1.0000e-005	4.5000e-003	0.0000	1.2933	1.2933	3.0000e-005	0.0000	1.2940

3.4 Concrete Forming and Placing - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.6900e-003	0.0155	0.0161	2.0000e-005		9.2000e-004	9.2000e-004		8.5000e-004	8.5000e-004	0.0000	1.9920	1.9920	5.7000e-004	0.0000	2.0064
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.6900e-003	0.0155	0.0161	2.0000e-005		9.2000e-004	9.2000e-004		8.5000e-004	8.5000e-004	0.0000	1.9920	1.9920	5.7000e-004	0.0000	2.0064

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3.4 Concrete Forming and Placing - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.7000e-004	4.1000e-004	4.3800e-003	1.0000e-005	0.1332	1.0000e-005	0.1332	0.0135	1.0000e-005	0.0135	0.0000	1.2070	1.2070	3.0000e-005	0.0000	1.2078
Total	5.7000e-004	4.1000e-004	4.3800e-003	1.0000e-005	0.1332	1.0000e-005	0.1332	0.0135	1.0000e-005	0.0135	0.0000	1.2070	1.2070	3.0000e-005	0.0000	1.2078

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.6900e-003	0.0155	0.0161	2.0000e-005		9.2000e-004	9.2000e-004		8.5000e-004	8.5000e-004	0.0000	1.9920	1.9920	5.7000e-004	0.0000	2.0064
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.6900e-003	0.0155	0.0161	2.0000e-005		9.2000e-004	9.2000e-004		8.5000e-004	8.5000e-004	0.0000	1.9920	1.9920	5.7000e-004	0.0000	2.0064

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3.4 Concrete Forming and Placing - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.7000e-004	4.1000e-004	4.3800e-003	1.0000e-005	0.0398	1.0000e-005	0.0399	4.1900e-003	1.0000e-005	4.2000e-003	0.0000	1.2070	1.2070	3.0000e-005	0.0000	1.2078
Total	5.7000e-004	4.1000e-004	4.3800e-003	1.0000e-005	0.0398	1.0000e-005	0.0399	4.1900e-003	1.0000e-005	4.2000e-003	0.0000	1.2070	1.2070	3.0000e-005	0.0000	1.2078

3.5 Fencing and Hitching Posts - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.6500e-003	0.0166	0.0180	2.0000e-005		1.0500e-003	1.0500e-003		9.6000e-004	9.6000e-004	0.0000	2.1487	2.1487	6.9000e-004	0.0000	2.1661
Total	1.6500e-003	0.0166	0.0180	2.0000e-005		1.0500e-003	1.0500e-003		9.6000e-004	9.6000e-004	0.0000	2.1487	2.1487	6.9000e-004	0.0000	2.1661

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3.5 Fencing and Hitching Posts - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3000e-004	4.5900e-003	9.0000e-004	1.0000e-005	0.0228	3.0000e-005	0.0229	2.3300e-003	3.0000e-005	2.3600e-003	0.0000	1.1396	1.1396	8.0000e-005	0.0000	1.1417
Worker	6.1000e-004	4.4000e-004	4.6900e-003	1.0000e-005	0.1427	1.0000e-005	0.1427	0.0145	1.0000e-005	0.0145	0.0000	1.2933	1.2933	3.0000e-005	0.0000	1.2940
Total	7.4000e-004	5.0300e-003	5.5900e-003	2.0000e-005	0.1656	4.0000e-005	0.1656	0.0168	4.0000e-005	0.0169	0.0000	2.4329	2.4329	1.1000e-004	0.0000	2.4358

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.6500e-003	0.0166	0.0180	2.0000e-005		1.0500e-003	1.0500e-003		9.6000e-004	9.6000e-004	0.0000	2.1487	2.1487	6.9000e-004	0.0000	2.1661
Total	1.6500e-003	0.0166	0.0180	2.0000e-005		1.0500e-003	1.0500e-003		9.6000e-004	9.6000e-004	0.0000	2.1487	2.1487	6.9000e-004	0.0000	2.1661

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3.5 Fencing and Hitching Posts - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3000e-004	4.5900e-003	9.0000e-004	1.0000e-005	6.8700e-003	3.0000e-005	6.9000e-003	7.4000e-004	3.0000e-005	7.7000e-004	0.0000	1.1396	1.1396	8.0000e-005	0.0000	1.1417
Worker	6.1000e-004	4.4000e-004	4.6900e-003	1.0000e-005	0.0427	1.0000e-005	0.0427	4.4900e-003	1.0000e-005	4.5000e-003	0.0000	1.2933	1.2933	3.0000e-005	0.0000	1.2940
Total	7.4000e-004	5.0300e-003	5.5900e-003	2.0000e-005	0.0496	4.0000e-005	0.0496	5.2300e-003	4.0000e-005	5.2700e-003	0.0000	2.4329	2.4329	1.1000e-004	0.0000	2.4358

3.6 Installing Site Furnishings - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.3000e-004	7.3700e-003	7.9800e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.3000e-004	4.3000e-004	0.0000	0.9550	0.9550	3.1000e-004	0.0000	0.9627
Total	7.3000e-004	7.3700e-003	7.9800e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.3000e-004	4.3000e-004	0.0000	0.9550	0.9550	3.1000e-004	0.0000	0.9627

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3.6 Installing Site Furnishings - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0000e-005	1.5300e-003	3.0000e-004	0.0000	7.6100e-003	1.0000e-005	7.6200e-003	7.8000e-004	1.0000e-005	7.9000e-004	0.0000	0.3799	0.3799	3.0000e-005	0.0000	0.3806
Worker	2.0000e-004	1.5000e-004	1.5600e-003	0.0000	0.0476	0.0000	0.0476	4.8300e-003	0.0000	4.8300e-003	0.0000	0.4311	0.4311	1.0000e-005	0.0000	0.4314
Total	2.4000e-004	1.6800e-003	1.8600e-003	0.0000	0.0552	1.0000e-005	0.0552	5.6100e-003	1.0000e-005	5.6200e-003	0.0000	0.8110	0.8110	4.0000e-005	0.0000	0.8119

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.3000e-004	7.3700e-003	7.9800e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.3000e-004	4.3000e-004	0.0000	0.9550	0.9550	3.1000e-004	0.0000	0.9627
Total	7.3000e-004	7.3700e-003	7.9800e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.3000e-004	4.3000e-004	0.0000	0.9550	0.9550	3.1000e-004	0.0000	0.9627

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3.6 Installing Site Furnishings - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0000e-005	1.5300e-003	3.0000e-004	0.0000	2.2900e-003	1.0000e-005	2.3000e-003	2.5000e-004	1.0000e-005	2.6000e-004	0.0000	0.3799	0.3799	3.0000e-005	0.0000	0.3806
Worker	2.0000e-004	1.5000e-004	1.5600e-003	0.0000	0.0142	0.0000	0.0142	1.5000e-003	0.0000	1.5000e-003	0.0000	0.4311	0.4311	1.0000e-005	0.0000	0.4314
Total	2.4000e-004	1.6800e-003	1.8600e-003	0.0000	0.0165	1.0000e-005	0.0165	1.7500e-003	1.0000e-005	1.7600e-003	0.0000	0.8110	0.8110	4.0000e-005	0.0000	0.8119

3.7 Signage and Striping - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0110					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.3000e-004	7.3700e-003	7.9800e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.3000e-004	4.3000e-004	0.0000	0.9550	0.9550	3.1000e-004	0.0000	0.9627
Total	0.0117	7.3700e-003	7.9800e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.3000e-004	4.3000e-004	0.0000	0.9550	0.9550	3.1000e-004	0.0000	0.9627

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3.7 Signage and Striping - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-005	7.6000e-004	1.5000e-004	0.0000	3.8100e-003	0.0000	3.8100e-003	3.9000e-004	0.0000	3.9000e-004	0.0000	0.1899	0.1899	1.0000e-005	0.0000	0.1903
Worker	8.0000e-005	6.0000e-005	6.3000e-004	0.0000	0.0190	0.0000	0.0190	1.9300e-003	0.0000	1.9300e-003	0.0000	0.1724	0.1724	0.0000	0.0000	0.1725
Total	1.0000e-004	8.2000e-004	7.8000e-004	0.0000	0.0228	0.0000	0.0228	2.3200e-003	0.0000	2.3200e-003	0.0000	0.3624	0.3624	1.0000e-005	0.0000	0.3628

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0110					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.3000e-004	7.3700e-003	7.9800e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.3000e-004	4.3000e-004	0.0000	0.9550	0.9550	3.1000e-004	0.0000	0.9627
Total	0.0117	7.3700e-003	7.9800e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.3000e-004	4.3000e-004	0.0000	0.9550	0.9550	3.1000e-004	0.0000	0.9627

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3.7 Signage and Striping - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-005	7.6000e-004	1.5000e-004	0.0000	1.1400e-003	0.0000	1.1500e-003	1.2000e-004	0.0000	1.3000e-004	0.0000	0.1899	0.1899	1.0000e-005	0.0000	0.1903
Worker	8.0000e-005	6.0000e-005	6.3000e-004	0.0000	5.6900e-003	0.0000	5.6900e-003	6.0000e-004	0.0000	6.0000e-004	0.0000	0.1724	0.1724	0.0000	0.0000	0.1725
Total	1.0000e-004	8.2000e-004	7.8000e-004	0.0000	6.8300e-003	0.0000	6.8400e-003	7.2000e-004	0.0000	7.3000e-004	0.0000	0.3624	0.3624	1.0000e-005	0.0000	0.3628

3.8 Clean Up and Demobilization - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.3000e-004	7.3700e-003	7.9800e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.3000e-004	4.3000e-004	0.0000	0.9550	0.9550	3.1000e-004	0.0000	0.9627
Total	7.3000e-004	7.3700e-003	7.9800e-003	1.0000e-005	0.0000	4.7000e-004	4.7000e-004	0.0000	4.3000e-004	4.3000e-004	0.0000	0.9550	0.9550	3.1000e-004	0.0000	0.9627

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3.8 Clean Up and Demobilization - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	4.0000e-005	4.7000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1293	0.1293	0.0000	0.0000	0.1294
Total	6.0000e-005	4.0000e-005	4.7000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1293	0.1293	0.0000	0.0000	0.1294

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.3000e-004	7.3700e-003	7.9800e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.3000e-004	4.3000e-004	0.0000	0.9550	0.9550	3.1000e-004	0.0000	0.9627
Total	7.3000e-004	7.3700e-003	7.9800e-003	1.0000e-005	0.0000	4.7000e-004	4.7000e-004	0.0000	4.3000e-004	4.3000e-004	0.0000	0.9550	0.9550	3.1000e-004	0.0000	0.9627

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3.8 Clean Up and Demobilization - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	4.0000e-005	4.7000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1293	0.1293	0.0000	0.0000	0.1294
Total	6.0000e-005	4.0000e-005	4.7000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1293	0.1293	0.0000	0.0000	0.1294

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0196	0.1674	0.2440	1.0000e-003	3.6598	9.5000e-004	3.6607	0.3764	8.9000e-004	0.3773	0.0000	92.5277	92.5277	4.9100e-003	0.0000	92.6504
Unmitigated	0.0196	0.1674	0.2440	1.0000e-003	3.6598	9.5000e-004	3.6607	0.3764	8.9000e-004	0.3773	0.0000	92.5277	92.5277	4.9100e-003	0.0000	92.6504

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	58.25	58.25	58.25	192,902	192,902
Total	58.25	58.25	58.25	192,902	192,902

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	18.50	10.10	7.90	33.00	48.00	19.00	66	28	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120

5.0 Energy Detail

Historical Energy Use: N

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5.2 Energy by Land Use - Natural Gas

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

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5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	6.2800e-003	1.0000e-005	1.0100e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.9500e-003	1.9500e-003	1.0000e-005	0.0000	2.0800e-003
Unmitigated	6.2800e-003	1.0000e-005	1.0100e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.9500e-003	1.9500e-003	1.0000e-005	0.0000	2.0800e-003

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6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.0900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.0900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-004	1.0000e-005	1.0100e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.9500e-003	1.9500e-003	1.0000e-005	0.0000	2.0800e-003
Total	6.2800e-003	1.0000e-005	1.0100e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.9500e-003	1.9500e-003	1.0000e-005	0.0000	2.0800e-003

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.0900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.0900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-004	1.0000e-005	1.0100e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.9500e-003	1.9500e-003	1.0000e-005	0.0000	2.0800e-003
Total	6.2800e-003	1.0000e-005	1.0100e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.9500e-003	1.9500e-003	1.0000e-005	0.0000	2.0800e-003

7.0 Water Detail

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7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

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7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

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8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Harford Springs Staging Area Project - Riverside-South Coast County, Summer

Harford Springs Staging Area Project
Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	78.72	1000sqft	1.81	78,720.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Harford Springs Staging Area Project - Riverside-South Coast County, Summer

Project Characteristics -

Land Use -

Construction Phase - Based on Construction Details provided by the County. Assume installation of site furnishings and signage and striping occur concurrent with fencing installation. Assume 7-day work week due to lack of policy prohibiting work on Saturdays and Sundays.

Off-road Equipment - Crew Trucks

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Reduction to 2 tractors due to limited scope of site

Off-road Equipment - Crew Trucks

Trips and VMT - Vendor trips for deliver of fencing, site furnishings, and signs

On-road Fugitive Dust - Changed % paved based on gravel/dirt entrance to Project site

Demolition - No demolition

Grading - Balanced site, per County-provided materials

Vehicle Trips - ITE Trip Generation Rate for Public Park is 0.11 per acre. (0.11 * 527 acres = 57.97 trips per day) and divided by 78.72 to present for the size metric

Trip length, and trip diversion rates based on default CalEEMod assumptions for a City Park land use

Road Dust - Based on gravel/dirt entrance to Project site

Construction Off-road Equipment Mitigation - SCAQMD Fugitive Dust Rule

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	10.00	7.00
tblConstructionPhase	NumDays	200.00	21.00
tblConstructionPhase	NumDays	200.00	7.00
tblConstructionPhase	NumDays	4.00	21.00
tblConstructionPhase	NumDays	10.00	14.00

Harford Springs Staging Area Project - Riverside-South Coast County, Summer

tblConstructionPhase	NumDays	2.00	7.00
tblConstructionPhase	NumDays	2.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblGrading	AcresOfGrading	10.50	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOnRoadDust	HaulingPercentPave	100.00	95.00
tblOnRoadDust	HaulingPercentPave	100.00	95.00
tblOnRoadDust	HaulingPercentPave	100.00	95.00
tblOnRoadDust	HaulingPercentPave	100.00	95.00
tblOnRoadDust	HaulingPercentPave	100.00	95.00
tblOnRoadDust	HaulingPercentPave	100.00	95.00
tblOnRoadDust	VendorPercentPave	100.00	95.00
tblOnRoadDust	VendorPercentPave	100.00	95.00
tblOnRoadDust	VendorPercentPave	100.00	95.00
tblOnRoadDust	VendorPercentPave	100.00	95.00

Harford Springs Staging Area Project - Riverside-South Coast County, Summer

tblOnRoadDust	VendorPercentPave	100.00	95.00
tblOnRoadDust	VendorPercentPave	100.00	95.00
tblOnRoadDust	WorkerPercentPave	100.00	95.00
tblOnRoadDust	WorkerPercentPave	100.00	95.00
tblOnRoadDust	WorkerPercentPave	100.00	95.00
tblOnRoadDust	WorkerPercentPave	100.00	95.00
tblOnRoadDust	WorkerPercentPave	100.00	95.00
tblOnRoadDust	WorkerPercentPave	100.00	95.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblRoadDust	RoadPercentPave	100	95
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	13.00	4.00
tblTripsAndVMT	VendorTripNumber	13.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	8.00	10.00
tblTripsAndVMT	WorkerTripNumber	5.00	14.00
tblTripsAndVMT	WorkerTripNumber	33.00	10.00
tblTripsAndVMT	WorkerTripNumber	33.00	10.00
tblTripsAndVMT	WorkerTripNumber	7.00	4.00
tblVehicleTrips	CC_TTP	0.00	48.00
tblVehicleTrips	CNW_TTP	0.00	19.00
tblVehicleTrips	CW_TTP	0.00	33.00
tblVehicleTrips	DV_TP	0.00	28.00
tblVehicleTrips	PB_TP	0.00	6.00
tblVehicleTrips	PR_TP	0.00	66.00
tblVehicleTrips	ST_TR	0.00	0.74
tblVehicleTrips	SU_TR	0.00	0.74

Harford Springs Staging Area Project - Riverside-South Coast County, Summer

tblVehicleTrips	WD_TR	0.00	0.74
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2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	3.8849	18.6372	8.4484	0.0192	41.1964	0.8316	41.5713	4.3995	0.7659	5.1654	0.0000	1,849.480 1	1,849.480 1	0.5466	0.0000	1,863.144 7
Maximum	3.8849	18.6372	8.4484	0.0192	41.1964	0.8316	41.5713	4.3995	0.7659	5.1654	0.0000	1,849.480 1	1,849.480 1	0.5466	0.0000	1,863.144 7

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	3.8849	18.6372	8.4484	0.0192	12.3115	0.8316	12.6864	1.7034	0.7659	2.4693	0.0000	1,849.480 1	1,849.480 1	0.5466	0.0000	1,863.144 7
Maximum	3.8849	18.6372	8.4484	0.0192	12.3115	0.8316	12.6864	1.7034	0.7659	2.4693	0.0000	1,849.480 1	1,849.480 1	0.5466	0.0000	1,863.144 7

Harford Springs Staging Area Project - Riverside-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	70.12	0.00	69.48	61.28	0.00	52.20	0.00	0.00	0.00	0.00	0.00	0.00

Harford Springs Staging Area Project - Riverside-South Coast County, Summer

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0346	7.0000e-005	8.0900e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0172	0.0172	5.0000e-005		0.0184
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.1264	0.9007	1.5014	5.8300e-003	20.1151	5.1900e-003	20.1203	2.0696	4.8900e-003	2.0745		593.7301	593.7301	0.0297		594.4727
Total	0.1610	0.9008	1.5095	5.8300e-003	20.1151	5.2200e-003	20.1203	2.0696	4.9200e-003	2.0745		593.7473	593.7473	0.0298	0.0000	594.4911

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0346	7.0000e-005	8.0900e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0172	0.0172	5.0000e-005		0.0184
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.1264	0.9007	1.5014	5.8300e-003	20.1151	5.1900e-003	20.1203	2.0696	4.8900e-003	2.0745		593.7301	593.7301	0.0297		594.4727
Total	0.1610	0.9008	1.5095	5.8300e-003	20.1151	5.2200e-003	20.1203	2.0696	4.9200e-003	2.0745		593.7473	593.7473	0.0298	0.0000	594.4911

Harford Springs Staging Area Project - Riverside-South Coast County, Summer

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Mobilization and Securing Site	Site Preparation	7/1/2020	7/7/2020	7	7	
2	Grading and Boulder Placement	Grading	7/8/2020	7/28/2020	7	21	
3	Concrete Forming and Placing	Paving	7/29/2020	8/11/2020	7	14	
4	Fencing and Hitching Posts	Building Construction	8/11/2020	8/31/2020	7	21	
5	Installing Site Furnishings	Building Construction	8/17/2020	8/23/2020	7	7	
6	Signage and Striping	Architectural Coating	8/18/2020	8/24/2020	7	7	
7	Clean Up and Demobilization	Site Preparation	9/1/2020	9/7/2020	7	7	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 1.81

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 4,723 (Architectural Coating – sqft)

OffRoad Equipment

Harford Springs Staging Area Project - Riverside-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Mobilization and Securing Site	Off-Highway Trucks	1	1.00	402	0.38
Mobilization and Securing Site	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading and Boulder Placement	Graders	1	8.00	187	0.41
Grading and Boulder Placement	Plate Compactors	1	8.00	8	0.43
Grading and Boulder Placement	Rubber Tired Dozers	1	7.00	247	0.40
Grading and Boulder Placement	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Concrete Forming and Placing	Cement and Mortar Mixers	1	8.00	9	0.56
Concrete Forming and Placing	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Fencing and Hitching Posts	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Installing Site Furnishings	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Signage and Striping	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Clean Up and Demobilization	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Mobilization and Securing Site	3	10.00	2.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading and Boulder Placement	4	10.00	0.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT
Concrete Forming and Placing	2	14.00	0.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT
Fencing and Hitching Posts	1	10.00	4.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT
Installing Site Furnishings	1	10.00	4.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT
Signage and Striping	1	4.00	2.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT
Clean Up and Demobilization	1	3.00	0.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Harford Springs Staging Area Project - Riverside-South Coast County, Summer

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Mobilization and Securing Site - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.5019	5.0006	5.0357	7.8600e-003		0.2950	0.2950		0.2714	0.2714		761.3648	761.3648	0.2462		767.5208
Total	0.5019	5.0006	5.0357	7.8600e-003	0.0000	0.2950	0.2950	0.0000	0.2714	0.2714		761.3648	761.3648	0.2462		767.5208

Harford Springs Staging Area Project - Riverside-South Coast County, Summer

3.2 Mobilization and Securing Site - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	5.9400e-003	0.2157	0.0397	5.8000e-004	1.1768	1.3300e-003	1.1781	0.1201	1.2700e-003	0.1214		60.6896	60.6896	4.2200e-003		60.7950
Worker	0.0632	0.0395	0.5287	1.4800e-003	14.7136	8.9000e-004	14.7145	1.4922	8.2000e-004	1.4930		147.5888	147.5888	3.7300e-003		147.6820
Total	0.0692	0.2551	0.5684	2.0600e-003	15.8904	2.2200e-003	15.8926	1.6123	2.0900e-003	1.6144		208.2784	208.2784	7.9500e-003		208.4770

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.5019	5.0006	5.0357	7.8600e-003		0.2950	0.2950		0.2714	0.2714	0.0000	761.3648	761.3648	0.2462		767.5208
Total	0.5019	5.0006	5.0357	7.8600e-003	0.0000	0.2950	0.2950	0.0000	0.2714	0.2714	0.0000	761.3648	761.3648	0.2462		767.5208

Harford Springs Staging Area Project - Riverside-South Coast County, Summer

3.2 Mobilization and Securing Site - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	5.9400e-003	0.2157	0.0397	5.8000e-004	0.3533	1.3300e-003	0.3546	0.0378	1.2700e-003	0.0391		60.6896	60.6896	4.2200e-003		60.7950
Worker	0.0632	0.0395	0.5287	1.4800e-003	4.3938	8.9000e-004	4.3947	0.4605	8.2000e-004	0.4613		147.5888	147.5888	3.7300e-003		147.6820
Total	0.0692	0.2551	0.5684	2.0600e-003	4.7471	2.2200e-003	4.7493	0.4983	2.0900e-003	0.5004		208.2784	208.2784	7.9500e-003		208.4770

3.3 Grading and Boulder Placement - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.3703	0.0000	5.3703	2.9074	0.0000	2.9074			0.0000			0.0000
Off-Road	1.6700	18.5977	7.9198	0.0177		0.8307	0.8307		0.7650	0.7650		1,701.8913	1,701.8913	0.5429		1,715.4626
Total	1.6700	18.5977	7.9198	0.0177	5.3703	0.8307	6.2011	2.9074	0.7650	3.6724		1,701.8913	1,701.8913	0.5429		1,715.4626

Harford Springs Staging Area Project - Riverside-South Coast County, Summer

3.3 Grading and Boulder Placement - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0632	0.0395	0.5287	1.4800e-003	14.7136	8.9000e-004	14.7145	1.4922	8.2000e-004	1.4930		147.5888	147.5888	3.7300e-003		147.6820
Total	0.0632	0.0395	0.5287	1.4800e-003	14.7136	8.9000e-004	14.7145	1.4922	8.2000e-004	1.4930		147.5888	147.5888	3.7300e-003		147.6820

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2958	0.0000	2.2958	1.2429	0.0000	1.2429			0.0000			0.0000
Off-Road	1.6700	18.5977	7.9198	0.0177		0.8307	0.8307		0.7650	0.7650	0.0000	1,701.8913	1,701.8913	0.5429		1,715.4626
Total	1.6700	18.5977	7.9198	0.0177	2.2958	0.8307	3.1265	1.2429	0.7650	2.0079	0.0000	1,701.8913	1,701.8913	0.5429		1,715.4626

Harford Springs Staging Area Project - Riverside-South Coast County, Summer

3.3 Grading and Boulder Placement - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0632	0.0395	0.5287	1.4800e-003	4.3938	8.9000e-004	4.3947	0.4605	8.2000e-004	0.4613		147.5888	147.5888	3.7300e-003		147.6820
Total	0.0632	0.0395	0.5287	1.4800e-003	4.3938	8.9000e-004	4.3947	0.4605	8.2000e-004	0.4613		147.5888	147.5888	3.7300e-003		147.6820

3.4 Concrete Forming and Placing - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2421	2.2102	2.3032	3.4300e-003		0.1308	0.1308		0.1215	0.1215		313.6888	313.6888	0.0904		315.9478
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.2421	2.2102	2.3032	3.4300e-003		0.1308	0.1308		0.1215	0.1215		313.6888	313.6888	0.0904		315.9478

Harford Springs Staging Area Project - Riverside-South Coast County, Summer

3.4 Concrete Forming and Placing - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0885	0.0552	0.7401	2.0700e-003	20.5990	1.2500e-003	20.6003	2.0890	1.1500e-003	2.0902		206.6243	206.6243	5.2200e-003		206.7549
Total	0.0885	0.0552	0.7401	2.0700e-003	20.5990	1.2500e-003	20.6003	2.0890	1.1500e-003	2.0902		206.6243	206.6243	5.2200e-003		206.7549

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2421	2.2102	2.3032	3.4300e-003		0.1308	0.1308		0.1215	0.1215	0.0000	313.6888	313.6888	0.0904		315.9478
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.2421	2.2102	2.3032	3.4300e-003		0.1308	0.1308		0.1215	0.1215	0.0000	313.6888	313.6888	0.0904		315.9478

Harford Springs Staging Area Project - Riverside-South Coast County, Summer

3.4 Concrete Forming and Placing - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0885	0.0552	0.7401	2.0700e-003	6.1514	1.2500e-003	6.1526	0.6447	1.1500e-003	0.6459		206.6243	206.6243	5.2200e-003		206.7549
Total	0.0885	0.0552	0.7401	2.0700e-003	6.1514	1.2500e-003	6.1526	0.6447	1.1500e-003	0.6459		206.6243	206.6243	5.2200e-003		206.7549

3.5 Fencing and Hitching Posts - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1571	1.5789	1.7098	2.3300e-003		0.0998	0.0998		0.0919	0.0919		225.5764	225.5764	0.0730		227.4003
Total	0.1571	1.5789	1.7098	2.3300e-003		0.0998	0.0998		0.0919	0.0919		225.5764	225.5764	0.0730		227.4003

Harford Springs Staging Area Project - Riverside-South Coast County, Summer

3.5 Fencing and Hitching Posts - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0119	0.4314	0.0794	1.1500e-003	2.3535	2.6600e-003	2.3562	0.2402	2.5500e-003	0.2428		121.3791	121.3791	8.4300e-003		121.5900
Worker	0.0632	0.0395	0.5287	1.4800e-003	14.7136	8.9000e-004	14.7145	1.4922	8.2000e-004	1.4930		147.5888	147.5888	3.7300e-003		147.6820
Total	0.0751	0.4708	0.6081	2.6300e-003	17.0671	3.5500e-003	17.0707	1.7324	3.3700e-003	1.7358		268.9679	268.9679	0.0122		269.2720

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1571	1.5789	1.7098	2.3300e-003		0.0998	0.0998		0.0919	0.0919	0.0000	225.5764	225.5764	0.0730		227.4003
Total	0.1571	1.5789	1.7098	2.3300e-003		0.0998	0.0998		0.0919	0.0919	0.0000	225.5764	225.5764	0.0730		227.4003

Harford Springs Staging Area Project - Riverside-South Coast County, Summer

3.5 Fencing and Hitching Posts - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0119	0.4314	0.0794	1.1500e-003	0.7065	2.6600e-003	0.7092	0.0756	2.5500e-003	0.0781		121.3791	121.3791	8.4300e-003		121.5900
Worker	0.0632	0.0395	0.5287	1.4800e-003	4.3938	8.9000e-004	4.3947	0.4605	8.2000e-004	0.4613		147.5888	147.5888	3.7300e-003		147.6820
Total	0.0751	0.4708	0.6081	2.6300e-003	5.1004	3.5500e-003	5.1039	0.5361	3.3700e-003	0.5394		268.9679	268.9679	0.0122		269.2720

3.6 Installing Site Furnishings - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2095	2.1052	2.2797	3.1100e-003		0.1331	0.1331		0.1225	0.1225		300.7685	300.7685	0.0973		303.2004
Total	0.2095	2.1052	2.2797	3.1100e-003		0.1331	0.1331		0.1225	0.1225		300.7685	300.7685	0.0973		303.2004

Harford Springs Staging Area Project - Riverside-South Coast County, Summer

3.6 Installing Site Furnishings - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0119	0.4314	0.0794	1.1500e-003	2.3535	2.6600e-003	2.3562	0.2402	2.5500e-003	0.2428		121.3791	121.3791	8.4300e-003		121.5900
Worker	0.0632	0.0395	0.5287	1.4800e-003	14.7136	8.9000e-004	14.7145	1.4922	8.2000e-004	1.4930		147.5888	147.5888	3.7300e-003		147.6820
Total	0.0751	0.4708	0.6081	2.6300e-003	17.0671	3.5500e-003	17.0707	1.7324	3.3700e-003	1.7358		268.9679	268.9679	0.0122		269.2720

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2095	2.1052	2.2797	3.1100e-003		0.1331	0.1331		0.1225	0.1225	0.0000	300.7685	300.7685	0.0973		303.2004
Total	0.2095	2.1052	2.2797	3.1100e-003		0.1331	0.1331		0.1225	0.1225	0.0000	300.7685	300.7685	0.0973		303.2004

Harford Springs Staging Area Project - Riverside-South Coast County, Summer

3.6 Installing Site Furnishings - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0119	0.4314	0.0794	1.1500e-003	0.7065	2.6600e-003	0.7092	0.0756	2.5500e-003	0.0781		121.3791	121.3791	8.4300e-003		121.5900
Worker	0.0632	0.0395	0.5287	1.4800e-003	4.3938	8.9000e-004	4.3947	0.4605	8.2000e-004	0.4613		147.5888	147.5888	3.7300e-003		147.6820
Total	0.0751	0.4708	0.6081	2.6300e-003	5.1004	3.5500e-003	5.1039	0.5361	3.3700e-003	0.5394		268.9679	268.9679	0.0122		269.2720

3.7 Signage and Striping - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.1273					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2095	2.1052	2.2797	3.1100e-003		0.1331	0.1331		0.1225	0.1225		300.7685	300.7685	0.0973		303.2004
Total	3.3368	2.1052	2.2797	3.1100e-003		0.1331	0.1331		0.1225	0.1225		300.7685	300.7685	0.0973		303.2004

Harford Springs Staging Area Project - Riverside-South Coast County, Summer

3.7 Signage and Striping - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	5.9400e-003	0.2157	0.0397	5.8000e-004	1.1768	1.3300e-003	1.1781	0.1201	1.2700e-003	0.1214		60.6896	60.6896	4.2200e-003		60.7950
Worker	0.0253	0.0158	0.2115	5.9000e-004	5.8854	3.6000e-004	5.8858	0.5969	3.3000e-004	0.5972		59.0355	59.0355	1.4900e-003		59.0728
Total	0.0312	0.2315	0.2512	1.1700e-003	7.0622	1.6900e-003	7.0639	0.7170	1.6000e-003	0.7186		119.7251	119.7251	5.7100e-003		119.8678

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.1273					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2095	2.1052	2.2797	3.1100e-003		0.1331	0.1331		0.1225	0.1225	0.0000	300.7685	300.7685	0.0973		303.2004
Total	3.3368	2.1052	2.2797	3.1100e-003		0.1331	0.1331		0.1225	0.1225	0.0000	300.7685	300.7685	0.0973		303.2004

Harford Springs Staging Area Project - Riverside-South Coast County, Summer

3.7 Signage and Striping - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	5.9400e-003	0.2157	0.0397	5.8000e-004	0.3533	1.3300e-003	0.3546	0.0378	1.2700e-003	0.0391		60.6896	60.6896	4.2200e-003		60.7950
Worker	0.0253	0.0158	0.2115	5.9000e-004	1.7575	3.6000e-004	1.7579	0.1842	3.3000e-004	0.1845		59.0355	59.0355	1.4900e-003		59.0728
Total	0.0312	0.2315	0.2512	1.1700e-003	2.1108	1.6900e-003	2.1125	0.2220	1.6000e-003	0.2236		119.7251	119.7251	5.7100e-003		119.8678

3.8 Clean Up and Demobilization - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.2095	2.1052	2.2797	3.1100e-003		0.1331	0.1331		0.1225	0.1225		300.7685	300.7685	0.0973		303.2004
Total	0.2095	2.1052	2.2797	3.1100e-003	0.0000	0.1331	0.1331	0.0000	0.1225	0.1225		300.7685	300.7685	0.0973		303.2004

Harford Springs Staging Area Project - Riverside-South Coast County, Summer

3.8 Clean Up and Demobilization - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0190	0.0118	0.1586	4.4000e-004	0.0452	2.7000e-004	0.0454	0.0120	2.5000e-004	0.0122		44.2766	44.2766	1.1200e-003		44.3046
Total	0.0190	0.0118	0.1586	4.4000e-004	0.0452	2.7000e-004	0.0454	0.0120	2.5000e-004	0.0122		44.2766	44.2766	1.1200e-003		44.3046

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.2095	2.1052	2.2797	3.1100e-003		0.1331	0.1331		0.1225	0.1225	0.0000	300.7685	300.7685	0.0973		303.2004
Total	0.2095	2.1052	2.2797	3.1100e-003	0.0000	0.1331	0.1331	0.0000	0.1225	0.1225	0.0000	300.7685	300.7685	0.0973		303.2004

Harford Springs Staging Area Project - Riverside-South Coast County, Summer

3.8 Clean Up and Demobilization - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0190	0.0118	0.1586	4.4000e-004	0.0452	2.7000e-004	0.0454	0.0120	2.5000e-004	0.0122		44.2766	44.2766	1.1200e-003		44.3046
Total	0.0190	0.0118	0.1586	4.4000e-004	0.0452	2.7000e-004	0.0454	0.0120	2.5000e-004	0.0122		44.2766	44.2766	1.1200e-003		44.3046

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Harford Springs Staging Area Project - Riverside-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1264	0.9007	1.5014	5.8300e-003	20.1151	5.1900e-003	20.1203	2.0696	4.8900e-003	2.0745		593.7301	593.7301	0.0297		594.4727
Unmitigated	0.1264	0.9007	1.5014	5.8300e-003	20.1151	5.1900e-003	20.1203	2.0696	4.8900e-003	2.0745		593.7301	593.7301	0.0297		594.4727

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	58.25	58.25	58.25	192,902	192,902
Total	58.25	58.25	58.25	192,902	192,902

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	18.50	10.10	7.90	33.00	48.00	19.00	66	28	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120

5.0 Energy Detail

Historical Energy Use: N

Harford Springs Staging Area Project - Riverside-South Coast County, Summer

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Harford Springs Staging Area Project - Riverside-South Coast County, Summer

5.2 Energy by Land Use - Natural Gas

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0346	7.0000e-005	8.0900e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0172	0.0172	5.0000e-005		0.0184
Unmitigated	0.0346	7.0000e-005	8.0900e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0172	0.0172	5.0000e-005		0.0184

Harford Springs Staging Area Project - Riverside-South Coast County, Summer

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	6.0000e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0279					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.6000e-004	7.0000e-005	8.0900e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0172	0.0172	5.0000e-005		0.0184
Total	0.0346	7.0000e-005	8.0900e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0172	0.0172	5.0000e-005		0.0184

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	6.0000e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0279					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.6000e-004	7.0000e-005	8.0900e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0172	0.0172	5.0000e-005		0.0184
Total	0.0346	7.0000e-005	8.0900e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0172	0.0172	5.0000e-005		0.0184

7.0 Water Detail

Harford Springs Staging Area Project - Riverside-South Coast County, Summer

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

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

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

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

Equipment Type	Number
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11.0 Vegetation

Harford Springs Staging Area Project - Riverside-South Coast County, Winter

Harford Springs Staging Area Project
Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	78.72	1000sqft	1.81	78,720.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	702.44	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Harford Springs Staging Area Project - Riverside-South Coast County, Winter

Project Characteristics -

Land Use -

Construction Phase - Based on Construction Details provided by the County. Assume installation of site furnishings and signage and striping occur concurrent with fencing installation. Assume 7-day work week due to lack of policy prohibiting work on Saturdays and Sundays.

Off-road Equipment - Crew Trucks

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Reduction to 2 tractors due to limited scope of site

Off-road Equipment - Crew Trucks

Trips and VMT - Vendor trips for deliver of fencing, site furnishings, and signs

On-road Fugitive Dust - Changed % paved based on gravel/dirt entrance to Project site

Demolition - No demolition

Grading - Balanced site, per County-provided materials

Vehicle Trips - ITE Trip Generation Rate for Public Park is 0.11 per acre. (0.11 * 527 acres = 57.97 trips per day) and divided by 78.72 to present for the size metric

Trip length, and trip diversion rates based on default CalEEMod assumptions for a City Park land use

Road Dust - Based on gravel/dirt entrance to Project site

Construction Off-road Equipment Mitigation - SCAQMD Fugitive Dust Rule

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	10.00	7.00
tblConstructionPhase	NumDays	200.00	21.00
tblConstructionPhase	NumDays	200.00	7.00
tblConstructionPhase	NumDays	4.00	21.00
tblConstructionPhase	NumDays	10.00	14.00

Harford Springs Staging Area Project - Riverside-South Coast County, Winter

tblConstructionPhase	NumDays	2.00	7.00
tblConstructionPhase	NumDays	2.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblGrading	AcresOfGrading	10.50	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOnRoadDust	HaulingPercentPave	100.00	95.00
tblOnRoadDust	HaulingPercentPave	100.00	95.00
tblOnRoadDust	HaulingPercentPave	100.00	95.00
tblOnRoadDust	HaulingPercentPave	100.00	95.00
tblOnRoadDust	HaulingPercentPave	100.00	95.00
tblOnRoadDust	HaulingPercentPave	100.00	95.00
tblOnRoadDust	VendorPercentPave	100.00	95.00
tblOnRoadDust	VendorPercentPave	100.00	95.00
tblOnRoadDust	VendorPercentPave	100.00	95.00
tblOnRoadDust	VendorPercentPave	100.00	95.00

Harford Springs Staging Area Project - Riverside-South Coast County, Winter

tblOnRoadDust	VendorPercentPave	100.00	95.00
tblOnRoadDust	VendorPercentPave	100.00	95.00
tblOnRoadDust	WorkerPercentPave	100.00	95.00
tblOnRoadDust	WorkerPercentPave	100.00	95.00
tblOnRoadDust	WorkerPercentPave	100.00	95.00
tblOnRoadDust	WorkerPercentPave	100.00	95.00
tblOnRoadDust	WorkerPercentPave	100.00	95.00
tblOnRoadDust	WorkerPercentPave	100.00	95.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblRoadDust	RoadPercentPave	100	95
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	13.00	4.00
tblTripsAndVMT	VendorTripNumber	13.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	8.00	10.00
tblTripsAndVMT	WorkerTripNumber	5.00	14.00
tblTripsAndVMT	WorkerTripNumber	33.00	10.00
tblTripsAndVMT	WorkerTripNumber	33.00	10.00
tblTripsAndVMT	WorkerTripNumber	7.00	4.00
tblVehicleTrips	CC_TTP	0.00	48.00
tblVehicleTrips	CNW_TTP	0.00	19.00
tblVehicleTrips	CW_TTP	0.00	33.00
tblVehicleTrips	DV_TP	0.00	28.00
tblVehicleTrips	PB_TP	0.00	6.00
tblVehicleTrips	PR_TP	0.00	66.00
tblVehicleTrips	ST_TR	0.00	0.74
tblVehicleTrips	SU_TR	0.00	0.74

Harford Springs Staging Area Project - Riverside-South Coast County, Winter

tblVehicleTrips	WD_TR	0.00	0.74
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2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	3.8866	18.6385	8.3427	0.0190	41.1964	0.8316	41.5714	4.3995	0.7659	5.1654	0.0000	1,834.2379	1,834.2379	0.5461	0.0000	1,847.8898
Maximum	3.8866	18.6385	8.3427	0.0190	41.1964	0.8316	41.5714	4.3995	0.7659	5.1654	0.0000	1,834.2379	1,834.2379	0.5461	0.0000	1,847.8898

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	3.8866	18.6385	8.3427	0.0190	12.3115	0.8316	12.6865	1.7034	0.7659	2.4693	0.0000	1,834.2379	1,834.2379	0.5461	0.0000	1,847.8898
Maximum	3.8866	18.6385	8.3427	0.0190	12.3115	0.8316	12.6865	1.7034	0.7659	2.4693	0.0000	1,834.2379	1,834.2379	0.5461	0.0000	1,847.8898

Harford Springs Staging Area Project - Riverside-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	70.12	0.00	69.48	61.28	0.00	52.20	0.00	0.00	0.00	0.00	0.00	0.00

Harford Springs Staging Area Project - Riverside-South Coast County, Winter

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0346	7.0000e-005	8.0900e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0172	0.0172	5.0000e-005		0.0184
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.1074	0.9038	1.3013	5.3700e-003	20.1151	5.2300e-003	20.1203	2.0696	4.9300e-003	2.0746		547.9799	547.9799	0.0306		548.7436
Total	0.1421	0.9039	1.3094	5.3700e-003	20.1151	5.2600e-003	20.1203	2.0696	4.9600e-003	2.0746		547.9971	547.9971	0.0306	0.0000	548.7620

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0346	7.0000e-005	8.0900e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0172	0.0172	5.0000e-005		0.0184
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.1074	0.9038	1.3013	5.3700e-003	20.1151	5.2300e-003	20.1203	2.0696	4.9300e-003	2.0746		547.9799	547.9799	0.0306		548.7436
Total	0.1421	0.9039	1.3094	5.3700e-003	20.1151	5.2600e-003	20.1203	2.0696	4.9600e-003	2.0746		547.9971	547.9971	0.0306	0.0000	548.7620

Harford Springs Staging Area Project - Riverside-South Coast County, Winter

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Mobilization and Securing Site	Site Preparation	7/1/2020	7/7/2020	7	7	
2	Grading and Boulder Placement	Grading	7/8/2020	7/28/2020	7	21	
3	Concrete Forming and Placing	Paving	7/29/2020	8/11/2020	7	14	
4	Fencing and Hitching Posts	Building Construction	8/11/2020	8/31/2020	7	21	
5	Installing Site Furnishings	Building Construction	8/17/2020	8/23/2020	7	7	
6	Signage and Striping	Architectural Coating	8/18/2020	8/24/2020	7	7	
7	Clean Up and Demobilization	Site Preparation	9/1/2020	9/7/2020	7	7	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 1.81

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 4,723 (Architectural Coating – sqft)

OffRoad Equipment

Harford Springs Staging Area Project - Riverside-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Mobilization and Securing Site	Off-Highway Trucks	1	1.00	402	0.38
Mobilization and Securing Site	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading and Boulder Placement	Graders	1	8.00	187	0.41
Grading and Boulder Placement	Plate Compactors	1	8.00	8	0.43
Grading and Boulder Placement	Rubber Tired Dozers	1	7.00	247	0.40
Grading and Boulder Placement	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Concrete Forming and Placing	Cement and Mortar Mixers	1	8.00	9	0.56
Concrete Forming and Placing	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Fencing and Hitching Posts	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Installing Site Furnishings	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Signage and Striping	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Clean Up and Demobilization	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Mobilization and Securing Site	3	10.00	2.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading and Boulder Placement	4	10.00	0.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT
Concrete Forming and Placing	2	14.00	0.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT
Fencing and Hitching Posts	1	10.00	4.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT
Installing Site Furnishings	1	10.00	4.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT
Signage and Striping	1	4.00	2.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT
Clean Up and Demobilization	1	3.00	0.00	0.00	19.80	7.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Harford Springs Staging Area Project - Riverside-South Coast County, Winter

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Mobilization and Securing Site - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.5019	5.0006	5.0357	7.8600e-003		0.2950	0.2950		0.2714	0.2714		761.3648	761.3648	0.2462		767.5208
Total	0.5019	5.0006	5.0357	7.8600e-003	0.0000	0.2950	0.2950	0.0000	0.2714	0.2714		761.3648	761.3648	0.2462		767.5208

Harford Springs Staging Area Project - Riverside-South Coast County, Winter

3.2 Mobilization and Securing Site - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	6.2400e-003	0.2151	0.0461	5.6000e-004	1.1768	1.3500e-003	1.1781	0.1201	1.2900e-003	0.1214		58.6199	58.6199	4.6800e-003		58.7370
Worker	0.0633	0.0408	0.4230	1.3300e-003	14.7136	8.9000e-004	14.7145	1.4922	8.2000e-004	1.4930		132.3467	132.3467	3.2200e-003		132.4272
Total	0.0695	0.2560	0.4691	1.8900e-003	15.8904	2.2400e-003	15.8926	1.6123	2.1100e-003	1.6144		190.9666	190.9666	7.9000e-003		191.1642

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.5019	5.0006	5.0357	7.8600e-003		0.2950	0.2950		0.2714	0.2714	0.0000	761.3648	761.3648	0.2462		767.5208
Total	0.5019	5.0006	5.0357	7.8600e-003	0.0000	0.2950	0.2950	0.0000	0.2714	0.2714	0.0000	761.3648	761.3648	0.2462		767.5208

Harford Springs Staging Area Project - Riverside-South Coast County, Winter

3.2 Mobilization and Securing Site - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	6.2400e-003	0.2151	0.0461	5.6000e-004	0.3533	1.3500e-003	0.3546	0.0378	1.2900e-003	0.0391		58.6199	58.6199	4.6800e-003		58.7370
Worker	0.0633	0.0408	0.4230	1.3300e-003	4.3938	8.9000e-004	4.3947	0.4605	8.2000e-004	0.4613		132.3467	132.3467	3.2200e-003		132.4272
Total	0.0695	0.2560	0.4691	1.8900e-003	4.7471	2.2400e-003	4.7493	0.4983	2.1100e-003	0.5004		190.9666	190.9666	7.9000e-003		191.1642

3.3 Grading and Boulder Placement - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.3703	0.0000	5.3703	2.9074	0.0000	2.9074			0.0000			0.0000
Off-Road	1.6700	18.5977	7.9198	0.0177		0.8307	0.8307		0.7650	0.7650		1,701.8913	1,701.8913	0.5429		1,715.4626
Total	1.6700	18.5977	7.9198	0.0177	5.3703	0.8307	6.2011	2.9074	0.7650	3.6724		1,701.8913	1,701.8913	0.5429		1,715.4626

Harford Springs Staging Area Project - Riverside-South Coast County, Winter

3.3 Grading and Boulder Placement - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0633	0.0408	0.4230	1.3300e-003	14.7136	8.9000e-004	14.7145	1.4922	8.2000e-004	1.4930		132.3467	132.3467	3.2200e-003		132.4272
Total	0.0633	0.0408	0.4230	1.3300e-003	14.7136	8.9000e-004	14.7145	1.4922	8.2000e-004	1.4930		132.3467	132.3467	3.2200e-003		132.4272

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2958	0.0000	2.2958	1.2429	0.0000	1.2429			0.0000			0.0000
Off-Road	1.6700	18.5977	7.9198	0.0177		0.8307	0.8307		0.7650	0.7650	0.0000	1,701.8913	1,701.8913	0.5429		1,715.4626
Total	1.6700	18.5977	7.9198	0.0177	2.2958	0.8307	3.1265	1.2429	0.7650	2.0079	0.0000	1,701.8913	1,701.8913	0.5429		1,715.4626

Harford Springs Staging Area Project - Riverside-South Coast County, Winter

3.3 Grading and Boulder Placement - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0633	0.0408	0.4230	1.3300e-003	4.3938	8.9000e-004	4.3947	0.4605	8.2000e-004	0.4613		132.3467	132.3467	3.2200e-003		132.4272
Total	0.0633	0.0408	0.4230	1.3300e-003	4.3938	8.9000e-004	4.3947	0.4605	8.2000e-004	0.4613		132.3467	132.3467	3.2200e-003		132.4272

3.4 Concrete Forming and Placing - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2421	2.2102	2.3032	3.4300e-003		0.1308	0.1308		0.1215	0.1215		313.6888	313.6888	0.0904		315.9478
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.2421	2.2102	2.3032	3.4300e-003		0.1308	0.1308		0.1215	0.1215		313.6888	313.6888	0.0904		315.9478

Harford Springs Staging Area Project - Riverside-South Coast County, Winter

3.4 Concrete Forming and Placing - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0886	0.0571	0.5921	1.8600e-003	20.5990	1.2500e-003	20.6003	2.0890	1.1500e-003	2.0902		185.2853	185.2853	4.5100e-003		185.3981
Total	0.0886	0.0571	0.5921	1.8600e-003	20.5990	1.2500e-003	20.6003	2.0890	1.1500e-003	2.0902		185.2853	185.2853	4.5100e-003		185.3981

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2421	2.2102	2.3032	3.4300e-003		0.1308	0.1308		0.1215	0.1215	0.0000	313.6888	313.6888	0.0904		315.9478
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.2421	2.2102	2.3032	3.4300e-003		0.1308	0.1308		0.1215	0.1215	0.0000	313.6888	313.6888	0.0904		315.9478

Harford Springs Staging Area Project - Riverside-South Coast County, Winter

3.4 Concrete Forming and Placing - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0886	0.0571	0.5921	1.8600e-003	6.1514	1.2500e-003	6.1526	0.6447	1.1500e-003	0.6459		185.2853	185.2853	4.5100e-003		185.3981
Total	0.0886	0.0571	0.5921	1.8600e-003	6.1514	1.2500e-003	6.1526	0.6447	1.1500e-003	0.6459		185.2853	185.2853	4.5100e-003		185.3981

3.5 Fencing and Hitching Posts - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1571	1.5789	1.7098	2.3300e-003		0.0998	0.0998		0.0919	0.0919		225.5764	225.5764	0.0730		227.4003
Total	0.1571	1.5789	1.7098	2.3300e-003		0.0998	0.0998		0.0919	0.0919		225.5764	225.5764	0.0730		227.4003

Harford Springs Staging Area Project - Riverside-South Coast County, Winter

3.5 Fencing and Hitching Posts - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0125	0.4303	0.0923	1.1100e-003	2.3535	2.6900e-003	2.3562	0.2402	2.5700e-003	0.2428		117.2399	117.2399	9.3600e-003		117.4740
Worker	0.0633	0.0408	0.4230	1.3300e-003	14.7136	8.9000e-004	14.7145	1.4922	8.2000e-004	1.4930		132.3467	132.3467	3.2200e-003		132.4272
Total	0.0758	0.4711	0.5152	2.4400e-003	17.0671	3.5800e-003	17.0707	1.7324	3.3900e-003	1.7358		249.5865	249.5865	0.0126		249.9012

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1571	1.5789	1.7098	2.3300e-003		0.0998	0.0998		0.0919	0.0919	0.0000	225.5764	225.5764	0.0730		227.4003
Total	0.1571	1.5789	1.7098	2.3300e-003		0.0998	0.0998		0.0919	0.0919	0.0000	225.5764	225.5764	0.0730		227.4003

Harford Springs Staging Area Project - Riverside-South Coast County, Winter

3.5 Fencing and Hitching Posts - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0125	0.4303	0.0923	1.1100e-003	0.7065	2.6900e-003	0.7092	0.0756	2.5700e-003	0.0781		117.2399	117.2399	9.3600e-003		117.4740
Worker	0.0633	0.0408	0.4230	1.3300e-003	4.3938	8.9000e-004	4.3947	0.4605	8.2000e-004	0.4613		132.3467	132.3467	3.2200e-003		132.4272
Total	0.0758	0.4711	0.5152	2.4400e-003	5.1004	3.5800e-003	5.1040	0.5361	3.3900e-003	0.5395		249.5865	249.5865	0.0126		249.9012

3.6 Installing Site Furnishings - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2095	2.1052	2.2797	3.1100e-003		0.1331	0.1331		0.1225	0.1225		300.7685	300.7685	0.0973		303.2004
Total	0.2095	2.1052	2.2797	3.1100e-003		0.1331	0.1331		0.1225	0.1225		300.7685	300.7685	0.0973		303.2004

Harford Springs Staging Area Project - Riverside-South Coast County, Winter

3.6 Installing Site Furnishings - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0125	0.4303	0.0923	1.1100e-003	2.3535	2.6900e-003	2.3562	0.2402	2.5700e-003	0.2428		117.2399	117.2399	9.3600e-003		117.4740
Worker	0.0633	0.0408	0.4230	1.3300e-003	14.7136	8.9000e-004	14.7145	1.4922	8.2000e-004	1.4930		132.3467	132.3467	3.2200e-003		132.4272
Total	0.0758	0.4711	0.5152	2.4400e-003	17.0671	3.5800e-003	17.0707	1.7324	3.3900e-003	1.7358		249.5865	249.5865	0.0126		249.9012

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2095	2.1052	2.2797	3.1100e-003		0.1331	0.1331		0.1225	0.1225	0.0000	300.7685	300.7685	0.0973		303.2004
Total	0.2095	2.1052	2.2797	3.1100e-003		0.1331	0.1331		0.1225	0.1225	0.0000	300.7685	300.7685	0.0973		303.2004

Harford Springs Staging Area Project - Riverside-South Coast County, Winter

3.6 Installing Site Furnishings - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0125	0.4303	0.0923	1.1100e-003	0.7065	2.6900e-003	0.7092	0.0756	2.5700e-003	0.0781		117.2399	117.2399	9.3600e-003		117.4740
Worker	0.0633	0.0408	0.4230	1.3300e-003	4.3938	8.9000e-004	4.3947	0.4605	8.2000e-004	0.4613		132.3467	132.3467	3.2200e-003		132.4272
Total	0.0758	0.4711	0.5152	2.4400e-003	5.1004	3.5800e-003	5.1040	0.5361	3.3900e-003	0.5395		249.5865	249.5865	0.0126		249.9012

3.7 Signage and Striping - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.1273					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2095	2.1052	2.2797	3.1100e-003		0.1331	0.1331		0.1225	0.1225		300.7685	300.7685	0.0973		303.2004
Total	3.3368	2.1052	2.2797	3.1100e-003		0.1331	0.1331		0.1225	0.1225		300.7685	300.7685	0.0973		303.2004

Harford Springs Staging Area Project - Riverside-South Coast County, Winter

3.7 Signage and Striping - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	6.2400e-003	0.2151	0.0461	5.6000e-004	1.1768	1.3500e-003	1.1781	0.1201	1.2900e-003	0.1214		58.6199	58.6199	4.6800e-003		58.7370
Worker	0.0253	0.0163	0.1692	5.3000e-004	5.8854	3.6000e-004	5.8858	0.5969	3.3000e-004	0.5972		52.9387	52.9387	1.2900e-003		52.9709
Total	0.0316	0.2315	0.2153	1.0900e-003	7.0622	1.7100e-003	7.0639	0.7170	1.6200e-003	0.7186		111.5586	111.5586	5.9700e-003		111.7079

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.1273					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2095	2.1052	2.2797	3.1100e-003		0.1331	0.1331		0.1225	0.1225	0.0000	300.7685	300.7685	0.0973		303.2004
Total	3.3368	2.1052	2.2797	3.1100e-003		0.1331	0.1331		0.1225	0.1225	0.0000	300.7685	300.7685	0.0973		303.2004

Harford Springs Staging Area Project - Riverside-South Coast County, Winter

3.7 Signage and Striping - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	6.2400e-003	0.2151	0.0461	5.6000e-004	0.3533	1.3500e-003	0.3546	0.0378	1.2900e-003	0.0391		58.6199	58.6199	4.6800e-003		58.7370
Worker	0.0253	0.0163	0.1692	5.3000e-004	1.7575	3.6000e-004	1.7579	0.1842	3.3000e-004	0.1845		52.9387	52.9387	1.2900e-003		52.9709
Total	0.0316	0.2315	0.2153	1.0900e-003	2.1108	1.7100e-003	2.1125	0.2220	1.6200e-003	0.2236		111.5586	111.5586	5.9700e-003		111.7079

3.8 Clean Up and Demobilization - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.2095	2.1052	2.2797	3.1100e-003		0.1331	0.1331		0.1225	0.1225		300.7685	300.7685	0.0973		303.2004
Total	0.2095	2.1052	2.2797	3.1100e-003	0.0000	0.1331	0.1331	0.0000	0.1225	0.1225		300.7685	300.7685	0.0973		303.2004

Harford Springs Staging Area Project - Riverside-South Coast County, Winter

3.8 Clean Up and Demobilization - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0190	0.0122	0.1269	4.0000e-004	0.0452	2.7000e-004	0.0454	0.0120	2.5000e-004	0.0122		39.7040	39.7040	9.7000e-004		39.7282
Total	0.0190	0.0122	0.1269	4.0000e-004	0.0452	2.7000e-004	0.0454	0.0120	2.5000e-004	0.0122		39.7040	39.7040	9.7000e-004		39.7282

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.2095	2.1052	2.2797	3.1100e-003		0.1331	0.1331		0.1225	0.1225	0.0000	300.7685	300.7685	0.0973		303.2004
Total	0.2095	2.1052	2.2797	3.1100e-003	0.0000	0.1331	0.1331	0.0000	0.1225	0.1225	0.0000	300.7685	300.7685	0.0973		303.2004

Harford Springs Staging Area Project - Riverside-South Coast County, Winter

3.8 Clean Up and Demobilization - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0190	0.0122	0.1269	4.0000e-004	0.0452	2.7000e-004	0.0454	0.0120	2.5000e-004	0.0122		39.7040	39.7040	9.7000e-004		39.7282
Total	0.0190	0.0122	0.1269	4.0000e-004	0.0452	2.7000e-004	0.0454	0.0120	2.5000e-004	0.0122		39.7040	39.7040	9.7000e-004		39.7282

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Harford Springs Staging Area Project - Riverside-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1074	0.9038	1.3013	5.3700e-003	20.1151	5.2300e-003	20.1203	2.0696	4.9300e-003	2.0746		547.9799	547.9799	0.0306		548.7436
Unmitigated	0.1074	0.9038	1.3013	5.3700e-003	20.1151	5.2300e-003	20.1203	2.0696	4.9300e-003	2.0746		547.9799	547.9799	0.0306		548.7436

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	58.25	58.25	58.25	192,902	192,902
Total	58.25	58.25	58.25	192,902	192,902

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	18.50	10.10	7.90	33.00	48.00	19.00	66	28	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120

5.0 Energy Detail

Historical Energy Use: N

Harford Springs Staging Area Project - Riverside-South Coast County, Winter

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	

Harford Springs Staging Area Project - Riverside-South Coast County, Winter

5.2 Energy by Land Use - Natural Gas

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0346	7.0000e-005	8.0900e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0172	0.0172	5.0000e-005		0.0184
Unmitigated	0.0346	7.0000e-005	8.0900e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0172	0.0172	5.0000e-005		0.0184

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6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	6.0000e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0279					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.6000e-004	7.0000e-005	8.0900e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0172	0.0172	5.0000e-005		0.0184
Total	0.0346	7.0000e-005	8.0900e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0172	0.0172	5.0000e-005		0.0184

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	6.0000e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0279					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.6000e-004	7.0000e-005	8.0900e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0172	0.0172	5.0000e-005		0.0184
Total	0.0346	7.0000e-005	8.0900e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0172	0.0172	5.0000e-005		0.0184

7.0 Water Detail

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

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

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

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

Equipment Type	Number
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11.0 Vegetation