CEQA Initial Study

Pedley Spreading Grounds Pond Enhancements

February 2023

Prepared For:

City of Pomona
Water Resources Department
148 N. Huntington Street
Pomona, California 91768

Prepared By:

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1.1 PROJECT TITLE AND LEAD AGENCY

Project Title:	Pedley Spreading Grounds Pond Enhancements Project
Lead Agency Name:	City of Pomona, Water Resources Department
Lead Agency Address:	148 N. Huntington Street Pomona, California 91768
Contact Person:	Jorge D. Anaya, Senior Water Resources Engineer
Contact Phone Number:	(909) 772-4240
Project Sponsor:	Same as lead agency

1.2 PROJECT BACKGROUND AND OBJECTIVE

The City of Pomona Water Resources Department is the lead agency under the California Environmental Quality Act (CEQA) and has prepared this Initial Study (IS) to address the impacts of implementing the Pedley Spreading Grounds (PSG) Pond Enhancements (proposed project). The PSG consists of three basins and is currently configured to receive flows from the adjacent (to the north) neighborhood through 42-inch and 18-inch storm drains, as well as process water from the adjacent Pedley Filtration Plant (PFP). Located in the City of Claremont, California, the PSG are owned and operated by the City of Pomona.

The proposed project is a collaborative effort between the Cities of Pomona and Claremont to capture, treat, and infiltrate local urban runoff into the existing PSG to increase water supply through stormwater recharge and to decrease non-point source pollutants. Funding to implement the project is being sought from the Safe Clean Water Program, which is funded by a parcel tax intended to increase Los Angeles County local water supply, improve water quality, and invest in making communities greener and more livable. The mission of the Pomona Water Resources Department is to protect and manage groundwater resources for the people of the City of Pomona and to provide the cleanest water possible to residents and businesses.

Design of the project is described in the Preliminary Design Report (PDR) (Pomona, 2022). The project includes: grading of the existing PSG basins to enhance percolation, modifications to an existing stormwater junction diversion structure, construction of a new control vault to improve stormwater conveyance to the basins, new water quality pretreatment structure, inlet storm drain extensions, energy dissipater and riprap pads, stilling basin and equalizer structures, spillways, access ramps and roadway improvements, and PFP outlet interconnect piping and controls. Additionally, the project includes implementation of improvements (pathway, plantings, educational signage, viewing area with benches, fencing, and a bike rack) at the Chaparral Park north of the spreading grounds.

The decision-making body for consideration and adoption of the CEQA document for the project is the Pomona City Council - a mayor and six council members, each representing a geographic district.

1.2.1 Project Background

1.2.1.1 ESGVWMG

The Cities of Pomona, Claremont, San Dimas, and La Verne formed the East San Gabriel Valley Watershed Management Group (ESGVWMG), and are collectively subject to the National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit No. R4-2021-0105 (Permit). MS4 permits authorize public entities to discharge pollutants from public stormwater systems to waters of the United States. The ESGVWMG updated their Watershed Management Plan (WMP) to comply with the MS4 Permit in May 2022. The WMP identifies best management practices (BMP) to reduce or eliminate pollutants from entering the MS4 in compliance with the water quality-based effluent limits of the Permit. A Reconnaissance-Level Recharge Study in the Six Basins recommended eight projects to help ESGVWMG comply with Permit requirements while enhancing groundwater recharge (Six Basins Watermaster, 2020). The proposed project at PSG was identified to help achieve MS4 Permit compliance while enhancing stormwater recharge to the underlying Six Basins groundwater basins.

1.2.1.2 Six Basins Watermaster

The Six Basins are a group of adjacent groundwater basins, located just south of the San Gabriel Mountains in eastern Los Angeles and western San Bernardino Counties. Surface-water runoff and recharge at basins located along the foot of the San Gabriel Mountains provide the main source of groundwater replenishment to the Six Basins. Local water-supply agencies also recharge water imported from the Metropolitan Water District of Southern California (Metropolitan). Groundwater is integral to the regional water supply, with 70 percent (as of 2019) of Pomona's water produced from groundwater wells located throughout Pomona and Claremont.

A stipulated judgement adjudicated pumping and storage rights for the Six Basins in 1998 (Southern California Water Company vs. City of La Verne, et al.). The Judgment prescribes the coordinated management of the Six Basins with the objective that the parties to the Judgment can reliably pump their respective rights and maximize the beneficial use of groundwater. The Judgment also established the Six Basins Watermaster - a committee of representatives (City of Claremont, City of Pomona, City of Upland, Golden State Water Company, Pomona College, Pomona Valley Protective Association, San Antonio Water Company, and Three Valleys Municipal Water District) charged with implementing the physical solution called for in the Judgement.

1.2.1.3 Previous Environmental Documentation

The Six Basins Watermaster prepared the Six Basins Strategic Plan Draft Program EIR (PEIR) to evaluate the potential environmental effects of the implementation of a long-term regional plan to increase groundwater recharge, increase water storage and decrease the reliance on State supplied water within the Six Basins (TVMWD, 2021). The PEIR describes the environmental impact of

projects proposed in the Six Basins Strategic Plan, one of which is enhancing stormwater recharge at the PSG. Based on the analysis present in the report, the project will have no impact, less than significant impacts, or less than significant impacts as mitigated for aesthetics, air quality, biological resources, cultural resources, hazardous materials, transportation, geology and soils, hydrology and water quality, noise, and utility systems. Mitigation measures adopted as part of the PEIR that are relevant to the proposed PSG project are referenced in the Environmental Assessment (Section 2 of this Initial Study). Rewording of some of the measures has been conducted for clarity and applicability to the proposed PSG project.

1.2.1.4 Existing Operations

The PSG consists of three basins and is currently configured to receive flows from the adjacent neighborhood to the north through storm drains (the 42-inch on Radcliffe Drive, 30-inch on Mills Avenue and 18-inch on the western corner of the PSG), as well as process water from the adjacent Frank G. Pedley Memorial Filtration Plant (Figure 1). Originally constructed in 1962, the filtration plant is permitted to treat up to 4.0 million gallons per day (mgd) of raw surface water for delivery to the City of Pomona. The treatment processes include coagulation, clarification, disinfection, and filtration. Two on-site reservoirs store treated water. Approximately 0.45 acre-feet per day (afd) flows from the filtration plant to the PSG from daily operations (supernatant, backwash carriage water, analyzer process water, and sludge from the gravity sludge thickener). This represents approximately 1.5 percent of the total storage capacity of PSG of 29.78 af. When discharges from the Canon Waterline to the filtration plant exceed 4 mgd or have high turbidity, flows are diverted directly to PSG via the overflow structure and PFP bypass pipe. Per the Pomona 2019 Integrated Water Supply Plan Update, typically, 500 acre-feet per year (afy) are spread at the PSG. Design of the project is based on the assumption that 13.26 ac-ft per day (4.32 mgd) are needed to be allocated within the PSG for storage of the potential maximum volume bypassed by the filtration plant into the PSG. Percolation testing performed as part of the geotechnical investigations determined an adjusted design percolation rate of 6.22 inches per hour (in/hr) for the PSG.

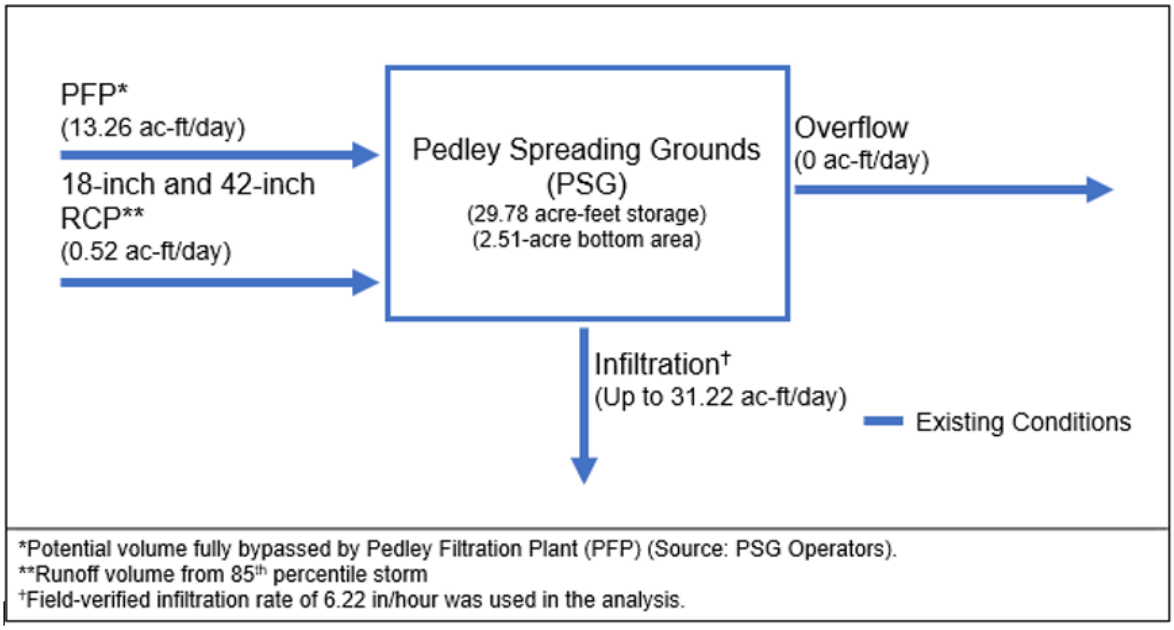


Figure 1. Pedley Spreading Grounds Existing Operations

1.2.2 Project Objective

The objective of the project is to capture, treat, and infiltrate local urban runoff into the PSG to enhance groundwater recharge of the Six Basins groundwater basins and thereby increase local water supply. Groundwater would then be withdrawn via existing wells to augment potable water resources in the City of Pomona service area. Consistent with the MS4 permit, the project would increase local groundwater supplies while decreasing pollutant loading to surface waters.

Project goals are:

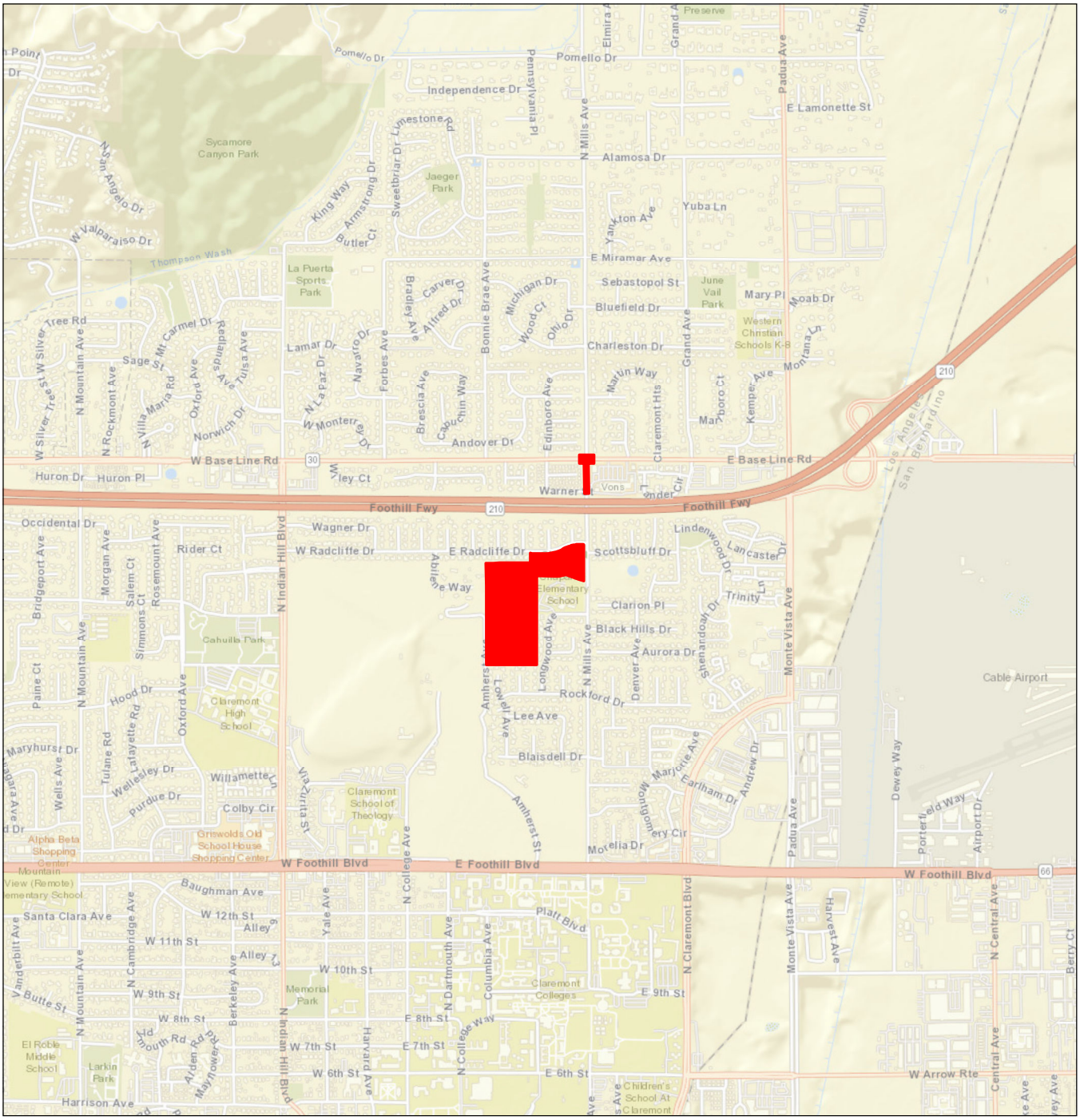
- Decrease impact of non-point source pollutants discharged into local water bodies
- Optimize stormwater management and conveyance
- Prepare for more extreme and frequent drought conditions by capturing and recharging groundwater
- Provide community education and awareness of groundwater resources

1.3 PROJECT LOCATION AND ENVIRONMENTAL SETTING

The PSG are located at 1691 Longwood Avenue in Claremont, on the eastern edge of the Los Angeles County in the Pomona Valley at the foothills of the San Gabriel Mountains (Figure 2). The site is centrally located within the City of Claremont, north of Interstate 10, north of State Route 66, and south of the Foothill Freeway (210 Fwy). The project site is in Sections 3 and 34; Township 1 South and Township 1 North; Range 8 West; San Bernardino Meridian; within the United States Geological Survey (USGS) Ontario 7.5-minute topographic quadrangle. The latitude/longitude of the approximate center of PSG is 34.116°N/-117.710°W. Elevation at the site is approximately 1,400 feet above mean sea level. Average annual temperatures range from a minimum of 44°F to a high of 92°F. Annual precipitation is 16.7 inches.

The three stormwater spreading basins (total of approximately 4 ponded acres) are bounded by single-family residences on Radcliffe Street to the north; Chaparral Elementary School and single-family residences on Longwood Avenue on the east; single family residences on Akron Place, Lowell Avenue and Longwood Avenue on the south; and open space managed by the California Botanic Garden on the west. Separated from the PSG by Amherst Avenue, the 86-acre garden is the largest botanic garden dedicated to California native plants, with more than 22,000 California native plants.

The PSG overlie the Six Basins groundwater basins, which underlie a portion of the Eastern San Gabriel Valley in Los Angeles County, and the City of Upland, and the unincorporated community of San Antonio Heights in western San Bernardino County. The basins are Canyon Basin, Upper Claremont Heights Basin, Lower Claremont Heights Basin, Pomona Basin, Live Oak Basin and Ganesha Basin. The Six Basins area is bounded by the San Gabriel Mountains to the north, the San Jose Hills to the south, the Main San Gabriel Basin to the west, and the Chino Basin to the east.



Project Location

0 1,000 2,000 Feet

(At original document size of 8.5x11)
1:24,000

N

Stantec

Project Location	Prepared by DL on 2022-06-21
Claremont	TR by SET on 2022-06-21
Los Angeles County, California	IR by JV on 2022-06-21

Client/Project 184031542
City of Pomona
Pedley Spreading Grounds Pond Enhancements Project

Figure No.
2

Title
Project Location

Notes
1. Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
2. Data Sources: Stantec 2022.
3. Background: Sources: Esri, GEBCO, NOAA, National Geographic, Garmin, HERE, Geonames.org, and other contributors
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
Esri, Garmin, GEBCO, NOAA NGDC, and other contributors

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1.4 PROJECT DESCRIPTION

The proposed project includes increasing the capacity of the PSG basins, improvements to the existing 30-inch Mills Avenue storm drain, installation of a water quality pretreatment device, modifications to interconnect the PFP outlet piping, and new park and educational facilities at the adjacent Chaparral Park.

1.4.1 PSG Basins

Under the proposed project, the existing spreading basins will be regraded to increase their capacity by 3.0 acre-feet and allow additional infiltration. Drivable berms would be re-established between the basins to allow easier access for maintenance. Flow control features will also be added between basins and to the PFP outlet piping system.

The proposed design retains the three-basin design with each basin being separated by a 20-foot-wide embankment with access road. Thirty-inch and 24-inch diameter culverts will serve as equalization conduits with slide gates allowing for additional control over water distribution. Access ramps (16-ft) will be added to each basin to allow for periodic maintenance and debris removal. All of the basin re-grading will be done at a maximum slope of 3:1. Basin 1 will be kept at the same depth as the existing condition with a bottom elevation of 385 feet. Basin 2 will be lowered by approximately 3 feet to a bottom elevation of 1382 feet. Basin 3 will be lowered slightly from 1383 to 1382.5 feet. Basin bottoms will be sloped at S=0.5 percent toward the low point elevation corresponding to the equalizer structures. A berm will be added to the south side of Basin 3 to add additional freeboard with an emergency spillway. This overflow will be lined with a grouted riprap pad at the base to reduce scour in the event of activation. Basin 1 will be treated as a pre-sedimentation basin for the outflow from the PFP. Basin 2 will feature a large capacity water quality pretreatment device, inlet pipe extension with energy dissipater and stilling basin for debris and sediment captures. Table 1 summarizes grading proposed for the three basins. With implementation of the proposed project:

- The capacity of the three basins will be 32.46 ac-ft
- The infiltration rate will be 6.22 in/hr based on geotechnical investigations. Up to 35.33 ac-ft/day can be infiltrated into all three basins.
- Adequate capacity for the 10-year storm event will be provided, based on:
    - 3.26 ac-ft/day from the 18-inch and 42-inch storm drains
    - 7.64 ac-ft/day from the 30-inch storm drain
    - 13.26 ac-ft/day from the filtration plant can be accommodated as an emergency overflow, if necessary

Table 1. Basin Grading

Basin	Bottom Area of Basin (ft^2)	Average Length (ft)	Average Width (ft)	Approximate Volume (ft^3)
Pre-sedimentation Basin for PFP (Basin 1)	12,520	200	63	138,770
Spreading Basin 2	45,470	310	145	538,920
Spreading Basin 3	58,380	345	170	750,970
TOTAL	116,370 (2.67 acres)			1,428,660 (32.80 ac-ft)

Improvement of the basins is estimated to result in approximately 17,460 cubic yards of cut and 14,860 cubic yards of fill material. Providing for 15 to 20 percent shrinkage, soils are anticipated to be approximately balanced on-site.

1.4.2 Stormwater Conveyance Improvements

To convey flows to the enhanced basins, the project includes improving the existing 30-inch storm drain as a low-flow diversion pipe to deliver stormwater runoff from a 375-acre drainage area to the PSG (Figure 3). The 30-inch Mills Avenue storm drain terminates at a junction structure, which receives flow from two 51-inch storm drains owned by the City of Claremont. Site reconnaissance showed a slide gate and weir that connects this 30-inch line to the junction structure. The slide gate would be removed and concrete plug material at the upstream opening of the pipe would be removed. By removing these restrictions and re-operating the diversion, the PSG can increase spreading by 7.64 acre-feet during the 24-hour, 85th-percentile storm.

Additionally, a below-grade vault (4 ft X 4 ft 10 ft) would be added along the 30-inch storm drain between the junction structure and the 210-Highway overpass (Figure 4). The vault would include a transition pipe, manually operated slide gate to control and optimize diversion flow while significantly reducing the likelihood of an overflow event at the PSG. The existing 30-inch storm drain will be operated as a low-flow diversion pipe and a bypass for storm flows entering the junction structure from the 51-inch storm drain. Any flows not entering the 30-inch storm drain will flow into the Los Angeles County Flood Control District owned 69-inch storm drain that discharges to Thompson Creek in the west. The transition pipe will help control the flows into the PSG from the 375-acre drainage area resulting from the baseline modification. The manually operated slide gate will be mounted at the upstream end of the vault so that the diversion can be completely closed without risk of overflow onto Mills Avenue. Visual inspection of staff gauges inside the basins along with Smartflow Smart Cover flow meters and totalizers on basin inlet pipes will be used to monitor when the PSG is nearing or at full capacity and inform operators to close the diversion slide gate. The gate is planned to be open for most of the year and closed intermittently during storms. Therefore, it is not anticipated that water will be stagnant in the 30-inch storm drain for an extended period of time. After installation, the area around the vault including sidewalk, turf, hedges, and irrigation will be restored to pre-construction condition.

Figure 3. Proposed Storm Drain System Improvements

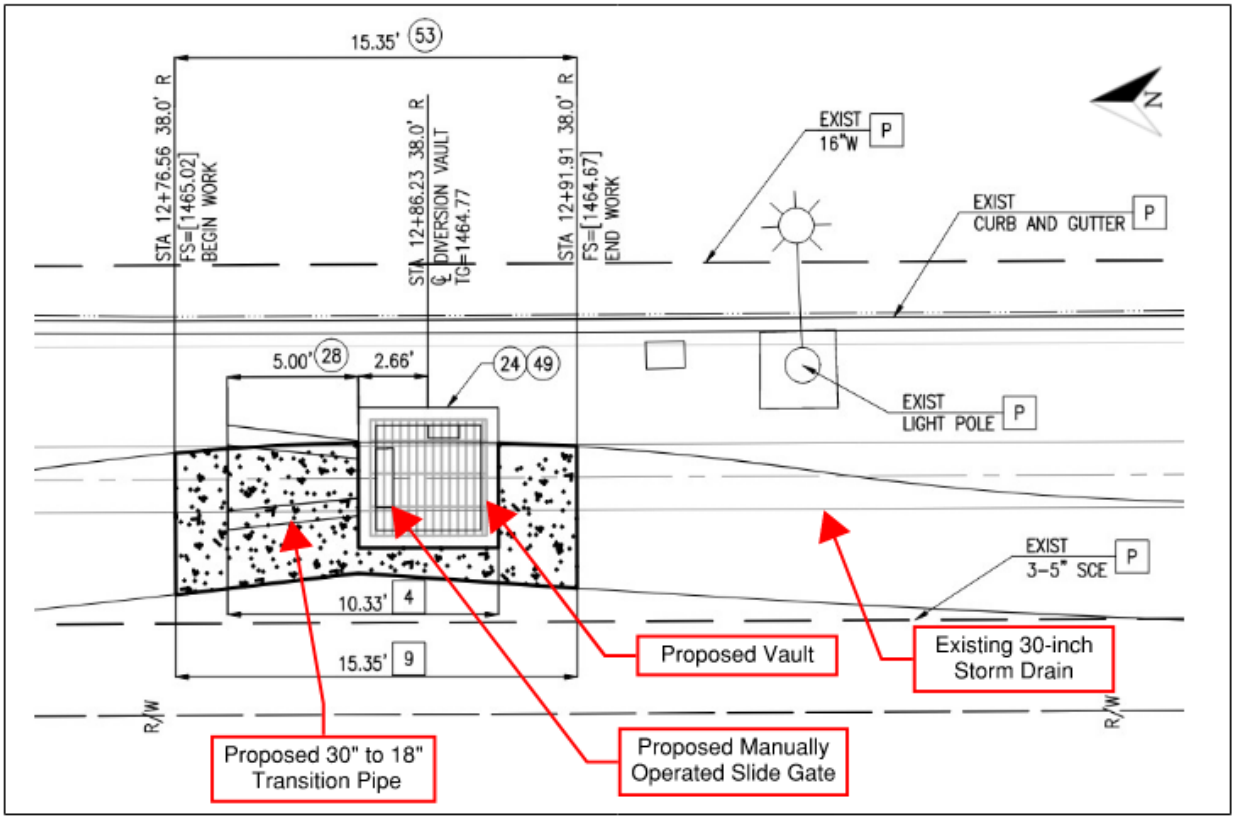


Figure 4. Proposed Vault Structure in Mills Avenue

1.4.3 Park and Educational Facilities

The project also includes new park and educational amenities to be installed at Chaparral Park. Located at 1899 North Mills Avenue, northeast of the PSG, the park is next to Chaparral Elementary School and includes a soccer field and a playground. Improvements to the park will be detailed during future design, but may include porous pavement walkway, minor planting of shrubs or native garden, viewing area with benches and educational signage about the PSG, wrought iron fencing, and a bike rack. Plans and specifications will be refined to reflect community input obtained during public outreach efforts.

1.4.4 Construction

Construction for the proposed project will include demolition activities; grading and berm improvements; storm drainpipe installation; cast-in-place concrete; placing riprap; PFP bypass and interconnect piping modifications; slide gate, gate valve, and check valve installations; reoperation of the junction structure in Mills Avenue at Baseline Road; and precast concrete vault installation in Mills Avenue.

Construction activities are summarized below:

Basin Enhancements

- During grading for the proposed basins, earthwork volumes will be as close to balanced as possible; import of soil is not anticipated.
- Basin grading will include a stilling basin, access ramps, spillways, and culverts between the basins to equalize storage.
- Construction activities for the basin enhancements include:
  - Earthwork Excavation for basins, 17,460 cubic yards (CY)
  - Earthwork Fill for basins and on-site roadways, 14,860 CY
  - Install 18" high-density polyethylene (HDPE) Pipe and Bedding, 71 linear ft
  - Install 24" HDPE Pipe and Bedding, 300 linear ft
  - Install 24" Inline Gate Valve H-30 by Waterman Industries (or approved equal), 4
  - Construct Concrete Double Pipe Wing Walls
  - Furnish and Install Rip Rap Slope Armor and Aprons, 185 CY
  - Construct Concrete Emergency Spillway, 2,000 sq-ft

Storm Drain Improvements

- Construction activities for the storm drain improvements will include:
  - Clear and Grub
  - Remove Existing Concrete Outlet Structures (2EA)
  - Remove Existing 30” Reinforced Concrete Pipe (RCP), 10 linear feet
  - Remove Existing 42” RCP, 20 linear feet
  - Remove Existing Slide Gates (3EA)
  - Remove Existing Concrete Plug
  - Remove Existing Portland cement concrete (PCC) sidewalk
  - Remove Existing Chain Link Fence and Slide Gate
  - Remove 18” PFP Bypass Pipe (160 linear feet)
  - Remove 18” PFP Outlet Pipe (15 linear feet)
  - Remove 14” PFP Overflow Pipe (30 linear feet)
  - Construct 30" to 18" Transition Per SPPWC 340-2, 5 linear ft
  - Install 4'x4' Vault with grated cover
  - Furnish and Install 18" Slide Gate with Unseated Design Head of 35.4' by Waterman (or approved equal)
- Surface preparation includes breaking and removing pavement with concrete saws and pavement breakers. Debris would be hauled to an appropriate construction/demolition and inert (CDI) landfill or crusher plant via dump trucks. An estimated 20 CY of asphalt debris would be hauled off-site. Assuming 10-cubic yard trucks, approximately two trucks would haul construction debris off-site.

Small scrapers, backhoes or track hoes would be used for excavation, with hand digging to locate buried utilities. Water trucks would be used during excavation to control fugitive dust. Suitable soils would be retained for backfill. For excavations 5 feet deep or deeper, the construction contractor would develop a shoring and bracing plan to provide worker protection against the hazard of caving ground during the excavation.

- **S**teel plates would be used to cover any open areas left at the end of each workday.

- Backfill materials would be clean, fine earth, rock, or sand, free from grass, roots, brush, or other vegetation. Backfilled earth would be compacted using a roller or hydraulic tamper prior to paving where applicable.

- Asphalt concrete pavement, at least 3 inches thick, would be placed over an aggregate base. Curbs will be repaired or replaced as necessary. Final steps would include striping and street cleaning as necessary.

General Construction Notes

- Approximately 10 construction workers (laborers, equipment operators and supervisors) would be onsite at any one time.

- The specific equipment to be used would be determined by the construction contractor; typical equipment for construction at the basins and for the storm drain improvements are listed in Table 2.

Table 2. Typical Construction Equipment

Equipment	Approximate Number During Project Construction
Dump Truck	1-4 (per day)
Scrapers	1-4
Hydraulic Breaker	1
Concrete Saw	1
Backhoe or Track Hoe	1
Front End Loader	1
Concrete Mixer Truck	1
Asphalt Paver	1
Roller Compactor	1
Pickup Utility Truck	1-2
Water Truck	1
Street Sweeper	1
Tractor (delivery trucks)	1 (per day)

- Construction is estimated to occur over approximately 4 to 6 months.

- To avoid having to divert stormwater flows, it is anticipated that construction would not occur during the wet season (October 1 to April 1).

- Consistent with the City of Claremont Municipal Code, grading operations would occur only between the hours of 7:00 am and 8:00 pm weekdays and Saturdays, excluding national holidays. No construction activities would be permitted outside of the hours or on Sundays and federal holidays, unless a temporary waiver has been granted by the City of Claremont chief building official.

- Construction staging for equipment and vehicles will be on-site at the PSG.

- Wind erosion and sediment erosion controls will be implemented as appropriate throughout the construction period.

- Up to two to three materials deliveries (fill soils, crushed base, pipe, pipe appurtenances, concrete, riprap, shoring materials) would be expected per day. It is anticipated that materials would be sourced locally. Materials would be received and stored at PSG.

- Prior to the start of construction, the construction contractor would install erosion control measures, such as stabilized entrances, silt fences, gravel bags, filter fabric, and/or hay bales along the peripheries of construction sites.

- Prior to the start of construction, a Construction Traffic Management Plan would be developed. The Plan will detail lane closures, placement of barricades and safety lights, positioning of flagpersons, and covering of open trenches during non-work periods with a metal plate. Emergency response providers (City of Claremont Fire and Police Departments) would be notified in advance of the construction schedule, location, and lane closures.

  It is assumed that at any one time, the maximum length of the construction zone (and therefore any lane closures) would be approximately 60 to 100 feet in length. At this time, it is envisioned that roadways will remain accessible with at least one lane of traffic operational.

- A least 2 weeks prior to the start of construction, the City of Pomona would notify residents and schools adjacent to and within 500 feet of the construction zone of the construction schedule. A contact name and phone number would be provided, as well as a project website address for project update information.

1.4.5 Operations and Maintenance

Existing maintenance of the PSG includes annual grubbing of approximately 1 inch of soil in the basins to improve percolation, annual soil removal, monthly tree trimming, and monthly access road clearing. Soil removal involves moving soil from the bottom of the basin to the top of the basin to help widen the access roads.

Anticipated operations and maintenance activities with implementation of the proposed project are summarized in Table 3. Typical construction equipment for vegetation and debris removal would include dozers, graders, backhoes, loaders, and scrapers. After removal of vegetation and debris and sediments, basin floors would be ripped using a bulldozer with ripper attachment, then smoothed by dragging a bar or screen behind the bulldozer. Sediment removal would serve to

maintain percolation rates at the basins, but would not substantially alter overall capacity. Sediments may be stockpiled on-site for later use in the repair of eroded areas or side slopes, or hauled off-site. Side slopes may also be maintained through the addition of rip-rap or gabions, as necessary. Additional equipment for vegetation management may include tractor mowers, power trimmers, and manual tools such as pruning loppers, saws and clippers to trim and thin vegetation. Debris removed using the vacuum truck from the water quality pretreatment device, sump locations, equalizer structures, and PFP outlet interconnect piping control vault, and vegetation removed from the basins, would be disposed off-site at a landfill.

Table 3. Anticipated Pedley Spreading Grounds Operation and Maintenance

Location	Activity	Schedule	Description
Baseline Road Junction Structure	Remove debris	Annually	Removing sediment and debris build up in the junction structure using a vacuum truck
Vault on Mills Avenue	Inspect slide gate	Semi-Annually	Inspecting condition of slide gate
	Operate slide gate	As Needed	Opening and closing slide gate. Slide gate should close when PSGs are at or near capacity.
	Lubricate fittings	Annually	Cleaning and lubricating fittings grease
	Clean and grease operating stems	Semi-Annually	Cleaning and lubricating operating stems with valve stem grease
	Remove Debris	Semi-Annually	Removing sediment and debris build up from vault using a vacuum truck
Basin Equalization Piping	Operate slide gates	As Needed	Opening and closing slide gates to equalize water levels in the PSG. Slide gates should be open unless isolation for maintenance of a particular basin is required.
	Remove debris	As needed	Removing sediment and debris from pipe openings
PFP Discharge Interconnect Piping	Inspect Slide gates	Semi-Annually	Inspecting condition of slide gates at interconnect structure
	Operate slide gates	As Needed	Opening and closing slide gates. One of two slide gates should be open at all times.
	Operate gate valves	As Needed	Opening and closing gate valves to manage various discharge flow and desired outfall location
	Remove debris	As Needed	Remove sediment and debris from interconnect structure
Basins at PSG	Grubbing	Annual, after wet season	Disturbing 1 inch of soil in the basins to improve percolation
	Soil Removal	Annual	Moving sediment build up at the bottom of the basins to other onsite locations

Location	Activity	Schedule	Description
	Tree Trimming	Monthly	Trimming trees around the perimeter of the basins
	Road Clearing	Monthly	Clearing access roads
Chapparal Park	To be maintained by City of Claremont		

1.5 Project Outreach

During final design, additional outreach will be conducted per the Interested Parties Outreach/Engagement Plan (Appendix A of the PDR). There will be an invitation of community members to key venues, such as the PFP, to explain water management goals and design a project that reconciles community and water management interests. The California Botanic Gardens, Chaparral Elementary School and Sustainable Claremont are project stakeholders. Materials such as briefing sheets with renderings of the completed project site will be provided in English and Spanish to gather feedback and/or comments about how the project is impacting the community. Outreach will also be conducted at Chaparral Elementary School to provide an overview of the project and educate students and staff on stormwater management.

1.6 APPLICABLE LAND USE PLAN

The PSG are designated as Public land use on the Land Use Plan of the City of Claremont's General Plan (2014a), with a zoning of Park/ Resource Conservation (P/RC) (Claremont, 2014b). The Public designation provides for a wide range of public uses, including public schools, transportation-related facilities, government uses, public utilities, libraries, museums, cultural facilities, and public service facilities. The P/RC category establishes and protects public properties for such purposes as preservation of natural resources, managed production of resources, outdoor recreation, and public health and safety. The P/RC District is intended to assure open space areas for uses such as public parks, outdoor recreation, cemetery uses, protection of natural habitat, preservation of cultural resources, management of groundwater resources, protection and conservation of mineral resources, and the protection of the public health and safety due to hazardous or special conditions. As noted below, water recharge facilities, settling basins, and drainage channels are allowed uses.

The following uses and development are permitted in the P/RC District:

A. Parks and outdoor recreation facilities such as playgrounds, playing fields, and trails, open to the public and for which no admission fee is charged.

B. Community, senior and youth activity centers.

C. Cemetery uses.

D. Highway and freeway landscaping.

E. Water recharge facilities, settling basins, and drainage channels.

F. Natural habitat protection.

G. Preservation of architectural, historic, cultural, and natural resources.

H. The growing of plants provided no sales occur at the site.

I. Facilities for use by the public such as benches, picnic tables, shade structures, paved walkways, parking lots, fencing, restroom buildings, other minor buildings, and ancillary improvements such as lighting related to permitted uses.

J. Commercial antenna/wireless telecommunication facilities pursuant to Chapter 16.100.

1.7 PROJECT APPROVALS

Permits, approvals, and notifications for project construction and operation are anticipated to include:

Agency	Potential Permit or Approval
State Water Resources Control Board (SWRCB)	NPDES Construction Stormwater General Permit 2009-0009-DWQ
Regional Water Quality Control Board (RWQCB), Los Angeles Region	Construction dewatering Waste Discharge Requirements (WDRs), if relevant. Note that based on the geotechnical report for the project (Converse, 2022), the groundwater table is not expected to be encountered during project construction.
California Department of Transportation (Caltrans)	Transportation Permit - Transportation of heavy construction equipment and/or materials, which requires the use of oversized-transport vehicles on State highways
South Coast Air Quality Management District (SCAQMD)	Dust Control Plan - Rule 403 requires the implementation of best available dust control measures (BACM) during active operations capable of generating fugitive dust. This rule also requires activities defined as “large operations” to notify the SCAQMD by submitting specific forms. A large operation is defined as any active operation on property containing 50 or more acres of disturbed surface area; or any earth moving operation with a daily earth-moving or throughput volume of 3,850 cubic meters (5,000 cubic yards), three times during the most recent 365 day period. Permit to Construct/Permit to Operate – temporary operation of IC engines for power generation during construction, if relevant
City of Claremont	Building Permit - construction or operation of new slide gate, new pipeline development
City of Claremont	Grading Permit - grading for basin enhancement
City of Claremont	Encroachment Permit - work at the intersection of Baseline Road and Mills Avenue; proposed Chaparral Park improvements

Agency	Potential Permit or Approval
Owner of APN 8671-050-056	(Potential) Temporary Construction Easement, Permanent Easement - Depending on the location of the property boundary in relation to the vault improvements, these easements may be necessary to encroach on the parcel.
Claremont Police and Fire Departments, adjacent homeowners, schools and businesses	Notification of project construction schedule and lane closures, as relevant

Section 2
Environmental Analysis

2.1 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below could potentially be significantly affected by this project, but mitigation has been identified to reduce impacts to less than significant levels.

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

2.2 AGENCY DETERMINATION

On the basis of this initial evaluation:

☐ I find that the project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the City of Pomona. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the project, nothing further is required.

Signature: _____ Title: Senior Water Resources Engineer

Printed Name: Jorge D. Anaya Date: February 22, 2023

2.3 ENVIRONMENTAL CHECKLIST

2.3.1 Aesthetics

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) 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 point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

Discussion: Integral to the community's image, the Claremont hillsides, including the Wilderness Park, establish a visual backdrop for the city. The City's General Plan (2009) defines the Neighborhood Vision: The City will continue to implement the Hillside Ordinance as it pertains to this area.

Regarding visual resources, the City of Claremont General Plan (2009) includes the following policy:

Policy 2-1.4. Avoid development of isolated residential areas in the hillsides or other areas where such development would require significant infrastructure investment, adversely impact biotic resources, and/or create adverse visual impact.

a) and c) **Less than Significant Impact**. Existing views of the PSG are of three basins, and the adjacent PFP (**Figure 5**). Views of the existing junction structure and proposed vault structure are of paved roadways with adjacent residences.

Visual Impacts During Construction. Construction activities would include grading, excavation for the vault structure and construction of the storm drain improvements. Views of the project site during construction would include up to approximately 10 workers and approximately 10 vehicles/equipment – such as loaders, scrapers, hydraulic breakers, backhoes, asphalt pavers and dump trucks. The impact would be limited to approximately 4 to 6 months. Construction-related impacts on visual character of the site would be temporary and less than significant.

Visual Impacts During Operation. Once the storm drain improvements are installed, the road surfaces will be restored and the aesthetics of the sites would be similar to existing conditions. At the PSG the existing trees and shrubs along the northern portion of the property will be kept in place to screen the site from adjacent residents. Basin maintenance activities would be confined to the PSG property, occur infrequently, and use equipment such as tractors, backhoes, and dump trucks, the same as under existing conditions. Since the project would not block views of the mountains, include tall structures or propose building materials that cause glare, the project would not conflict with any of the City's policies related to the protection of scenic resources. Improvements at Chaparral Park may include plantings, a beneficial visual impact. Overall, operational impacts on the visual character of the project sites would be less than significant.

Mitigation Measure

Impacts from project construction and operation of the proposed project would be less than significant for visual resources. However, consistent with the Six Basins PEIR, mitigation measure AES-1 shall be implemented to further reduce project-related aesthetic impacts.

AES-1 Design Standards. Proposed facilities, including walls, gates, treatment facilities, etc., shall be designed in accordance with local design standards in order to be complementary to the local area. Landscaping shall be installed and maintained in conformance with local landscaping design guidelines as appropriate to screen views of new facilities from surrounding areas to the extent feasible taking into consideration the needs of the project and except where such compliance is not required by California law.

b) **No Impact**. Scenic roadways are designated by Caltrans and the Federal Highway Administration. The closest Officially Designated Scenic Highway is Route 2 in Los Angeles, approximately 20 miles north of the PSG. The closest eligible scenic highways are Route 57 through the Puente Hills and Route 142 in Chino Hills (both approximately 10 miles south of the PSG) (Caltrans, 2018). The stated intent of the California Scenic Highway program is to protect and enhance California's natural beauty and to protect the social and economic values provided by the State's scenic resources (Streets and Highway Code Section 260). Observers along these roadways would not have views of the PSG or the construction activity for the storm drain improvements. Therefore, there would be no impacts from project construction or operation on views from a State scenic highway.

d) **No Impact.** The use of temporary lighting for basin and storm drain improvements would not be anticipated since construction activity would be conducted during the day. Existing security lighting present at PSG would not be altered by the project. Since the proposed project does not include new sources of light, there would be no impacts on light or glare.

Figure 5. Photograph of Pedley Spreading Grounds

Source: Stantec, July 2022

2.3.2 Agriculture and Forestry Resources

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Discussion: Regarding the zoning for agricultural use or impacts on sites under Williamson Act contracts, a review of city zoning maps for the cities of Claremont, La Verne, Pomona and Upland revealed that there are no project sites identified in the Strategic Plan that are zoned for agricultural uses or under Williamson Act contract. Therefore, implementation of the Strategic Plan and related projects would not result in any conflict with zoning for agricultural use or impact any sites under contract.

a) **No Impact.** The Farmland Mapping and Monitoring Program (FMMP) does map Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance and Grazing Land in the project vicinity (California Department of Conservation, 2022). There is no important farmland mapped on the project sites nor is any farming conducted on or immediately adjacent to the project facilities. Therefore, the proposed project would have no impact on conversion of FMMP designated Farmland.

b) **No Impact.** The project sites are not zoned or mapped by the City of Claremont for agricultural use. The PSG are designated as Public land use in the City of Claremont's General Plan, with a zoning of P/RC (Claremont, 2009). The Public designation provides for a wide range of public uses, including public schools, transportation-related facilities, government uses, public utilities, libraries, museums, cultural facilities, and public service facilities. The P/RC category establishes and protects public properties for such purposes as preservation of natural resources, managed production of resources, outdoor recreation, and public health and safety. The P/RC District is intended to assure open space areas for uses such as public parks, outdoor recreation, cemetery uses, protection of natural habitat, preservation of cultural resources,

management of groundwater resources, protection and conservation of mineral resources, and the protection of the public health and safety due to hazardous or special conditions. The junction structure and proposed vault are within city streets, adjacent to residentially-zoned areas.

Enacted in 1965, the California Land Conservation Act (Williamson Act) involves voluntary contracts between landowners and a city or county in which they agree to retain their lands in agriculture or other open space uses for a minimum of 10 years. The landowners receive property tax relief on the lands under contract. No Williamson Act contracts are relevant for the project areas; therefore, the proposed project would have no impact on agricultural zoning or Williamson Act contracts.

c) and d) **No Impact.** Public Resources Code Section 12220 (g) defines "Forest land" as land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits. There are no timber production zones in the project areas. The project areas are not used for timber harvest and the proposed basin and storm drain improvements would not alter existing use of the sites. Since the project would not result in conversion of forest land to non-forest use, the project would have no impact on forest lands.

e) **No Impact.** The project would not require construction on or adjacent to forest harvest areas or farmlands, or change the use of the project sites. Therefore, there would be no impact on agricultural operations from construction and operation of the proposed project.

2.3.3 Air Quality

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

Discussion:

The project site is located within the 6,745 square-mile South Coast Air Basin (SCAB), which includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino County. SCAB is under the jurisdiction of the SCAQMD. The air quality within SCAB is primarily influenced by meteorology and a wide range of emissions sources, such as dense population centers, heavy vehicular traffic, and industry.

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards for outdoor concentrations. The federal and state standards have been set at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons such as children, pregnant women, and the elderly, from illness or discomfort. Criteria air pollutants include ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), particulate matter 2.5 microns or less in diameter (PM2.5), particulate matter 10 microns or less in diameter (PM10), and lead (Pb). Pursuant to the federal Clean Air Act, the SCAQMD is responsible for reducing emissions of criteria air pollutants for which SCAB is considered in non-attainment. The SCAB region is designated as nonattainment for O_3 and PM2.5 under the California and National Ambient Air Quality Standards (AAQS) and PM10 under the California AAQS (SCAQMD, 2018).

SCAQMD's 2016 Air Quality Management Plan (2016 AQMP) is the regional blueprint for achieving air quality standards and healthful air. The 2016 AQMP contains a comprehensive list of pollution control strategies directed at reducing emissions and achieving AAQS in coordination with the California Air Resources Board (CARB), U.S. Environmental Protection Agency (U.S. EPA), and the Southern California Association of Governments (SCAG) 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). SCAQMD is currently preparing the Revised 2022 AQMP, which has not yet been approved at the time this analysis was prepared (SCAQMD, 2022).

a) **Less than Significant Impact.** The following addresses the project's consistency with SCAQMD's 2016 AQMP. In accordance with the procedures established in SCAQMD's CEQA Air Quality Handbook, the following criteria are required to be addressed in order to determine the project's consistency with applicable SCAQMD policies:

- **Criterion 1.** Whether a 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 air quality standards or the interim emission reductions specified in the AQMP.

  As discussed below under Impact AQ-b and Impact AQ-c, the proposed project would fall below SCAQMD project-level and localized thresholds. Moreover, the proposed project would not introduce any new stationary sources or expose sensitive receptors to substantial pollutant concentrations. Therefore, the project would not increase the frequency or severity of an existing violation or cause or contribute to new violations for these pollutants and would also not delay timely attainment or air quality standards or interim emission reductions specified in the AQMP.

- **Criterion 2.** Whether a project would exceed the assumptions in the AQMP based on the year of project buildout and phase.

  With respect to the second criterion for determining consistency with AQMP growth assumptions, the projections in the AQMP for achieving air quality goals are based on the assumptions within SCAG's 2016 RTP/SCS regarding population, housing, and growth trends. The proposed project would increase the capacity of existing recharge basins and improve an existing storm drain. The project would not result in any new population, housing, or long-term employment opportunities in the region. As a result, the project is consistent with the growth projections in the AQMP.

The determination of AQMP consistency is primarily concerned with the long-term influence of a project on air quality in SCAB. The proposed project would not result in a long-term impact on the region's ability to meet State and federal air quality standards. Therefore, the project is consistent with the applicable air quality plan and impacts would be less than significant.

b) **Less than Significant Impact.** In developing thresholds of significance for air pollutants, the SCAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. Construction and operational emissions were estimated in the California Emissions Estimator Model (CalEEMod).

Construction Emissions - Emissions from construction-related activities are generally short-term but may still cause adverse air quality impacts. The project would generate emissions from construction equipment exhaust, worker travel, and fugitive dust. These construction emissions include criteria air pollutants from the operation of heavy construction equipment.

Grading of the site would require in 17,460 CY of soil excavation and 14,860 CY of fill. With provisions for 15 to 20 percent shrinkage, this results in an approximately balanced site. In addition, the project would import approximately 185 CY of rip rap slope armor. Grading estimates account for excavation of the basins and excavation for storm drain upgrades.

The construction schedule used in the analysis represents a "worst-case" analysis scenario since emission factors for construction equipment decrease as the analysis year increases due to improvements in technology and more stringent regulatory requirements. Therefore, construction emissions would decrease if the construction schedule were delayed to later years. The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required pursuant to CEQA Guidelines 15064(f)(5).

As shown in Table 4, the project construction emissions would be below the SCAQMD significance thresholds, and therefore, impacts would be less than significant and are not considered cumulatively considerable. Note that during construction, per guidance from the City of Pomona Land Development General Notes, and the requirements of SCAQMD Rule 403, dust would be controlled by watering.

Table 4. Estimated Project Construction Emissions

Construction Year	Emissions (lbs/day)					
	VOC	NOx	SOx	CO	PM10	PM2.5
2023	3.39	34.75	0.06	28.74	21.12	11.32
SCAQMD Thresholds	75	100	150	550	150	55
Exceed?	No	No	No	No	No	No

Note: Construction emission estimates do not account for fugitive dust controls required under SCAQMD Rule 403.
Source: CalEEMod output files (Appendix A)

Operational Emissions - Operational emissions would be generated from periodic maintenance activities which include annual grubbing, annual soil removal, monthly tree trimming, and monthly access road clearing. Soil removal involves moving soil from the bottom of the basin to the top of the basin to help widen the access roads. Grubbing involves disturbing 1 inch of soil in the basins to improve percolation.

Soil removal and grubbing were assumed to require excavators, graders, rubber tired dozers, scrapers, and loaders based on CalEEMod defaults for grading construction. Soil removal and grubbing were assumed to occur over a 2 week period. Soil removal and grubbing were modeled as construction inputs within the CalEEMod model.

Tree trimming was assumed to require an aerial lift, chainsaws, and woodchipper and was assumed to occur 12 days per year (once per month). Road clearing was assumed to require a street sweeping truck and was assumed to occur 12 days per year (once per month). Both tree trimming and road clearing would be conducted by two workers. Other maintenance activities include occasional inspection and cleaning of pipeline vaults. Inspection and cleaning of the

pipeline would occur annually or semi-annually and may require a vacuum truck to remove sediment and debris build up. Similar to tree trimming and road clearing activities, it was conservatively assumed other maintenance activities would be performed by two workers. Tree trimming, road clearing, and other maintenance activities were modeled within the CalEEMod model as operational inputs. Employee trips for tree trimming, road clearing, and other maintenance activities were calculated off-model using the California Air Resources Board's EMFAC2021 emission factors. It was assumed that a maximum of 12 employee trips would occur in any single day. Employee trips for the soil removal and grubbing were calculated within the model.

As shown in Table 5, the project operational emissions would be below the SCAQMD significance thresholds, and therefore, impacts would be less than significant and are not cumulatively considerable. Table 5 below also presents a conservative estimate of operational emissions as the table assumes all operational activities would occur at once. In reality, this is unlikely, and in practice emissions would be lower.

Table 5. Estimated Project Operational Emissions

Activity	Emissions (lbs/day)					
	VOC	NOx	SOx	CO	PM10	PM2.5
Soil Removal and Grubbing	3.39	34.56	0.06	28.75	10.85	5.02
Tree trimming, road clearing, and other maintenance activities	1.79	11.83	0.03	13.96	0.55	0.52
Area	0.38	<0.01	0.00	<0.01	<0.01	<0.01
Mobile	0.09	0.02	0.002	0.34	0.005	0.002
Total	5.65	46.41	0.10	43.05	11.41	5.54
SCAQMD Thresholds	55	55	150	550	150	55
Exceed?	No	No	No	No	No	No

Note: Soil removal and grubbing emission estimates do not account for fugitive dust controls required under SCAQMD Rule 403.

Source: CalEEMod output files (Appendix A)

c) **Less than Significant Impact.** Project emissions were reviewed that could expose sensitive receptors to pollutant concentrations to a degree that would significantly affect sensitive receptors (residences, schools, childcare centers, playgrounds, retirement homes, convalescent homes, hospitals, and medical clinics). This section addresses the exposure of sensitive receptors of localized significance thresholds (LST), construction-generated fugitive dust (PM10), construction and operational-generated diesel particulate matter (DPM), or operational CO hotspots.

Localized Significance Thresholds Analysis

Construction. The maximum on-site daily emissions for NOx, CO, PM10, and PM2.5 were calculated using CalEEMod and compared to the applicable SCAQMD LSTs. The site lies within site receptor area (SRA) 10 based on a 5-acre site with receptors approximately 25 meters from the site. The project site size is based on the approximate acres that would be graded per day (see Appendix A for calculations). Additionally, localized construction emissions include compliance with SCAQMD Rule 403 which is required to reduce impacts related to fugitive dust from the project site.

Table 6 below conservatively shows both on-site and off-site emissions and demonstrates that construction emissions would be below the SCAQMD LSTs, and therefore, impacts would be less than significant.

Table 6. Localized Significance of Construction and Estimated Operational Emissions (lbs/day)

Year	NOx	CO	PM10	PM2.5
Construction				
2023 On-site Maximum Emissions	34.79	28.74	10.3	5.77
SCAQMD Construction Thresholds	236	1,566	12	7
Exceed?	**No**	**No**	**No**	**No**

Source: CalEEMod Output (Appendix A)

Operation - Project operation would result in periodic maintenance activities. SCAQMD Rule 403 would be applicable to all operations that may generate fugitive dust and, therefore, fugitive dust reduction measures including watering exposed areas and reducing vehicle speeds on unpaved roads would be implemented during operational activities. Operational activities would occur throughout the site and would not be concentrated in any one area throughout the day. Therefore, receptors near the site would not be constantly exposed throughout the day. Finally, operational maintenance activities would likely not occur at once and would be spread throughout the year. As such, operational activities would not exceed SCAQMD LST thresholds and would be less than significant.

Fugitive Dust Emissions - Fugitive dust (PM10) would be generated from site grading and other earth-moving activities. Most of this fugitive dust would remain localized and would be deposited near the project site. However, the potential for impacts from fugitive dust exists unless control measures are implemented to reduce the emissions from the project site. The project would be required to comply with SCAQMD Rules and Regulations, including Rule 403 that requires the implementation of best management practices to reduce fugitive dust emissions. The impact from fugitive dust emissions would be less than significant.

Toxic Air Contaminants (TAC) Construction - The greatest potential for TAC emissions during construction would be from DPM emissions associated with heavy equipment

operations. According to SCAMQD methodology, health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. An individual cancer risk is the likelihood that a person continuously exposed to concentrations of TACs over a 70-year lifetime will contract cancer. Given the short-term construction schedule, the project would not result in a long-term (i.e., 70-year) source of TAC emissions. Therefore, the impact from construction TAC emissions would be less than significant.

Toxic Air Contaminants – Operation

DPM. The SCAQMD recommends that health risk assessment (HRAs) be conducted for substantial individual sources of DPM. These land uses include truck stops and warehouse distribution facilities that generate more than 100 trucks per day or more than 40 trucks with operating transport refrigeration units (SCAQMD, 2022). The project would not include these types of land uses and is not considered to be a substantial source of DPM emissions. The project would include the use of on-site, off-road equipment that would emit DPM emissions during operation. However, the use of this equipment would be periodic and would not be concentrated in one area throughout the day. As such, given the short-term and episodic nature of operational maintenance, the project would not generate significant levels of DPM emissions.

TACs. Typical sources of acutely and chronically hazardous TACs including industrial manufacturing processes which include chrome plating, electrical manufacturing, or petroleum refining. The project would not include these types of potential industrial manufacturing process sources. As such, the project would not release substantial amounts of TACs.

Carbon Monoxide Hotspots. An analysis of CO "hot spots" determines whether the change in the level of service of an intersection caused by a proposed project would have the potential to result in exceedances of CAAQS or NAAQS. Vehicular exceedances occur primarily when vehicles are idling at intersections. With the turnover of older vehicles, CO concentrations have steadily declined throughout the state. SCAB was re-designated as attainment in 2007 and CO is no longer addressed in the SCAQMD's AQMP.

During operation, vehicle trips would occur from maintenance workers to the site. Operational maintenance would be periodic. The site would not attract any other vehicle trips from customers, vendors, or residents. Therefore, the project does not trigger the need for a detailed CO hotspots model.

Conclusion

The proposed project would not result in a health risk impact from TACs and would not generate a CO hotspot. Moreover, construction and operation of the proposed project would fall below SCAQMD LSTs. Therefore, impacts would be less than significant.

d) **Less than Significant Impact.** Construction - Diesel exhaust and volatile organic compounds (VOCs) would be emitted during construction of the project from equipment exhaust, painting, and paving activities, which are objectionable to some; however, construction activities would be minimal and emissions would disperse rapidly from the project site and therefore would not

create objectionable odors affecting a substantial number of people. As such, construction odor would be less than significant.

Operation - Land uses typically associated with odors include wastewater treatment facilities, waste-disposal facilities, or agricultural operations. The project does not contain land uses typically associated with emitting objectionable odors and, as such, this impact would be less than significant.

2.3.4 Biological Resources

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) 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 Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
c) 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?	☐	☒	☐	☐
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 wildlife nursery sites?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Discussion: A biological resources reconnaissance-level survey of the project site and an additional 300-ft buffer zone was conducted on May 2, 2022, by Stantec Consulting Services Inc. (Stantec). The approximately 87-acre area is defined as the Biological Study Area (BSA). Details of the survey methods, background data, and existing conditions are included in the Biological Resources Technical Report (BRTR, Appendix B).

Existing Biological Setting

Three plant communities defined by Sawyer et al. (2009) and U.S. National Vegetation Classification (USNVC) (2022), one vegetation community descriptive in nature, and seven land cover types were mapped in the BSA and are summarized in Table 7 and depicted in Figure 6.

Table 7. Vegetation Communities and Land Cover Types in the BSA

Vegetation Communities and Land Cover Types	Area of BSA (acres)
Vegetation Communities	
Common deerweed (A*cmispon glaber*, formerly *Lotus scoparius*) shrubland	3.08
Mulefat (*Baccharis salicifolia*) thickets	0.98
Eucalyptus spp. Ruderal Forest Alliance – Eucalyptus woodland	1.04
Olea spp. Semi-Natural Stand – Olive woodland	3.09
Subtotal	8.19
Land Cover Types	
Disturbed/Developed	68.33
Disturbed/Developed	0.03
--Concrete Lined Channel	6.42
Residential Landscaping	1.21
Infiltration Ponds	1.91
Vegetated Channel	0.02
Ruderal herbaceous	0.80
Subtotal	78.72
Total	**86.91**

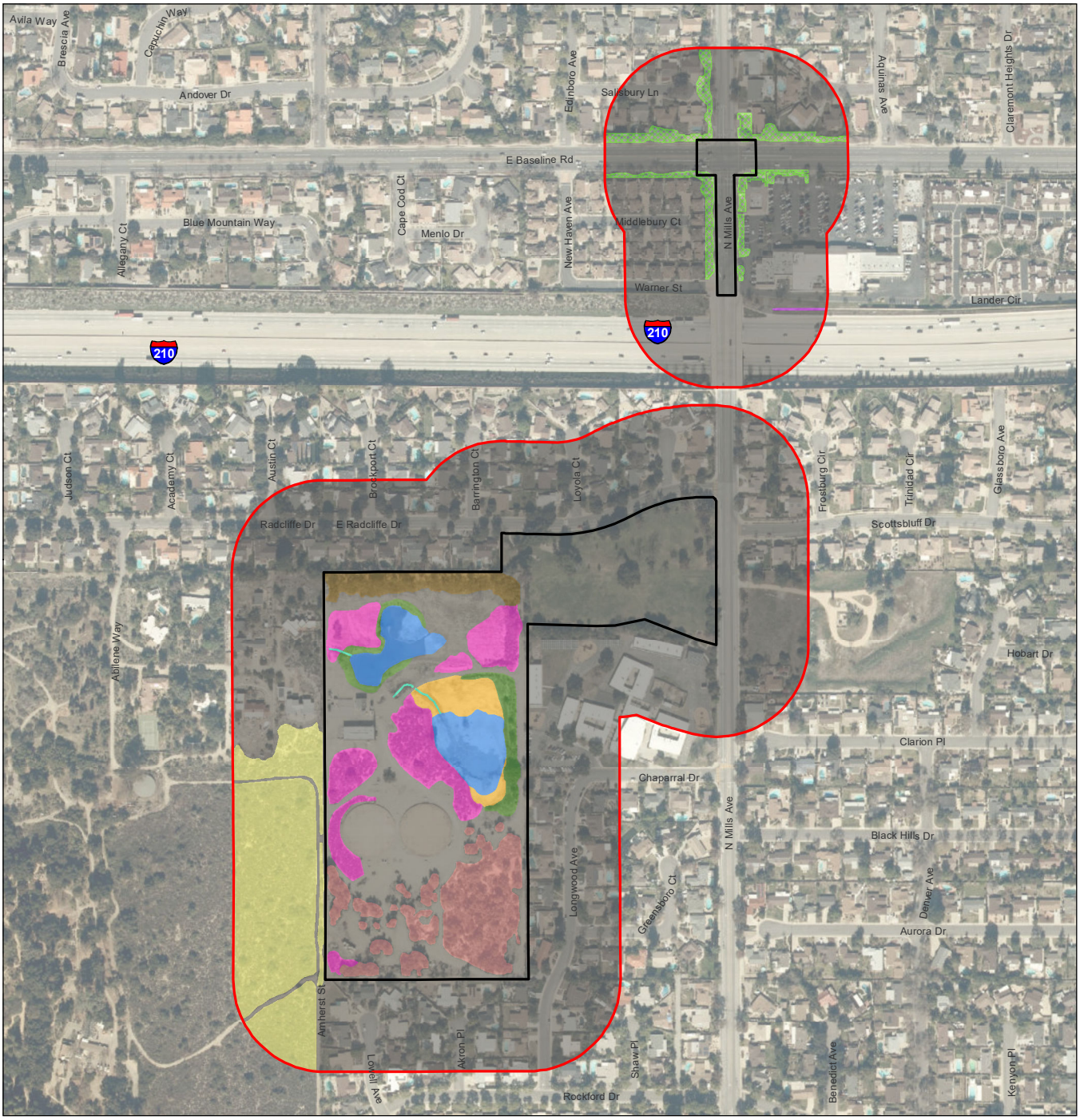
Source: Sawyer et. al 2009

The aquatic features on the project site consist of artificial wetlands and non-wetlands within the existing basins and channels. Isolated and restricted to the project site, the aquatic features are exempt from SWRCB jurisdiction because the features are for detention, retention, infiltration, and treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal stormwater permitting program (SWRCB, 2021).

A total of 94 common native and non-native plants species were observed in the BSA. A total of 19 common wildlife species were observed in the BSA - 18 bird species and 1 mammal. No reptiles, amphibians, or fish were observed in the BSA. A full list of the common plant and wildlife species observed are included in Appendix B.

Based on California Department of Fish and Wildlife (CDFW) California Natural Diversity Data Base (2022a), USFWS Information for Planning and Consultation (2022b), and the Strategic Plan PEIR, 38 sensitive species and 52 sensitive wildlife species occur within the region defined as 10 miles of the BSA. Most of the sensitive plant and animal species known to occur in the region have been determined to have no or a low potential to occur on the project site. A table of the 90 sensitive/special-status plant and wildlife species and their potential to occur in the BSA are included in Appendix B.

No critical habitat occurs in the BSA (USFWS, 2022a), and no sensitive plant or animal species were observed within the BSA during surveys on May 2, 2022 (Appendix B).



Biological Survey Area
Project Footprint

Vegetation Communities and Land Cover Types

- Mulefat thickets
- California Botanic Garden
- Concrete Lined Channel
- Disturbed/Developed
- Common deerweed shrubland
- Eucalyptus woodland
- Olive woodland
- Residential Landscaping
- Retention Pond
- Ruderal herbaceous
- Vegetated Channel

0 250 500 Feet

(At original document size of 8.5x11)
1:6,000

N

Stantec

Project Location
Claremont
Los Angeles County, California

Prepared by DL on 2022-06-21
TR by SET on 2022-06-21
IR by JV on 2022-06-21

Client/Project 184031542
City of Pomona
Pedley Spreading Grounds Pond Enhancements Project
CEQA Initial Study

Figure No.
6

Title
Vegetation Communities and Land Cover Types

Notes
1. Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
2. Data Sources: Stantec 2022. Township/Section/ Range Data from BLM 2018. Quadrangle data from USGS 2017.
3. Background: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

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a) **Less than Significant Impact with Mitigation Incorporated.** The project site includes habitats such as common deerweed (*Acmispon glaber* formerly *Lotus scoparius*) shrubland, mulefat (*Baccharis salicifolia*) thickets, *Eucalyptus* spp. woodland, infiltration ponds, and vegetated channel areas that could provide habitat for sensitive species (Sawyer et al., 2009). The 300-foot survey buffer consists mostly of disturbed/developed areas and the California Botanic Garden just west of the project site (Figure 7). Based on the design of the proposed project, Table 8 presents the impact acreages to vegetation communities and land cover types on the project site.

Table 8. Impacts to Vegetation Communities and Land Cover Types

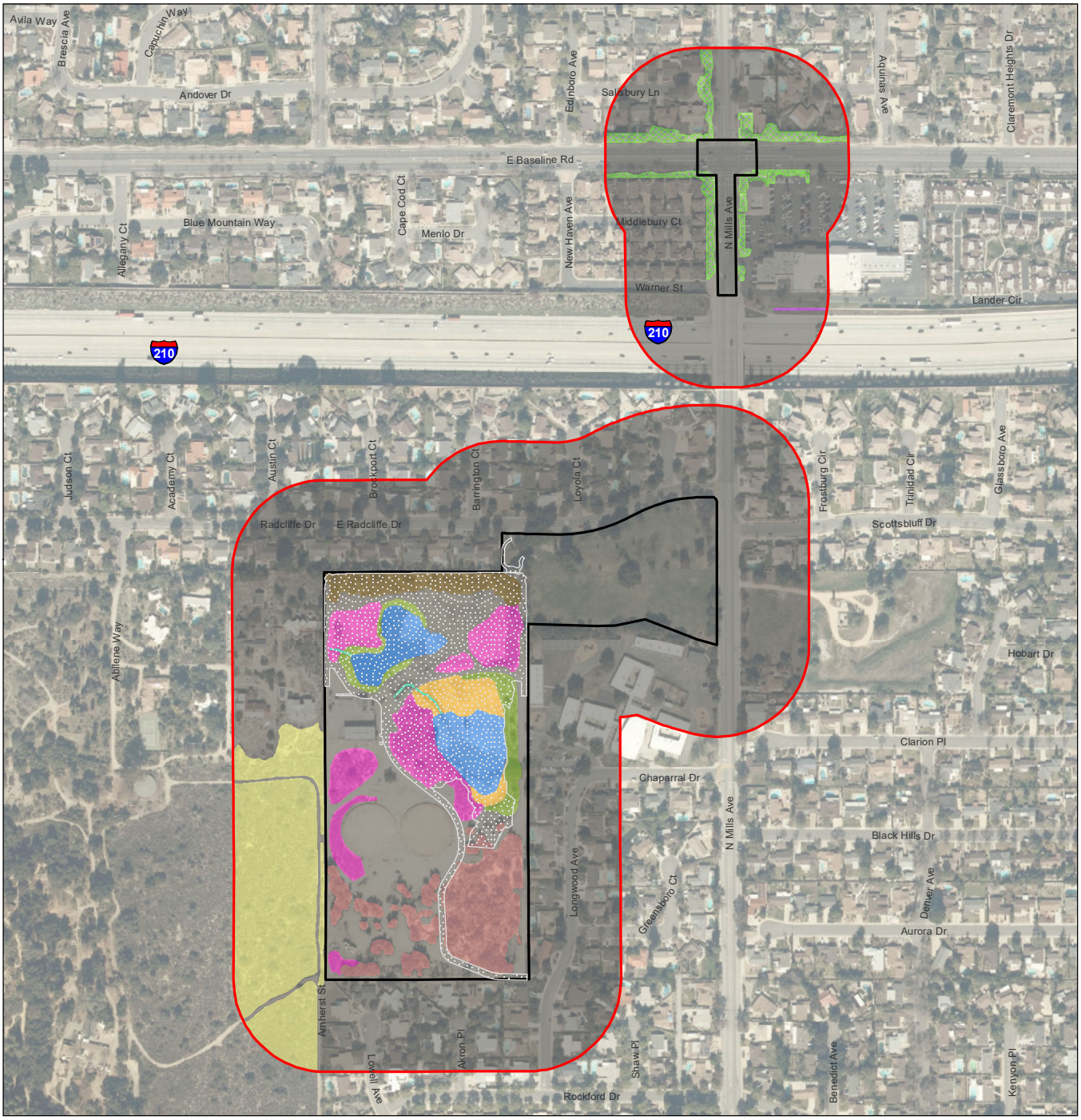
Vegetation Communities and Land Cover Types	Permanent Impacts
	Acres
Vegetation Communities	
Deerweed scrubland	1.24
Mulefat (*Baccharis salicifolia*) thickets	0.66
Eucalyptus woodland	0.97
Olive woodland	0.12
Subtotal	***2.99***
Land Cover Types	
Disturbed/Developed	2.90
Infiltration Ponds	1.91
Vegetated Channel	0.02
Ruderal herbaceous	0.80
Subtotal	***5.63***
Total	**8.62**

Source: Sawyer et al., 2009

The following subsections describe potential impacts to sensitive species.

Sensitive Plant Species

During the May 2, 2022 site survey, no sensitive plants were observed at the project site and no sensitive plants species that are known to occur in the region have a high potential to occur on the site. There is a moderate potential for five sensitive plant species to occur on the project site (Table 9). Nevin's barberry (*Berberis nevinii*), a perennial shrub, had moderate potential to occur, but would have been observed during the survey if it was present.



- Biological Survey Area
- Project Footprint
- Project Impacts (9.49 acres)

Vegetation Communities and Land Cover Types

- Mulefat Thickets
- California Botanic Garden
- Concrete Lined Channel
- Disturbed/Developed
- Common Deerweed Shrubland
- Eucalyptus woodland
- Olive Woodland
- Residential Landscaping
- Retention Pond
- Ruderal Herbaceous
- Vegetated Channel

0 250 500 Feet

(At original document size of 8.5x11)
1:6,000

N

Stantec

Project Location
Claremont
Los Angeles County, California

Prepared by KDLP on 2022-12-19
TR by SET on 2022-12-19
IR by MT on 2022-12-19

Client/Project 184031542
City of Pomona
Pedley Spreading Grounds Pond Enhancement Project
CEQA Initial Study

Figure No.
7

Title
Vegetation Communities and Land Cover Types with Impacts

Notes
1. Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
2. Data Sources: Stantec 2022. Township/Section/ Range Data from BLM 2018. Quadrangle data from USGS 2017.
3. Background: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Table 9. Sensitive Plant Species with Moderate Potential to Occur

Scientific Name	Common Name	Status (federal/state)	Suitable habitat
Plant Species			
Berberis nevinii	Nevin's barberry	FE/SE, 1B.1	deerweed shrubland, mulefat thickets
Calochortus weedii var. *intermedius*	intermediate mariposa-lily	-/1B.2	deerweed shrubland
Calystegia felix	lucky morning glory	-/1B.1	infiltration pond
Pseudognaphalium leucocephalum	white rabbit-tobacco	-/2B.2	deerweed shrubland, mulefat thickets
Sagittaria sanfordii	Sanford's arrowhead	-/1B.2	infiltration pond

Sources: CDFW 2022a, 2022b, 2022c, 2022d; CNPS 2022, USFWS 2022b

Notes: Federal Designation

FE = Federally Endangered

State Ranking

SE = State Endangered

California Rare Plant Rank (CRPR)

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

2B Plants rare, threatened, or endangered in California and common elsewhere

.1 Seriously threatened in California (high degree/immediacy of threat)

.2 Fairly threatened in California (moderate degree/immediacy of threat)

Prior to the start of construction Mitigation Measure BR-1, a preconstruction survey, will be implemented and focus on the following four species:

- intermediate mariposa-lily (*Calochortus weedii var. intermedius*)
- lucky morning glory (*Calystegia felix*),
- white rabbit tobacco (*Pseudognaphalium leucocephalum*)
- Sanford's arrowhead (*Sagittaria sanfordii*)

If no sensitive plant species are found, then construction and operation of the proposed project would not be expected to result in direct or indirect impacts to sensitive plant species. If a sensitive plant species is found and cannot be avoided, a relocation strategy would be developed and coordination with CDFW and/or USFWS would be conducted as described in mitigation measure BR-1.

Sensitive Bird Species

During the May 2, 2022, survey, 18 common bird species were observed in the project site and surrounding area. If construction for the proposed project occurs during the avian nesting season (generally extends from February 1 through August 31, but it can vary slightly from year to year based on seasonal weather conditions and some raptors species may nest as early as January), impacts to nesting birds could occur. The Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-711) does not allow for take of migratory birds. The MBTA makes it unlawful to possess, buy, sell, purchase, barter or "take" any migratory bird listed in Title 50 of the Code of Federal Regulations Part 10. "Take" is defined as possession or destruction of migratory birds, their nests, or eggs. Disturbances that cause nest abandonment and/or loss of reproductive effort or the loss of habitats upon which these birds depend may be a violation of the MBTA. The MBTA prohibits killing, possessing, or trading in migratory birds except in

accordance with regulations prescribed by the Secretary. The MBTA encompasses whole birds, parts of birds, and bird nests and eggs.

If implementation of the proposed project were to impact nesting birds protected under the MBTA, the impacts would be considered significant. Therefore, Mitigation Measure BR-2 would require preconstruction nest surveys prior to ground disturbance, nesting bird surveys, and avoidance measures for active nests. With implementation of mitigation measure BR-2, impacts on nesting birds would be less than significant.

Sensitive Fish/Invertebrate Species

One sensitive species, Crotch's bumblebee (*Bombus crotchii*), has a high potential to occur on the proposed project site. Crotch bumblebee may occur on flowers in the proposed project site. This bumblebee is most likely to occur in the deerweed shrublands. If a Crotch's bumblebee occurs on site, it can fly away during construction. No significant impacts to Crotch's bumblebee are expected.

Sensitive Reptile Species

During surveys conducted within the project site, no common or sensitive reptiles were observed. All but one of sensitive reptiles known to occur in the region were determined to have a low or no potential to occur in the project site; one species, southern California legless lizard (legless lizard) (*Anniella stebbinsi*), a CDFW Species of Special Concern (SSC), was determined to have a moderate potential to occur.

Construction activities associated with the proposed project could result in the direct loss of legless lizard should it occur. Direct impacts could result from potential mechanical crushing during construction, trampling of friable soils required for burrowing, removal of brush piles, fugitive dust, and general disturbance due to increased human activity. Project implementation may also result in permanent loss of mulefat thickets. Indirect impacts could include compaction of soils and the introduction of non-native plant species.

In compliance with mitigation measure BR-1, preconstruction clearance surveys will be implemented. However, legless lizard may not be detected during preconstruction surveys since they would primarily occur in underground burrows. Therefore, if a legless lizard is detected during construction, construction will halt and a qualified biologist will relocate the lizard.

Sensitive Mammal Species

During surveys conducted within the proposed project area, no sensitive mammals were observed. All but one of the sensitive reptiles known to occur in the region were determined to have a low or no potential to occur in the project site; one species, San Diego woodrat (*Neotoma lepida intermedia*), SSC, was determined to have a moderate potential to occur. If a San Diego woodrat nest was present during the survey on May 2, 2022, it would have been observed. During preconstruction surveys, the site will be surveyed again for San Diego

woodrat nests. If an individual woodrat occurs on site, away from its nest, it could move away from construction. Although unlikely, if a nest is found, it will be marked and avoided to minimize impacts on San Diego woodrat.

Conclusion

Implementation of BR-1 and BR-2, specifically preconstruction surveys, avoidance and minimization measures, and biological monitoring, would minimize impacts to sensitive species. In addition, mitigation measure BR-3, an environmental awareness and compliance training program will be presented to all construction personnel.

With implementation of mitigation measures BR-1 through BR-3, impacts on sensitive species would be reduced to less than significant levels.

Mitigation Measures

The following mitigation measures would reduce project-related impacts on biological resources to less than significant levels.

BR-1 Plant and Wildlife Preconstruction Clearance Surveys and Biological Monitoring. Prior to ground disturbance or vegetation clearing within the proposed project site, a qualified biologist shall conduct preconstruction plant surveys and wildlife clearance surveys (no more than 7 days prior to site disturbing activities) where suitable habitat is present and will be directly impacted by construction activities.

If a rare plant species is found, it will be fenced and avoided. If it cannot be avoided, then an appropriate relocation strategy shall be developed and coordinated with CDFW and/or USFWS. Common wildlife found within the project site or in areas potentially affected by the proposed project shall be relocated to the nearest suitable habitat that would not be affected by the proposed project prior to the start of construction.

Any sensitive wildlife species found within a proposed project impact area shall be relocated by a qualified biologist to suitable habitat outside the impact area prior to the start of ground-disturbing activities.

A qualified biologist shall be on site during initial ground disturbance activities (minimally for the first week of construction). Thereafter, monitoring shall be conducted at a minimum of once per week throughout the construction phase. The qualified biologist(s) shall have the right to halt all activities that are in violation of sensitive species protection measures. Work shall proceed only after sensitive species are relocated or allowed to leave the site, and the species is no longer at risk.

If a sensitive wildlife species is relocated by the qualified biologist during preconstruction clearance surveys or monitoring, records of all detection, capture, and release of sensitive species shall be reported to CDFW.

BR-2 Nesting Bird Surveys and Avoidance Measures. If initial site disturbance is scheduled to begin during the avian nesting season (February 1 through August 31; January 1 through August 31 for raptors), breeding and nesting bird surveys shall be conducted by a qualified biologist no more than 3 days prior to the start of site disturbance. If construction activities carry over into a second nesting season(s), the surveys shall be completed annually until the proposed project is complete. Surveys shall be conducted within 500 feet of all proposed project activities.

The City of Pomona shall coordinate with USFWS if a federally endangered or threatened species is observed. The City of Pomona shall coordinate with CDFW if a State- endangered or threatened species is observed. If a CDFW species of special concern is observed nesting, it shall be reported to CDFW.

If breeding birds with active nests are found prior to or during construction, a qualified biological monitor shall establish a 300-foot buffer around the nest, and no activities shall be allowed within the buffer(s) until the young have fledged from the nest or the nest fails; initial buffers for nesting raptors shall be 500 feet. The prescribed buffers for common species may be adjusted by the qualified biologist based on existing conditions around the nest, planned construction activities, tolerance of the species, and other pertinent factors; for example, buffers for common passerines, often found to be habituated to human activity, may be adjusted down to 25 - 50 feet depending on the disturbance tolerance of each specific species.

Buffer adjustments for listed and/or other sensitive species shall be done in coordination with the USFWS and CDFW, as applicable. The qualified biologist shall conduct weekly monitoring of the nest to determine success or failure and to ensure that proposed project activities are not conducted within the buffer(s) until the nesting cycle is complete or the nest fails.

BR-3 Environmental Awareness Training. Prior to initial ground disturbance, all project personnel shall attend an environmental awareness and compliance training program. The training program shall present applicable environmental regulations and permit conditions. The training program shall include applicable measures established for the proposed project to minimize impacts to avoid sensitive resources, habitats, and species. Subsequent training events shall be scheduled to support the training of new personnel. Dated sign-in sheets for attendees at these meetings shall be maintained and submitted to the City of Pomona.

b) and c) **Less than Significant Impact with Mitigation Incorporated.** Sensitive natural communities are defined by CDFW as "...communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects." All vegetation within the state is ranked with an "S" rank; however, only those that are of special concern (S1-S3 rank) are generally evaluated under CEQA (CDFW, 2022e). No CDFW sensitive natural communities occur in the proposed project site. Table 8 summarizes project impacts by vegetation and land cover types.

Substantial impacts to riparian habitat are considered significant. Riparian areas generally occur on the bank of waterbody, often a stream or river, and are a transitional zone between

terrestrial and aquatic habitat. Implementation of the proposed project would result in 0.66 acres of permanent impacts to riparian habitat (mulefat thickets).

Implementation of mitigation measure BR-4, which includes minimizing vegetation removal and compensation for impacts to riparian vegetation, would reduce impacts to sensitive riparian (i.e., mulefat thickets) habitats to a less than significant level.

Mitigation Measure

The following mitigation measure would reduce project-related impacts on riparian vegetation to less than significant levels.

BR-4 Riparian Vegetation Removal and Replacement. Construction activities shall be done in such a manner as to minimize the removal of native riparian vegetation (i.e., mulefat thickets). If impacts to native riparian vegetation removal cannot be avoided, the compensation for the permanent loss of habitats may be achieved either by a) on-site habitat creation or enhancement of impacted communities with similar species compositions to those present prior to construction, b) off-site creation or enhancement of the impacted community type (or similar communities), or c) participation in an established mitigation bank program. Permanent impacts to native communities shall be restored/mitigated at a minimum of a 2:1 ratio for on or off-site habitat restoration/creation or participation in an established mitigation banking program.

Prior to the start of any project related activities (including removal of native vegetation), if on- or off-site mitigation is required, an ecosystem-based Habitat Mitigation and Monitoring Plan shall be prepared by persons with expertise in southern California ecosystems and native plant restoration techniques that will guide all restoration and monitoring activities. This plan shall include, at a minimum, the following:

- Provide the total acreage of unique sensitive vegetation communities impacted, and abundance, density, and cover of each plant species and vegetation layer impacted (i.e., ground cover, forbs, subshrub, shrub, and trees).
- Provide the specific location of on- and/or off-site mitigation area(s) and a science based factual discussion as to why the mitigation area(s) is appropriate for mitigating project-related impacts. Describe the environmental features (i.e., soils, slope, existing vegetation, hydrology) that would suggest the mitigation area(s) can support the vegetation and wildlife impacted by project activities.
- Provide a vegetation survey conducted at a reference site containing the vegetation communities being mitigated, with as good or better-quality habitat, to document the density, abundance, diversity, and percent cover for each species by vegetation layer.
- A schematic depicting the mitigation area.
- Proposed species list for creation/enhancement. A plant palette shall consist of species that are diverse with respect to growing duration (annual, perennial), life form (grasses, shrubs, trees, vines), and structure (ground cover, shrubs, tree canopy) that form the vegetation alliance that is being mitigated.
- Planting/seeding methodology (e.g., sources of local propagules, container sizes, and seeding rates).

- Planting schedule.
- Irrigation plan.
- Weeding schedule; and invasive plant control methods that reduce or eliminate the use of chemicals.
- Success criteria.
- Monitoring methodology and schedule extended across a sufficient time frame to ensure that the new habitat is established, self-sustaining, and capable of surviving drought.
- Reporting requirements.

d) **Less than Significant Impact.** Wildlife movement corridors are defined on both a regional and on a local scale. Regionally, the project site does not fall within a movement corridor. On a local basis, the undeveloped areas on the project site provide low to moderate quality habitat for wildlife; but the surrounding area is dominated by development that impedes movement of reptiles, amphibians, and mammals.

Migratory birds may use the project site and vicinity for breeding, nesting, and foraging, or as transient rest sites during migration flights. Because the project is small, mostly within disturbed and developed areas, and of a short construction duration, impacts to the movement of any native resident or migratory fish or wildlife species, to wildlife corridors, or to native wildlife nursery sites would be temporary, minor, and less than significant. Therefore, no mitigation measures are required.

e) **Less than Significant Impact with Mitigation Incorporated.** The project site is located within the City of Claremont. However, as the City of Pomona is the project proponent, relevant City of Pomona General Plan Conservation Component goals and policies were reviewed:

- Policy 7E.P11 Prior to development of areas with drainage features such as ponds, detention basins, or wetlands, a site-specific investigation shall be conducted to define the extent of drainage features, determine wetland permit requirements, and propose measures to mitigate any impacts on the resources.

- Policy 7E.P12 Conduct presence/absence biological surveys for sensitive plant and animal species during the appropriate time of year and time of day in natural areas prior to any construction activities proposed adjacent to or within natural areas. If no special-status species [sensitive] are detected during these surveys, then construction-related activities may proceed. If listed special status species are found within the construction zone, then avoid these species and their habitat or consult with USFWS and/or California Department of Fish and Game [Wildlife] prior to the commencement of construction.

- Policy 7E.P13 Conduct nesting bird surveys prior to any construction activities, including projects proposed to remove/disturb native and ornamental landscaping and other nesting habitat for native birds during bird breeding season from March 1 through August 31 (as early January 1 for some raptors). If no nesting birds are detected during these surveys, then construction-related activities may proceed. Active nests within and adjacent to the construction zone should be avoided and provided a minimum buffer as determined by a

biological monitor (CDFW recommends a 300-foot nest avoidance buffer or 500 feet for all active raptor nests) or consult with the USFWS and/or CDFW prior to the commencement of construction.

In compliance with Policy 7E.P11 and Policy 7E.P12, a habitat assessment was conducted on May 2, 2022, and a BRTR was prepared. As described above, no sensitive species were observed on the project site. However, mitigation measures BR-1 through BR-4 will be implemented to minimize impacts to sensitive species if any are identified prior to or during construction. Consistent with Policy 7E.P13, mitigation measure BR-2 will be implemented if the proposed project occurs during the bird breeding season. With implementation of mitigation measures, impacts on biological resources policies would be reduced to less than significant levels.

f) **No Impact.** The project site is not within a Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, no impacts to a habitat plan would occur.

2.3.5 Cultural Resources

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

Discussion: Consistent with PEIR Mitigation Measure CUL-1, Stantec has conducted a cultural resources assessment consisting of: (1) a cultural resources records search conducted by the South-Central Coastal Information Center (SCCIC) located at California State University Fullerton; (2) consultation with the Native American Heritage Commission (NAHC) and with interested Native American tribes identified by NAHC; and (3) a field survey of the project site.

On May 10, 2022, Stantec requested a cultural resources CHRIS archival records search from the SCCIC, located at California State University Fullerton. The record search was completed by the SCCIC and results received by Stantec on July 18, 2022. The SCCIC records search included a review of all previously recorded prehistoric and historic archaeological sites located within the study area, as well as a review of all known cultural resource survey reports, excavation reports and regional cultural overviews. The purpose of the records search was to determine the number of cultural resource studies and known archaeological resources in the project area (26 acres), and the ½-mile radius study area. The record search returned 13 reports pertaining to previous studies conducted within the study area. Additionally, as part of the records search the following sources were reviewed:

- Google Earth Imagery
- Historical Aerial Imagery
- BLM General Land Office Records
- Built Environment Resource Directory (BERD)
- Cucamonga, CA (1897; 1900; 1903; 1944) 1:62,500 USGS topographic map
- La Verne, CA (1928; 1940) and Ontario, CA (1954; 1967; 2012) 1:24,000 USGS 7.5-minute topographic maps

On June 6, 2022, Stantec conducted a Phase I archaeological investigation on behalf of the City of Pomona for the proposed project. The archaeological investigation consisted of an archival records search of the entire 26-acre project area and a surrounding ½-mile study area, as well as an intensive pedestrian survey of the entire project area. The report entitled, *Archaeological Survey of Approximately 26 Acres of Land on Behalf of the City of Pomona, for the Proposed Pedley*

Spreading Grounds Pond Enhancements Project, Claremont, Los Angeles County, California, is on file with the City of Pomona.

a) **Less than Significant Impact with Mitigation Incorporated.** The records search revealed that one historic period resource, Mojave Road (Base Line Road) (P-19-187085), was previously recorded in the project area and one multicomponent site, Indian Hill (P-19-000108), was previously recorded within the study area. Indian Hill is located entirely outside of the project area and will be avoided. As a result of the intensive pedestrian survey, one historic building (PED-BC-02 - the Pedley Filtration Plant) and one historic distribution line (PED-BC-01 - 12KV Pitzer Distribution Line Segment) were observed.

The project does not propose changes or modifications to the historic building or the historic distribution line. To prevent potentially significant impacts to these resources, Mitigation Measure CR-1 will be implemented to avoid these features during project construction.

The Mojave Road (P-19-187085) is aligned with the modern-day Base Line Road, an actively used throughfare. No further cultural resources study is recommended for P-19-187085. Therefore, with avoidance of the historic building and distribution line, there would be no impacts to historical resources.

Mitigation Measure

The following mitigation measure would reduce project-related impacts on historic resources to less than significant levels.

CR-1 Historic Resources Avoidance. During project construction, no earthwork or other construction activity shall occur which disturbs the Pedley Filtration Plant or the historic distribution line (PED-BC-01 - 12KV Pitzer Distribution Line Segment). In the event that these structures cannot be avoided, additional evaluation would be required.

b) **Less than Significant Impact with Mitigation Incorporated.** The proposed project would require excavation for basin enhancement, berm road improvements at PSG, storm drain improvements in Mills Avenue and improvements at Chaparral Park. No archaeological resources were observed or are known for these locations. However, in areas of deeper excavation there is the potential of encountering native soils and some limited potential to encounter previously unknown cultural resources. If artifacts are present in native soils, a limited potential exists for project construction to significantly impact the resources.

Maintenance of the PSG would be limited to the immediate surface of the basin bottoms and side slopes, no disturbance of native soils would be anticipated. Operation of the project would therefore have no impact on cultural resources.

Implementation of mitigation measures CR-2 and CR-3 would protect unknown cultural resources during installation of project facilities. As mitigated, impacts on cultural resources would be less than significant.

Mitigation Measures

The following mitigation measures would reduce project-related impacts on archaeological resources to less than significant levels.

CR-2 Archaeological Awareness Training. All construction workers and supervisors shall attend a mandatory workshop providing information on cultural resources that may be present in the project vicinity; penalties for unauthorized collection of artifacts; and the need to temporarily redirect work away from the location of any unanticipated discovery until it is recorded and adequately documented and treated. The presentation shall be available to train additional personnel who may join the construction crew after the initial training.

CR-3 Unanticipated Discoveries. If previously unrecorded cultural resources are encountered at any time during project construction, all work shall cease within 60 feet of the discovery until the find can be evaluated by a qualified archaeologist who meets the Secretary of the Interior standards. Work on the other portions of the project outside of the buffered area may continue during this assessment period. If determined to be potentially significant, and if the resource cannot be avoided, a Monitoring and Treatment Plan shall be developed within 48-hours of the discovery. Appropriate Native Americans as identified by the NAHC would be notified of the find and provided a copy of the draft Monitoring and Treatment Plan so as to provide Tribal input with regards to significance and treatment of the find. Work shall not resume in areas determined by the archaeologist as sensitive until the discovery has been evaluated and the recommendations for treatment have been implemented.

c) **Less than Significant Impact with Mitigation Incorporated.** No recorded cemeteries are known for the project area. In the unexpected event that human remains are discovered during project construction or operation, the County Coroner shall be contacted, the area of the find would be protected, and provisions of State CEQA Guidelines Section 15064.5 and Public Resources Code 5097 would be followed. With implementation of Mitigation Measure CR-4, project-related impacts on human remains potentially present in the project area would be less than significant.

Mitigation Measure

The following mitigation measure would reduce project-related impacts on unexpected discover of human remains to less than significant levels.

CR-4 Unanticipated Human Remains. In the unexpected event that human remains or funerary objects are uncovered at a project site, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains (minimum of 200-ft buffer of the find) until:

- The coroner of the county in which the remains are discovered must be contacted to determine whether an investigation of the cause of death is required, and
- If the coroner determines the remains to be Native American:
  - The coroner shall contact the Native American Heritage Commission within 24 hours.

  - The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.
  - The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98.
- Where the following conditions occur, the City of Pomona or authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance:
  - The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission;
  - The descendant identified fails to make a recommendation; or
  - The City of Pomona or authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.

For additional details regarding mitigation measures associated with the unanticipated discovery of human remains and associated funerary objects, refer to Section 2.3.18 Tribal Cultural Resources, Mitigation Measure 4 (TCR-4).

With implementation of the above mitigation measures, project-related impacts on cultural resources would be less than significant.

2.3.6 Energy

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

Discussion: Energy consumption related to the proposed project would include fuel use for enhancement of the PSG basins, improvements to the storm drain system, installation of additional amenities at Chaparral Park, and maintenance of project facilities.

a) **Less Than Significant Impact.** Project Construction Energy Consumption. Energy for project construction would be consumed in the form of fossil fuels for vehicles and equipment. Specific volumes of gas and diesel would depend on the size and age of equipment selected by the construction contractor, the number of hours of active work each day for each vehicle or piece of equipment, and the overall construction schedule. The construction schedule and the equipment selected for use by the contractor would be overseen by the city of Pomona Construction Manager. To the extent feasible, efficiencies in scheduling and equipment use would minimize the fossil fuels used during construction.

   Project Operations Energy Consumption. Project operation would also result in the consumption of fossil fuels for maintenance of the basins. Vehicles and equipment used for maintenance would be properly maintained to maximize energy efficiency.

   Overall, the project would increase the reliability of local water supply, an energy savings over increased imported water use in the City of Pomona service area. Since construction and operation of the project would not be wasteful, inefficient, or unnecessary, the project would have a less than significant impact on energy use.

b) **No Impact.** The planning document relevant to renewable energy or energy efficiency is the Claremont General Plan (Claremont, 2009). Claremont supports sustainable building practices and energy conservation.

   The project includes new buried storm drain facilities, but would not include development of new buildings. Since the project would increase the reliability of local water supply, it would not conflict with General Plan energy conservation policies.

   For water agencies, greenhouse gas reductions focus on the relationship between water and energy. A Greenhouse Gas Emissions Calculator developed by United States Bureau of

Reclamation (2013) showed that an effective way to reduce the volume of carbon emissions related to water treatment and meet Assembly Bill (AB) 32 goals would be to reduce imported water usage and increase local supply usage and water use efficiency. Since the proposed project would increase the reliability of local water supply, the project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency; there would be no adverse impacts on energy planning.

2.3.7 Geology and Soils

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) 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, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994) creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems, where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

Discussion: The project area is located at the northern end of the Peninsular Ranges geomorphic province. The Peninsular Ranges formed as a volcanic island arc collided with the west coast of North America and was accreted onto the margin of the continent, resulting in the expansion of the continent westward. The Peninsular Ranges are part of a larger subduction zone that extends all along western North America, with this particular geomorphic province extending from the Los Angeles Basin in the north to Baja in the south, and extending to Santa Catalina, Santa Barbara, San Nicolas, and San Clemente Islands on the west and the Colorado Desert on the east (Norris and Webb, 1990). The core of the Peninsular Ranges formed as the core of a magmatic arc in the Mesozoic that resulted from active subduction along the Pacific Plate boundary (Harden, 2004).

Locally, the project area is in the Los Angeles Basin, a structural depression approximately 50 miles long and 20 miles wide in the northernmost Peninsular Ranges Geomorphic Province (Ingersoll and Rumelhart, 1999). The Los Angeles Basin developed as a result of tectonic forces

and the San Andreas fault zone, with subsidence occurring 18 – 3 million years ago (Ma) (Critelli et al., 1995). While sediments dating back to the Cretaceous (66 Ma) are preserved in the basin, continuous sedimentation began in the middle Miocene (around 13 Ma) and continues today, resulting in thousands of feet of accumulation (Yerkes et al., 1965). Most of these sediments are marine, until sea level dropped in the Pleistocene and deposition of the alluvial sediments that compose the uppermost units in the Los Angeles Basin began.

As noted in the Strategic Plan PEIR (TVMWD, 2021), the Six Basins are located across a major watershed divide that separates the San Gabriel River watershed to the west from the Santa Ana River watershed to the east. The stream systems that exit the San Gabriel Mountains comprise the main source of sediments and water that contributed to the formation of the Six Basins. The largest of these stream systems is San Antonio Creek, which is responsible for the deposition of material that created the broad alluvial fan, emanating from the mouth of San Antonio Canyon. Soils associated with the geology in the Six Basins project area are made of alluvial material generally consisting of boulders, cobble, gravel, sand, silt and clay.

a)-i) and a)-ii) **Less Than Significant Impact.** The project area is not mapped within a currently designated State of California Earthquake Fault Zone (formerly Alquist-Priolo Special Studies Zones) for surface fault rupture. However, the project site is bounded by the Sierra Madre Fault and Rancho Cucamonga Fault system (zoned as active) to the north and by the Indian Hill Fault and San Jose Fault system to the south. Known faults within 50 km of the site have a maximum moment magnitude of up to 7.9. Therefore, seismic ground shaking is possible for the project site and surrounding region. However, based on location and geologic conditions, the potential for surface rupture resulting from the movement of nearby faults is considered low (Converse Consultants, 2022).

Storm drain improvements and vault design would be done consistent with relevant seismic code requirements (California Building Code) and guidance documents such as the *Minimum Design Loads and Associated Criteria for Buildings and Other Structures* (ASCE/SEI 7-16, 2017). Design features to limit seismic impacts could include flexible pipe couplings and seals. Since habitable structures would not be built as part of the proposed project, people would not be exposed to adverse effects involving seismic ground shaking. Damage to project facilities would be repaired as necessary. Therefore, impacts related to seismic events would be less than significant.

Relevant to the Strategic Plan PEIR mitigation measures, the proposed project is not located within a State of California Earthquake Fault Zone and therefore Measure GEO-1 does not apply. A geotechnical investigation has been completed for the project (Converse Consultants, 2022) and recommendations incorporated into the project design. Therefore, Measure GEO-2 has been completed.

a)-iii) **Less Than Significant Impact.** Soils with moderate liquefaction susceptibility (sediments are young (less than 10,000 years old), unconsolidated, with fine-grained layers, and there has been artesian well activity historically) are mapped to the north and southwest of the PSG (Claremont, 2009). The potential for liquefaction has been found to be the greatest where the groundwater levels and loose cohesionless soils occur within 50 feet of the ground surface.

The project site is not located within a mapped Seismic Hazard Zone for potential liquefaction (Converse Consultants, 2022). Since the project would not be constructed in an area with liquefaction susceptibility, and since habitable structures would not be built as part of the proposed project, people would not be exposed to adverse effects involving seismic-related ground failure. Damage to project facilities from seismic events would be repaired as necessary. Therefore, impacts related to ground failure would be less than significant.

a)-iv) **Less Than Significant Impact.** Areas susceptible to earthquake-induced landslides are mapped north of the project site (Claremont, 2009). The project site is located well away from the mountain front, and the potential for seismically-induced landslides to impact the project site is low (Converse Consultants, 2022). Additionally, since habitable structures would not be built as part of the proposed project, people would not be exposed to adverse effects involving landslides. Damage to project facilities would be repaired as necessary. Therefore, impacts related to landslides would be less than significant.

b) **Less Than Significant Impact.** PSG site soils are characterized as well drained soils with high infiltration rates and low runoff potential (TVMWD, 2021). Soil disturbance would occur during excavation for the basins and storm drain improvements, and during basin maintenance. Site preparation for storm drain improvements would be unlikely to impact topsoils since these would have been removed during previous ground disturbance. Basin grading and vault installation would be done in compliance with BMPs, including measures to control erosion from the construction area. Basin maintenance would manage accumulated sediments but largely leave native soils intact. With compliance with stormwater regulations, impacts related to erosion and loss of topsoil would be less than significant.

c) **Less Than Significant Impact.** Based on review of geologic conditions and topography (graded slopes) at the site and vicinity, the potential for lateral spreading at the project site is considered low (Converse Consultants, 2022). The site is not located within a designated earthquake-induced landslide zone and the potential for seismically-induced landslides to impact the project site is low. The site is not located within a designated liquefaction zone (Claremont, 2009) and the project site not susceptible to potential liquefaction (Converse Consultants, 2022). Therefore, impacts related to unstable geologic units or soils would be less than significant.

d) **Less Than Significant Impact.** The type and amount of clay present in soils, along with moisture content, determine the expansive potential of soils. The project site is in an area of poorly consolidated alluvium from the San Gabriel Mountains (Claremont, 2009). The Uniform Building Code (ICBO, 1994) defines an Expansion Index of soils, which guides foundation design. During geotechnical investigation of the project site, the fill soils from 1 to 2 feet in depth below grade were found to consist primarily of silty sands and sands with varying amounts of gravels and cobbles (Converse Consultants, 2022). The native alluvial soils encountered beneath the fill were primarily alluvial fan deposits - coarse-grained soils consisting of silty sands, sands, sand and gravel mixes, sandy silts, clayey sands, and silty clays with varying amounts of gravels, cobbles, and some boulders.

Based on laboratory testing conducted as part of the geotechnical investigation, the expansion potential of the on-site surficial soils is very low. Mitigation for expansion soils was not

identified or considered necessary unless expansive site soils are encountered during grading (Converse Consultants, 2022). Design of the project facilities would consider soil conditions and include appropriate design features as relevant. Therefore, impacts related to unstable or expansive soils would be less than significant.

e) **No Impact.** Sanitation facilities are not present or proposed for the project site. Therefore, there would be no impact on soils related to wastewater disposal.

f) **Less than Significant Impact with Mitigation Incorporated.** Paleontological remains are considered limited, nonrenewable, scientific, and educational resources. Fossils can qualify as unique resources because they represent the best examples of specific species found in the region, particularly if they are discovered in an undisturbed context. Fossils can also qualify as unique paleontological resources because they provide evolutionary, paleoclimatic, or paleontological data important to the understanding of geologic history (SVP, 1996).

Consistent with PEIR Mitigation Measure GEO-3, Stantec has assessed the potential sensitivity of the project site for paleontological resources and prepared a Paleontological Resource Assessment for the PSG project (Appendix C).

The paleontological resource investigation consisted of a museum records search from the Natural History Museum of Los Angeles County of the project area and vicinity, as well as a review of the most recent geologic mapping, relevant scientific literature and reporting, and a search of online collections databases. This research was used to assign paleontological potential rankings of the Society of Vertebrate Paleontology (2010) to the geologic units present in the project area, either at the surface or in the subsurface. The results of this assessment indicate that young alluvial fan deposits are mapped in the project area, which have low-to-high paleontological potential, increasing with depth. These sediments are likely underlain by very old alluvial fan deposits in the subsurface, which are assessed as having high paleontological potential. Project plans for ground disturbance involve regrading of the existing pond basins and potholing to expose the existing utilities. Of these, the regrading of the existing basins may occur in geologic units with high paleontological potential and therefore may encounter paleontological resources. In order to reduce impacts to paleontological resources to a less than significant level, mitigation measures GE-1 through GE-4 shall be implemented.

Mitigation Measures

The following mitigation measures would reduce project-related impacts on paleontological resources to less than significant levels.

GE-1 Paleontological Monitoring and Mitigation Plan. A paleontologist meeting professional standards as defined by Murphey et al. (2019) shall be retained as the Project Paleontologist to oversee all aspects of paleontological mitigation, including the development and implementation of a Paleontological Monitoring and Mitigation Plan (PMMP) tailored to the project plans that provides for paleontological monitoring of earthwork and ground disturbing activities into undisturbed geologic units with high paleontological potential to be conducted by a paleontological monitor meeting industry standards (Murphey et al., 2019). A

final monitoring report summarizing the results of the monitoring program should be prepared at the conclusion of project ground disturbance.

GE-2 Workers' Environmental Awareness Training. The PMMP shall include provisions for a Workers' Environmental Awareness Training Program that communicates requirements and procedures for the inadvertent discovery of paleontological resources during construction, to be delivered by the paleontological monitor to the construction crew prior to the onset of ground disturbance.

GE-3 Paleontological Monitoring. The PMMP shall provide for full time paleontological monitoring of grading in the existing basins at any depth, and of other ground disturbing activities that exceed 5 feet in depth below the natural ground surface in previously undisturbed sediments. The Project Paleontologist may reduce the frequency of monitoring or spot checks should subsurface conditions indicate low paleontological potential.

GE-4 Paleontological Resource Salvage. Should a potential paleontological resource be identified in the project area, whether by the monitor or a member of the construction crew, work should halt in a safe radius around the find (usually 50 feet) until the Project Paleontologist can assess the find and, if significant, salvage the fossil for laboratory preparation and curation at the Natural History Museum of Los Angeles County.

With implementation of mitigation measures, project-related impacts on paleontological resources would be less than significant.

2.3.8 Greenhouse Gas Emissions

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Discussion: Greenhouse gases (GHGs) are gases that trap heat in the atmosphere. The most common GHGs emitted from natural processes and human activities include carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). Examples of GHGs created and emitted primarily through human activities include fluorinated gases (hydrofluorocarbons and perfluorocarbons) and sulfur hexafluoride. Each GHG is assigned a global warming potential. The global warming potential is the ability of a gas or aerosol to trap heat in the atmosphere. The global warming potential rating system is standardized to CO_2, which has a value of one. For example, CH_4 has a global warming potential of 21, which means that it has a global warming effect 21 times greater than CO_2 on an equal-mass basis. Total GHG emissions from a source are often reported as a CO_2 equivalent (CO_2e). The CO_2e is calculated by multiplying the emission of each GHG by its global warming potential and adding the results together to produce a single, combined emission rate representing all GHGs. On a national scale, federal agencies are addressing emissions of GHGs by reductions mandated in federal laws and Executive Orders. Several states have promulgated laws as a means to reduce statewide levels of GHG emissions. In particular, the California Global Warming Solutions Act of 2006 (AB 32) directed the State of California to reduce statewide GHG emissions to 1990 levels by the year 2020.

AB 32 requires CARB, in coordination with other State agencies and members of the private and academic communities, to adopt regulations to require the reporting and verification of statewide GHG emissions and to monitor and enforce compliance with this program. Under the provisions of the bill, by 2020, statewide GHG emissions were to be limited to the equivalent emission levels in 1990. On December 12, 2008, CARB adopted its Climate Change Scoping Plan pursuant to AB 32 (CARB, 2008). The Scoping Plan was re-approved by CARB on August 24, 2011, and in November 2017, CARB adopted the final 2017 Scoping Plan: The Strategy for Achieving California's 2030 GHG target. The 2017 Scoping Plan indicates existing and ongoing emission reduction efforts and identifies new policies and actions to accomplish the State's climate goals.

According to CARB (2019), in 2017, CO_2 accounted for approximately 83 percent of statewide GHG emissions, with CH_4 accounting for approximately 9 percent of GHG emissions and N_2O accounting for another 3 percent of GHG emissions. Fluorinated gases accounted for approximately 5 percent of GHG emissions in California in 2017. The transportation sector is the

single largest category of California's GHG emissions, accounting for 40 percent of emissions statewide (CARB, 2019). In 2017, total California GHG emissions were 424 million metric tons of CO_2e ($MMTCO_2e$), 5 $MMTCO_2e$ lower than 2016 levels and 7 $MMTCO_2e$ below the 2020 GHG Limit of 431 $MMTCO_2e$ (CARB, 2019).

a) **Less Than Significant Impact.** Project-related GHG emissions would be limited to air pollutants generated from equipment and vehicles during construction and maintenance of project facilities. As described in Section 2.3.3 Air Quality, construction of the project would result in less than significant combustion emissions from vehicles and equipment.

The proposed project is located within the jurisdiction of the SCAQMD. In 2008, the SCAQMD release draft guidance regarding interim CEQA GHG significance thresholds. Within its October 2008 document, the SCAQMD proposed the use of a percent emission reduction target to determine significance for commercial/residential projects that emit greater than 3,000 MT CO2e per year. Under this proposal, a commercial/residential threshold was not formally adopted. On December 5, 2008, the SCAQMD Governing Board adopted the staff proposal for an interim GHG significance of threshold of 10,000 MT CO_2e per year for stationary source/industrial projects where the SCAQMD is the lead agency, with construction emissions amortized over 30 years and added to operational GHG emissions. However, the SCAQMD has yet to adopt a GHG significance threshold for land use development projects.

Based on the estimated average day construction emissions, emissions of GHG related to construction of the proposed project are summarized in Table 10. While the SCAQMD thresholds have not yet been approved, the annual construction emissions can be compared against the proposed 3,000 MT CO_2e/year threshold. Since predicted project GHG emissions would be substantially less than this threshold, project-related emissions would not have a significant direct or indirect impact on GHG and therefore the project would not have a significant impact on climate change.

Table 10. Estimated Construction Greenhouse Gas Emissions (Unmitigated)

Construction Year	MTCO2e
2023	239
Total	**239**
Amortized over 30 years	**8.0**

Notes:
$MTCO_2e$ = metric tons of CO_2 equivalent
Source: CalEEMod Output (Appendix A), unmitigated emissions

Once operational, the project would result in periodic vehicle and equipment emissions related to basin maintenance and staff inspections of the facilities, similar to existing conditions. The project does not include any substantive new stationary or mobile sources of emissions. The

impact of project operation on emissions of GHG, and thus climate change, would be less than significant.

b) **Less than Significant Impact**. In February 2022, the Claremont City Council voted to switch to a 100 percent Green Power program through the Clean Power Alliance where all of the city's electricity will come from renewable sources such as solar, wind and geothermal. The Clean Power Alliance is a nonprofit joint powers authority comprised of 32 public agencies across Ventura and Los Angeles counties.

For water agencies, greenhouse gas reductions focus on the relationship between water and energy. Operation of the proposed project would not have any additional substantial demand for electricity. Energy use and air emissions related to the proposed project would occur primarily during construction, with periodic emissions during facility maintenance (as under existing conditions). The project would not generate substantial new vehicle trips or GHG emissions. Additionally, reduced imported water usage and increased local supply usage have been identified as effective ways to reduce the volume of carbon emissions related to water treatment and meet AB32 goals (Bureau of Reclamation, 2013). Therefore, the project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs; impacts would be less than significant.

2.3.9 Hazards and Hazardous Materials

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
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?	☐	☐	☐	☒
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?	☐	☐	☒	☐
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly, to the risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

Discussion: Existing use of hazardous materials at the PSG includes gasoline and diesel fuel for operations equipment and vehicles.

Vectors. Under existing conditions, since water from the PFP is continuously replaced and basins have high infiltration rates, mosquito controls have not been required at PSG. For design of the proposed project, a review of vector minimization considerations has been conducted (Table 11). Note that dry systems are any structure designed to drain completely following capture and/or treatment of runoff. Vector minimization will be incorporated into the O&M Plan for the PSG.

Table 11. Dry Systems Checklist of Vector Minimization Measures

Checklist Item	Response
Complete discharge of all captured water in 4 days or less.	Yes
Is the structure designed to discharge all captured water in 4 days or less?	Yes
Has every effort been made to trace and eliminate persistent non-stormwater flows (e.g. irrigation runoff) that may enter the system and jeopardize non-chemical vector control efforts?	Yes

Checklist Item	Response
Has groundwater depth been carefully evaluated to ensure that the structure will not be permanently or seasonally flooded (i.e., is the base of the basin higher than the local groundwater table)?	Yes
Does the design provide an adequate slope between the inlets and outlets, with special attention given to ensure corners are above grade?	Yes, this design consideration was preliminarily evaluated and will be considered during the design phase
Has soil been compacted adequately during grading to minimize subsidence, which can result in pools of standing water?	Yes, this design consideration was preliminarily evaluated and will be considered during the design phase
Does the design slope take into consideration the inevitable accumulation of sediment and debris between maintenance periods that can result in standing water, especially in and around the inlet?	Yes
Does the design minimize the use of features that increase the potential for standing water, such as loose riprap and concrete curbs?	Yes
Does the structure include a concrete or earthen low-flow channel to concentrate (i.e., minimize available surface area) and direct non-stormwater flows to the outlet?	Not Applicable
Is the distribution piping sloped adequately and smooth (not corrugated) on the inside to prevent standing water?	Yes
Are the inlet structures and energy dissipaters designed and sloped sufficiently to prevent scour depressions?	Yes, this design consideration was preliminarily evaluated and will be considered during the design phase
Are the outlets designed with debris screens or other features that reduce the potential for clogging?	Yes
Is the structure designed with safe and sufficient access for inspection, maintenance, and/or vector control activities when needed?	Yes
Does the operation and maintenance plan include a minimum of quarterly inspections to ensure that vegetation overgrowth, sediment accumulation, or other factors have not created areas of standing water?	Yes
Does the operation and maintenance plan include a minimum annual maintenance to remove vegetation overgrowth, remove sediment and debris accumulation, and otherwise return the structure to “as-designed” conditions?	Yes
Is signage provided and clearly visible with minimum information indicating the type of structure (e.g. extended detention basin), ownership, and contact information?	Yes

a) and b) **Less Than Significant Impact with Mitigation Incorporated.** Construction of the proposed project would require the routine transport, use, and storage of limited quantities of gasoline and diesel fuel for construction vehicles and equipment operation. Maintenance of the basins would also require gasoline and diesel fuel for heavy equipment. Additionally, as under existing conditions, herbicides such as glyphosate, prodiamine, and isoxaben may be used for vegetation management. Chemical mosquito controls are not currently required, and none are anticipated to be required for the project.

Operators would employ standard operating procedures for the routine transport, use, storage, handling, and disposal of hazardous materials related to the construction and operation of public works facilities. The use of fuels is an existing condition at the PSG. The use of herbicides for vegetation management or potentially larvicides for mosquito control would be conducted as per manufacturer's recommendations. Therefore, with adherence to the standard operating procedures for hazardous materials use, impacts related to release or accidental exposure to humans or the environment would be less than significant.

Although mosquito controls have not been required for existing operations at PSG, expanded use of the basins would result in additional days of wetted area and potentially increased habitat for mosquitos, midges, or other vectors. Therefore, mitigation measure HZ-1 shall be implemented to reduce impacts from vectors to less than significant levels.

Mitigation Measure

The following mitigation measure would reduce project-related impacts on vectors to less than significant levels.

HZ-1 Vector Management. The City of Pomona shall coordinate the San Gabriel Valley Mosquito and Vector Control District (SGVMVCD) to develop a strategy/plan to minimize the occurrence of vectors, such as midges and mosquitos; and to establish protocols for monitoring and eradicating vectors should they be found when basins are in use (filled with water). Monitoring to determine presence/absence of vectors during periods when recharge basins are holding water shall be the responsibility of the City of Pomona to engage the services of a vector control professional. Should monitoring have positive results, the vector control professional shall work with the SGVMVCD to implement control measures as set forth in the approved strategy/plan. The strategy/plan shall be prepared and available to be implemented prior to initiating the use of the expanded recharge basins.

c) **Less Than Significant Impact.** Several schools are located near the project areas including Chaparral Elementary School which is immediately adjacent and east of PSG at 451 Chaparral Drive. During project constructions, fuels would be used for vehicles and equipment. Spill control prevention BMPs would be implemented during construction of the project. During basin maintenance, hazardous materials use would include fuels for equipment and vehicles and potentially herbicides for vegetation control. Fuel use would be confined to the PSG property. On-site spill control equipment would be present. Herbicides, if employed, would be applied only on the PSG property and per manufacturer's recommendations. Since hazardous materials would not be used outside of the property of the basins and would be applied in a manner that controls travel off-site, the impact of the proposed project on hazardous materials release within ¼ mile of an existing or proposed school would be less than significant.

d) **No Impact.** Section 65962.5 of the California Government Code requires the California Environmental Protection Agency (CalEPA) to update a list of known hazardous materials sites, which is also called the "Cortese List." The sites on the Cortese List are designated by the SWRCB, the Integrated Waste Management Board, and the Department of Toxic Substances Control (DTSC).

Based on a search of the data sources that provide information regarding the facilities or sites identified as meeting the "Cortese List" requirements, there are no hazardous waste and substances sites listed for the PSG (Table 12). Twenty-six leaking underground storage tank (LUST) sites are noted in Claremont, but all of these sites are completed, closed cases.

Table 12. Cortese List Databases and Results for City of Claremont

Database	Results Relevant to PSG
List of Hazardous Waste and Substances sites from Department of Toxic Substances Control (DTSC) EnviroStor database	No results in the City of Claremont
List of Leaking Underground Storage Tank Sites from the SWRCB's GeoTracker database	26 LUST cleanup cases noted for the City of Claremont including one south of PSG at 1500 College Avenue North. Status of all completed – case closed.
List of solid waste disposal sites identified by Water Board with waste constituents above hazardous waste levels outside the waste management unit	No results in the City of Claremont
List of active Cease and Desist Orders and Cleanup and Abatement Orders from the Regional Board	No results in the City of Claremont
List of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by DTSC	No results in the City of Claremont

Sources: SWRCB 2022; DTSC 2022; RWQCB 2022

e) **Less Than Significant Impact.** Airports near Claremont include Cable Airport in Upland (0.9 miles east of PSG), Bracket Field Airport in La Verne (4 miles west of PSG), and Ontario International Airport (6 miles southeast of PSG). The PSG are located within Zone E of the Cable Airport Land Use Compatibility Plan (Upland, 2015) – the least restrictive compatibility zone. The project does not include new power poles or other tall structures that could pose a risk to airport safety. During construction, cranes in excess of 30 feet tall would not be required. The surface area of ponds potentially attractive to birds would not be substantially increased by the project, although the ponds may be wetted additional days per year. Since the PSG are an existing use, and the project would not result in new tall structures or equipment, or a substantial increase in risks from wildlife, impacts on airport safety would be less than significant. Since the project does not include habitable structures, and since the workforce required for maintenance of PSG is not anticipated to substantially change, the project would not expose people residing or working in the area to experience excessive airport-related noise. Impacts related to noise near an airport/airstrip would be less than significant.

f) **Less Than Significant Impact.** In the event of a disaster, specific evacuation routes in the City of Claremont are determined by the Claremont law enforcement agencies. Temporary lane closures during construction for storm drain improvements could impact the movement of emergency vehicles. To protect public safety, flag workers will be placed at intersections near lane closures to direct traffic. Local emergency response agencies (Claremont Police

Department and Claremont Fire Department,) would be notified of the timing and duration of planned lane closures. Since the project site is not designated as an emergency staging area, and since notifications to emergency providers would be conducted as part of the project, the project would have a less than significant impact on emergency access and evacuation plans.

g) **Less Than Significant Impact.** The project areas are not mapped within a Fire Hazard Severity Zone (Claremont, 2009) and are located a mile south of wilderness areas. Fire stations in Claremont are located at 3710 N. Mills Avenue (Station 62), 606 W. Bonita Avenue (Station 101), 4370 Sumner Avenue (Station 102).

Use of welding equipment, if any during project construction, would be conducted according to industry standards. Once the storm drain improvements are constructed and disturbed areas restored, the risk of fire along the storm drain alignment would be similar to existing conditions. Recharge of additional stormwater at the PSG could increase the number of days per year that the basins are wetted, a reduction in fire potential. Maintenance of the basins would include vegetation control, reducing potential fuel for fires. Therefore, the proposed project would have a less than significant impact related to wildland fires.

2.3.10 Hydrology and Water Quality

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☒	☐	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would:				
i. result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
iv. impede or redirect flood flows?	☐	☐	☒	☐
d) In a flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

Discussion: As described in the Strategic Plan PEIR, the Six Basins are part of a large broad alluvial plain located along the southerly extent of the mountains that sit atop a depression known as the Chino Plain, also known as the Perris Block. Soil deposits in the Six Basins project area are the result of deposition associated with sediments washing down from the San Gabriel Mountains along numerous drainages over time, coalescing and building to form the water bearing sediments that sit atop the bedrock (TVMWD, 2021).

Groundwater recharge to the Six Basins primarily occurs by:

- Infiltration of native and imported surface waters at the spreading grounds that overlie the Six Basins (San Antonio Creek, Thompson Creek, Live Oak, Pedley, and Miramar)
- Subsurface inflow from the saturated alluvium and fractures within the bordering bedrock hills and mountains
- Deep infiltration of precipitation and applied water
- Deep infiltration of septic tank discharge
- Streambed infiltration in unlined channels

Groundwater quality in the Six Basins has been influenced by past agricultural uses (pesticides and herbicides), urban uses (gas and fueling stations), and industrial sites. Contaminants known from groundwater monitoring/testing in the Six Basins project area include: total dissolved solids, nitrate, perchlorate, trichloroethene (TCE), tetrachloroethene (PCE), 1,1-dichloroethene (1,1-DCE), and hexavalent chromium (Cr-6) and 1,2,3- trichloropropane (1,2,3-TCP). Specifically, groundwater contaminant plumes are known for three former industrial sites (two in the City of La Verne approximately 9 miles west-southwest from PSG and one in the Pomona Basin approximately 2 miles southwest of PSG). The PSG property is not located within a delineated groundwater contaminant plume associated with these or other industrial sources.

a) **Less than Significant Impact with Mitigation Incorporated.** The PSG are within the Upper Claremont Heights subbasin of the Six Basins groundwater basins. In the Water Quality Control Plan for the Los Angeles Region (Basin Plan) prepared by the Los Angeles Regional Water Quality Control Board (Regional Board, 2014, amended through 2020) the Six Basins are divided into three groundwater subbasins, the PSG are within the Claremont Heights subbasin. The designated beneficial uses for all three subbasins are: municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply.

   Narrative and numeric water quality standards for all groundwaters in the region are applicable for: bacteria, chemical constituents and radioactivity, mineral quality, nitrogen, and taste and odor.

   Water quality objectives for the Claremont Heights groundwater subbasin are (Regional Board, 2014):

   - Total Dissolved Solids (TDS) – 450 mg/L
   - Sulfate – 100 mg/L
   - Chloride – 50 mg/L

   Project Construction. During project construction, disturbance to surface soils would result from grading of the basins, berm road creation, improvements to the storm drain system, and construction of amenities at Chaparral Park. Since disturbance to surface soils would exceed 1 acre, stormwater would be managed in accordance with BMPs identified in a SWPPP completed in compliance with the NPDES General Permit for Storm Water Discharges Associated with Construction Activity (General Permit). Example types of BMPs to be implemented are summarized in Table 13. The SWPPP would include a map to detail the locations of work zones and BMP placement. Additionally, dewatering is not currently anticipated to be required during project construction. In the event that dewatering is required, a permit would be obtained from the SWRCB. With implementation of mitigation measures HYD-1 and HYD-2, construction of the proposed project would not substantially increase sediment load in stormwater or adversely affect surface water beneficial uses. Therefore, the impact on water quality during project construction would be less than significant.

Table 13. Summary of Anticipated Construction Stormwater BMPs

Best Management Practices for the Protection of Stormwater Quality During Construction
Housekeeping Measures • Conduct an inventory of products used or expected to be used • Cover and/or berm loose stockpiled construction materials • Store chemicals in watertight containers
Employee Training • Brief staff on the importance of preventing stormwater pollution • Have staff review SWPPP • Conduct refresher training during the wet season • Document training
Erosion and Sediment Controls • Provide effective cover for inactive areas – cover, berm, or direct runoff to suitable basins • Establish and maintain effective perimeter control • Stabilize construction entrances and exits to control sediment – inspect ingress and egress points daily, and maintain as necessary • Control dust during earthwork • Place sandbags or other barriers to direct stormwater flow to suitable basins
Spill Prevention and Control • Inspect construction equipment for leaking • Use drip pans until equipment can be repaired • Cleanup spills Immediately – remove adsorbent promptly • Notify the proper entities in the event of a spill
Concrete Truck Washing Waste • Provide containment for capture of wash water • Maintain containment area
Hazardous Waters Management and Disposal • Store hazardous wastes in covered, labeled containers with secondary containment for liquid hazardous wastes • Store wastes separately to promote recycling and to prevent undesirable chemical reactions
Materials Handling and Storage • Establish a designated area for hazardous materials • Berm, cover, and/or contain the storage area as necessary to prevent materials from leaking or spilling • Store the minimum volume of hazardous materials necessary for the work
Vehicle and Equipment Maintenance, Repair, and Storage • Inspect vehicles and equipment regularly • Conduct maintenance as necessary • Designate areas for storage – where fluids can be captured and disposed of properly
Scheduling • Avoid work during storm events • Stabilize work areas prior to predicted storm events

Project Operation. Since the watershed areas above the Six Basins are within the San Gabriel mountains with no urban development, the quality of the surface water entering local spreading grounds is good (TVMWD, 2021). Implementation of the proposed project would further enhance the quality of recharged stormwater. Basin 1 will be treated as a pre-sedimentation basin for the outflow from the PFP. Basin 2 will feature a large capacity water quality pretreatment device, inlet pipe extension with energy dissipater and stilling basin for debris and sediment captures.

Copper was determined to be the limiting pollutant for the ESGVWMG'S WMP. As described in the PDR, the anticipated copper reduction at PSG would be 100 percent (Table 14). With the enhanced treatment at PSG, the quality of water recharged at the project would be improved, a beneficial impact.

Table 14. Annual Average Pollutant Load Reduction for Proposed Conditions

	Copper Reduction (pounds)	Copper Reduction (%)
Proposed Conditions – Addition of flow from 30-inch storm drain in Mills Avenue	22.45	100

Additionally, a groundwater under the direct influence of surface water hydrogeologic assessment was conducted to determine if the surface water recharged at the PSG under the proposed project may impact the quality of the groundwater produced at the City's Tunnel Wells (Appendix I of the PDR). A microscopic particulate analysis (MPA) will be conducted to assess the existence of a hydraulic connection between the PSG and the Tunnel Wells. The timing of the MPA will be dependent on information obtained from an intrinsic and/or introduced tracer study to estimate groundwater travel times and the relative percentage of recharge waters pumped at the Tunnel Wells. This analysis may be performed after project construction.

Maintenance. Project operation would include maintenance activities including removal of vegetation, silt, and debris from the basin. Many of the BMPs used during construction would also be implemented to maintain water quality. As described in the PEIR, mitigation measure HWQ-1 would be implemented during basin restoration projects.

With implementation of BMPs during project construction and as needed during maintenance, and with the stormwater quality improvements inherent in the design of the PSG enhancements, the proposed project would have less than significant impacts on groundwater and surface water quality.

Mitigation Measures

The following mitigation measures would reduce impacts on water quality to less than significant levels.

HYD-1 Implementation of a SWPPP and the Use of BMPs During Construction. Prior to commencement of any ground disturbing activities for the PSG project, the construction

contractor shall prepare a SWPPP and submit a Notice of Intent (NOI) to the SWRCB. Implementation of BMPs as outlined in the SWPPP shall be on-going during construction activities. A copy of the SWPPP and the Waste Discharge Identification (WDID) number, shall be kept at the construction site and be available for review by inspectors until construction is completed.

HYD-2 Dewatering General Permit. Prior to commencement of construction activities that would require dewatering and conveyance of groundwater to surface water including but not limited to a storm drain system, a NOI shall be submitted to the SWRCB under the requirements of the Dewatering General Permit. The NOI shall include any additional information including a list of BMPs for preventing degradation of water quality or impairment of receiving waters.

b) **Less than Significant Impact**. The proposed project includes improvements to the storm drain system in the City of Claremont and enhancement of the PSG. With the project, capacity of the three basins will be 32.46 ac-ft. Based on a percolation rate of 6.22 in/hr, up to 35.33 ac-ft/day would be infiltrated. The project would enhance groundwater recharge, a beneficial impact. The project does not include installation of new wells or groundwater withdrawals. Therefore, the project would not substantially deplete groundwater supplies or reduce groundwater recharge. Impacts on groundwater and management of the groundwater basin would be less than significant.

c) i) **Less Than Significant Impact.** The proposed project does not include alteration of the course of stream or river, or the addition of new impervious surfaces. Storm drains proposed to be improved as part of the project would convey runoff to the PSG in pipes; erosion of surface water features would not occur. Construction to enhance the PSG would temporarily disturb site soils for approximately 4 to 6 months. The potential for erosion during project construction would be minimized by implementation of BMPs included in the construction stormwater SWPPP. Therefore, the project would have a less than significant impact on erosion or siltation on- or off-site.

ii) **Less than Significant Impact**. Under the proposed project, adequate capacity for the 10-year storm event will be provided at PSG, based on:

- 3.26 ac-ft/day from the 18-inch and 42-inch storm drains
- 7.64 ac-ft/day from the 30-inch storm drain
- 13.26 ac-ft/day from the filtration plant can be accommodated as an emergency overflow, if necessary

Flows from larger storms would divert back to the existing storm drain system, as under existing conditions. During heavy storm events, the PSG recharge basins would increase the capacity of the storm drain system by taking flows from local storm drains (TVMWD, 2021). Therefore, the project would increase storage capacity at the PSG but would not increase flood risk. Impacts related to flooding would be less than significant.

iii) **Less than Significant Impact**. The project includes improvements to the storm drain system and treatment of stormwater to improve water quality. No additional runoff from the PSG property would result as no new impervious surfaces are proposed. Flows in excess of the

basins' capacity would be conveyed in downstream storm drains, as under existing conditions. Impacts on stormwater drainage systems would be beneficial and impacts related to polluted runoff would be less than significant.

iv) **Less than Significant Impact.** By design, the proposed project includes modifications to the storm drain system to direct flood flows to the PSG. Treatment would reduce pollutants from these flows and the enhanced basins would facilitate increased groundwater recharge. The proposed project would increase the capacity of the local storm drain system. Therefore, the project would have a less than significant impact on flood flows.

d) **No Impact.** Mapped as an Area of Minimal Flood Hazard, the PSG are not within a 100-year floodplain as mapped by the Federal Emergency Management Agency (FEMA) (TVMWD, 2021). The proposed project is designed to capture storm flows from existing storm drain systems in order to pretreat and recharge stormwater into the groundwater basin. Under the proposed project, adequate capacity for the 10-year storm event will be provided at PSG. Flows from larger storms would divert back to the existing storm drain system, as under existing conditions. Therefore, the project would increase storage capacity at the PSG but would not increase flood risk.

Due to the distance to the ocean, tsunami is not relevant for the proposed project. Seiches, or earthquake-generated waves are not known for the PSG. The project would treat stormwater and remove surface water pollutants. Therefore, the project would have no impact on the risk of pollutant release in a flood, tsunami or seiche zone.

e) **Less than Significant Impact.** The proposed project would treat and therefore enhance the quality of surface waters recharged to the Upper Claremont Heights groundwater subbasin. As a project to increase the volume of groundwater recharge with high quality water, the project would be consistent with Basin Plan objectives.

As described in the PEIR (TVMWD, 2021), Senate Bills 1168 and 1319 and Assembly Bill 1739 amended the California Water Code to establish the Sustainable Groundwater Management Act (SGMA). The Act requires:

- the development of sustainable groundwater management plans for all medium- and high-priority basins, as defined by the Department of Water Resources
- mandates the creation of local groundwater sustainability agencies to oversee and implement the plans
- outlines the guidelines and schedule for complying with the Act

Section 10721.8 of the amended Water Code exempts adjudicated areas and local agencies that conform to the requirements of an adjudication of water rights from the provisions of SGMA (specifically naming the Six Basins as exempt) except for an annual reporting requirement. The intent of the Strategic Plan is to continue to manage the groundwater basins in a reliable and sustainable way in order to ensure a continuous supply of water to the Watermaster Parties and their customers. As an element of the Strategic Plan, the PSG project is an integral part of a sustainable groundwater management plan. Since the proposed project would not conflict or obstruct implementation of a water quality control plan or sustainable groundwater

management plan, the impact of the project on water resources planning would be less than significant.

2.3.11 Land Use and Planning

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Physically divide an established community?	☐	☐	☒	☐
b) 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?	☐	☐	☐	☒

Discussion:

a) **Less than Significant Impact.** The PSG are located within the City of Claremont. Improvements to the PSG would be constructed on the existing site which is currently used for infiltration basins. During construction or the storm drain improvements, access would be limited in the active area of construction, but once installed, the facilities would be buried and would not divide an established community. No habitable structures are planned as part of the proposed project. Therefore, impacts on established communities would be temporary and less than significant.

b) **No Impact.** The PSG are located on City of Pomona-owned lands within the incorporated area of the City of Claremont. The PSG are designated as Public land use on the Land Use Plan of the City of Claremont's General Plan (2014a), with a zoning of Park/Resource Conservation (P/RC) (Claremont, 2014b). These designations allow for public use including management of groundwater resources. The proposed project would improve existing facilities for the allowed uses of water recharge facilities and drainage channels. Therefore, the proposed project would have no impacts regarding conflicts with applicable planning documents.

Once installed, the storm drain improvements would be buried, and the land use of the project areas would be the same as existing conditions. With capture and infiltration of stormwater at the enhanced PSG, the project would be consistent with City of Claremont water resources goals. Since the project also includes enhancements at the adjacent Chaparral Park, the project would also be consistent with parks and open space goals. Therefore, construction and operation of the project would have no adverse impacts on land use planning, policies, or regulations.

2.3.12 Mineral Resources

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☒	☐
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?	☐	☐	☒	☐

Discussion: The potential for aggregate mining occurs in Claremont based on its location at the edge of an alluvial fan that extends from the base of the San Gabriel Mountains. Several aggregate mining operations occur in the Claremont-Upland Production region, two just east of Claremont (Claremont, 2009). Mining also occurs north of the City, upstream from the San Antonio Creek Flood Control Dam.

Like the vast majority of the developed portion of the City of Claremont, the PSG sites is mapped as MRZ-2 – areas where adequate information indicates that significant mineral deposits are present or where a high likelihood exists for their presence (Claremont, 2009). However, the site is not mapped within an area of regional significance for mineral resources.

The City of Claremont is the lead agency for the implementation of the Surface Mining and Reclamation Act of 1975 (SMARA), which establishes statewide policies for the conservation and development of mineral lands in California. To prevent incompatible land use development in areas with significant mineral deposits, the Claremont General Plan (2009) includes the following goals and policies:

- Goal 5-17 Protect and conserve state-designated significant mineral resources from land uses that threaten their availability for future mining and require that any future mining of those resources will not adversely impact the environment or the livability of Claremont's residential neighborhoods.
  - Policy 5.17.1 Protect mineral resource deposits in designated areas of regional significance in order that such deposits may be available for future use, excepting in already urbanized locations where development has already occurred or is planned.
  - Policy 5.17.2 Balance the regional need to produce mineral resources against other City goals set forth in this General Plan.
  - Policy 5.17.3 Balance the importance of mineral resources against alternative land uses and consider the value of minerals in their market region or to the state in reviewing any project involving mineral resources from areas designated regionally significant.

- Policy 5.17-4 Prior to approval of any use that would threaten the potential to extract from any state-designated significant mineral resource, require that sufficient mitigation be provided to eliminate land us conflicts between the approved use and any future mining of the mineral resources.

a) and b) **Less than Significant Impact.** No active mining occurs on the project site but the area is designated as MRZ-2. The project includes enhancement of the existing basins and improvements to storm drains. Project operations would include basin maintenance, including vegetation management and periodic sediment and debris removal. However, the project would not otherwise alter the basins in a way that would prohibit future use of the site for mining. Since stormwater recharge at the basins would be consistent with existing site use and would not hinder the potential for future mining in the project area, the proposed project would have a less than significant impact on the loss of availability of a known mineral resource or mineral resource recovery site.

2.3.13 Noise

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in:				
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 or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) For a project located within the vicinity of a private airstrip or 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 expose people residing or working in the project area to excessive noise levels?	☐	☐	☒	☐

Discussion: Street and freeway (SR-210 and I-10) traffic, railways, and airports represent the primary sources of noise in Claremont (Claremont, 2009). Noise contours developed in 2005 for the General Plan (Claremont, 2009) note existing noise levels of 60 A-weighted decibels (dBA) Community Noise Equivalent Level (CNEL) at PSG. Claremont General Plan Policy 6-12.3 states:

- Minimize noise from property maintenance equipment, construction activities and other non transportation noise sources by enforcing designated construction and maintenance hours.

The Claremont Land Use Noise Guidelines for Land Use Planning (Claremont, 2009), allow for:

- Low to medium density residential (45 dBA interior, 65 dBA exterior)
- High density residential (45 dBA interior, 70 dBA exterior)
- Schools (50 dBA interior, 65 dBA exterior)
- Other Public/Institutional (50 dBA interior, 70 dBA exterior)

Relevant to construction activity, Chapter 16.154 Environmental Protective Standards Section 316.154.020 Noise and Vibration Standards of the Claremont Municipal Code notes the activities that are exempt from City noise standards, including:

- Noise sources associated with or vibration created by construction, repair, remodeling or grading of any real property, or during authorized seismic surveys, provided:

    a. Activities take place between the hours of 7:00 a.m. and 8:00 p.m. weekdays and Saturdays, excluding national holidays; and

b. Noise levels, as measured on residential properties, do not exceed 65 dBA for a cumulative period of more than 15 minutes in any one hour, 70 dBA for a cumulative period of more than 10 minutes in any one hour, 79 dBA for a cumulative period of more than 5 minutes in any one hour or 80 dBA at any time; and

c. Any vibration created does not endanger the public health, welfare, and safety.

Construction, repair, remodeling and grading activity that does not exceed the noise levels set by Section 16.154.020.D of Claremont's Municipal Code may occur on Sundays and national holidays.

Ambient noise levels were quantified in the Six Basins PEIR (TVMWD, 2021). Relative to the PSG, the following noise levels were measured (Table 15).

Table 15. Ambient Noise Levels near PSG, Claremont, California

Measurement Site	Date	Description	Energy Average Noise Level (dBA L_{eq})		Average Median Noise Level (dBA L_{eq})		CNEL
			Daytime[1]	Nighttime	Daytime	Nighttime	
L10-1	6/20/19	Chaparral Drive, east of PSG, within a residential neighborhood near Chaparral Elementary School	55.1	47.8	50.9	42.2	56.8
L10-2	6/20/19	Barrington Court, north of PSG, within a residential neighborhood near Chaparral Park	54.3	47.1	50.1	45.3	56.0

Source: TVMWD, 2021
Notes: Daytime = 7:00 a.m. to 10:00 p.m.; Nighttime = 10:00 p.m. to 7:00 a.m.

a) **Less Than Significant Impact with Mitigation Incorporated.** The closest noise receptors to the project area are residences located immediately adjacent to the PSG and on Mills Avenue, and the immediately adjacent Chaparral Elementary School.

Construction. Temporary use of heavy construction equipment would occur within a few feet of residential property lines and within approximately 20 to 50 feet of structures, including school buildings. During improvements to the basins and installation of the storm drain improvements, noise would be generated from equipment with noise levels ranging from approximately 74-90 dBA (at a distance of 50 feet) (Table 16).

Table 16. Construction Equipment Noise Levels

Equipment	Actual Measured Lmax @ 50 feet (dBA, slow) (samples averaged)
Dump Truck	76
Jackhammer	89
Concrete Saw	90
Backhoe or Track Hoe	78
Front End Loader	79
Concrete Mixer Truck	79
Asphalt Paver	77
Roller Compactor	80
Vacuum Street Sweeper	82
Flat bed truck (delivery trucks)	74

Source: FHA, 2017
Lmax - the maximum sound level during a measurement period or a noise event

Based on the assumed construction schedules for the junction structure and the proposed vault, most receptors would experience construction noise for a few weeks at most. Noise would not be continuous as equipment would be used intermittently. Additionally, with an exterior-to-interior reduction of typical buildings of about 25 dB with windows closed (FTA, 2006), noise levels within homes directly adjacent to the construction would be anticipated to be on the order of 50 to 65 dBA.

To ensure that construction activity would adhere to the Claremont Municipal Code, regarding the Monday through Saturday acceptable work period, and the time limits for high noise generation activities, Mitigation Measure N-1 would be implemented. Construction activity would not occur during 7:00 p.m. to 6:00 a.m. when there is greater potential for noise disturbance to residents. Mitigation measures N-2, N-3 and N-4 would further reduce construction-related noise. As mitigated, noise generation during project construction would be consistent with established codes and noise impacts would be less than significant.

Operations. The closest noise receptors at PSG are directly adjacent to the site. Operation of the proposed project would include periodic grading of basins and other maintenance activities. Noise generated during project operation would be generated from tractors, backhoes, loaders, scrapers, dozers, power trimmers, and manual tools. However, these activities would not generate substantial noise in excess of existing O&M activities. Maintenance noise would be infrequent and within the day and time restrictions noted in the Claremont Municipal Code. Noise impacts during project operations would be less than significant. However, mitigation measure N-5 would be implemented to further reduce less than significant impacts.

Mitigation Measures

Implementation of the following mitigation measures would reduce noise and vibration levels during construction and operation of the proposed project to less than significant levels.

N-1 Construction Noise Plan. The construction contractor shall develop and implement a focused construction noise mitigation plan to ensure compliance with the City of Claremont

construction noise limits established in Municipal Code 16.154 Environmental Protective Standards Section 316.154.020. Where construction noise would exceed the noise levels and time periods specified, the construction contractor shall install temporary noise barriers, use alternative scheduling, or use alternative equipment. As part of the Noise Mitigation Plan, the City of Pomona will notify (at least 2 weeks in advance of the start of construction) residents and the Chaparral Elementary School adjacent to the PSG and storm drain improvement locations as to the schedule for construction.

N-2 Construction Equipment Maintenance and Placement. During project site construction, the construction contractor shall ensure that all construction equipment, fixed or mobile, shall have properly operating and maintained mufflers, consistent with manufacturers' standards. The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise-sensitive receivers nearest the project site.

N-3 Equipment Staging. The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise-sensitive receivers nearest the project site during all project construction (i.e., the center of each site).

N-4 Construction Haul Routes. The construction contractor shall design delivery routes for equipment and materials to minimize the exposure of sensitive land uses or residential dwellings to delivery truck-related noise.

N-5 Operational Noise Minimization. All trucks transiting on-site in outdoor areas of the project facilities shall be operated with properly functioning and well-maintained mufflers. Pavement conditions at PSG shall be maintained to be free of vertical deflection (i.e., speed bumps) to minimize truck noise. Truck access gates and loading areas shall have posted signs which state:

1. Truck drivers shall turn off engines when not in use.
2. No music or electronically reinforced speech from workers shall be audible at noise-sensitive properties.

b) **Less Than Significant Impact.** Typical vibration (peak particle velocity (PPV) at 25 feet) produced by construction and maintenance equipment includes small bulldozers at 0.003 (inches/second), loaded trucks at 0.076 inches/second, large bulldozers at 0.089 inches/second, and jackhammers at 0.035 inches/second (FTA, 2006). The Federal Transit Administration (FTA) has published architectural damage criterion for continuous vibrations of 0.20 inch/second (FTA, 2006). Construction equipment necessary to install project facilities would create groundborne vibration and groundborne noise in the immediate area of the construction; vibration would be intermittent and not continuous. Since construction would not exceed the 0.20 inch/second PPV significance threshold for vibration, impacts related to temporary groundborne vibration or noise would be less than significant. Accordingly, PEIR Mitigation Measure NOI-5 would not be applicable to the proposed project.

c) **Less than Significant Impact**. Cable Airport in Upland is located approximately 0.9 miles east of PSG. The project areas are located within Zone E of the Cable Airport Land Use

Compatibility Plan (Upland, 2015) – the least restrictive compatibility zone. The workforce for operations of the enhanced PSG is not anticipated to substantially change. Since the PSG are an existing use and no habitable structures are proposed as part of the project, the project would not expose additional people residing or working in the area to experience excessive airport-related noise. Impacts related to noise near an airport/airstrip would be less than significant.

2.3.14 Population and Housing

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) 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)?	☐	☐	☒	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Discussion:

a) **Less Than Significant Impact.** A project may induce growth if it would involve construction of housing or large employment centers or would remove barriers to population growth (e.g., a change to a jurisdiction's General Plan and Zoning Ordinance that would allow new residential development to occur). The proposed project does not involve construction of any housing or employment centers, and would not modify the land use or zoning designations for the sites to permit new residential or commercial development. Construction at the PSG and for the storm drain improvements would generate some construction jobs, but this would be a temporary effect and would not provide permanent economic growth to the area. Basin maintenance would also require workers, but the limited number and infrequent nature of basin maintenance would have a less than significant impact on employment in Claremont.

A project may also be considered growth-inducing if it increases the capacity of infrastructure in an area in which the public service currently meets demand. The proposed project would treat storm water runoff while recharging the groundwater basin to increase the reliability of local water supply. However, the project would not add new potable water wells or distribution systems, or add connections to new users. The project would not increase potable water delivery within the City of Pomona or City of Claremont service areas. Therefore, the proposed project would not significantly impact population growth.

b) **No Impact.** No habitable structures would be constructed as part of the project, and no existing housing would be removed. Therefore, the project would not displace existing people or housing and there would be no impacts on housing from construction and operation of the project.

2.3.15 Public Services

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i) Fire protection?	☐	☐	☐	☒
ii) Police protection?	☐	☐	☐	☒
iii) Schools?	☐	☐	☐	☒
iv) Parks?	☐	☐	☐	☒
v) Other public facilities?	☐	☐	☐	☒

Discussion:

i – v) **No Impact.** New habitable structures are not proposed as part of the project. Similarly, the project would not induce population growth since it would not add new potable water wells or distribution systems, or add connections to new users. Neither the limited number of workers required to construct the project (approximately 10), nor the operations-related maintenance workers (up to 1 additional worker, if any) would generate substantial population growth or create the need for new or expanded public services. Therefore, there would be no project-related impacts regarding new or physically altered fire, police, schools, parks, or other public facilities.

2.3.16 Recreation

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☒	☐

Discussion: Located at 1899 North Mills Avenue, the City of Claremont Chapparal Park has a playground and soccer field. The proposed project includes new amenities for this park, potentially including new porous pavement walkway, minor planting of shrubs or native garden, viewing area with benches and educational signage about the PSG, wrought iron fencing, and a bike rack. Details will be refined to reflect community input obtained during public outreach efforts.

a) **Less Than Significant Impact.** New habitable structures are not proposed as part of the project. The limited number of construction workers required to implement the project (approximately 10) would not generate substantial population growth or create the need for new or expanded parks. Operation of the project would increase the volume of stormwater managed at PSG but would not impact adjacent recreational resources. Therefore, the project would have a less than significant impact related to increased use of neighborhood or regional parks or other recreation facilities.

   Maintenance activities during operation of the project would result in minor truck traffic (approximately 12 trucks per year), a less than significant impact on recreational access in the project area.

b) **Less than Significant Impact.** The project includes improvements at Chaparral Park potentially including new porous pavement walkway, minor planting of shrubs or native garden, viewing area with benches and educational signage about the PSG, wrought iron fencing, and a bike rack. These improvements at an existing local park would have a beneficial, although less than significant, impact on recreation.

2.3.17 Transportation

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☒	☐	☐
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3 subdivision (b)?	☐	☐	☒	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☒	☐	☐
d) Result in inadequate emergency access?	☐	☒	☐	☐

Discussion: Relevant roadways to the project sites include:

- Mills Avenue – a four-lane north-south arterial, approximately 60 feet wide in the area of the proposed vault, with a Class II bike lane
- Baseline Drive – a four-lane east-west arterial, approximately 80 feet wide in the area of the proposed junction structure improvements, with a Class II bike lane

Additionally, materials and equipment would be brought to the project site, likely via I-10 and SR-210. The specific routes for equipment and vehicles would be dependent on the construction contractor selected for the work, and their fleet location.

a) **Less than Significant Impact with Mitigation Incorporated**. The Southern California Association of Governments (SCAG) prepared the 2016 Regional Transportation Plan/Sustainable Communities Strategies (RTP/SCS) as part of regional transportation planning (SCAG, 2016). The RTP/SCS is a planning document that supports the integration of land use and transportation to help the region meet the federal Clean Air Act requirements.

The project would impact area roadways temporarily during construction and infrequently for the mobilization of maintenance equipment. However, since the project does not include new transportation systems or the permanent alteration of land use or roadways, the project would not conflict with the RTP/SCS.

General Plan. Relevant City of Claremont General Plan goals and policies related to transportation include:

- Goal 4-7 Reduce congestion in areas surrounding schools and parks.

During construction the project could temporarily increase congestion at the adjacent Chaparral Elementary School and Chaparral Park. With implementation of mitigation

measures TR-1 (Construction Traffic Management Plan), TR-2 (Heavy Equipment Travel) and TR-3 (Haul Trucks), impacts on local schools and parks would be temporary and less than significant.

- Goal 4-8 Maintain truck routes that minimize adverse impacts on residential neighborhoods.

Per the Community Mobility Element of the Claremont General Plan (2009), Baseline Road is a designated truck route. Truck routes are designated to ensure appropriate road construction and to protect residential neighborhoods (Claremont, 2009). With incorporation of mitigation measure TR-2, materials deliveries and hauling for soil and debris disposal related to the project would adhere to these truck routes.

As mitigated, the project would be consistent with the transportation policies detailed in the General Plan.

City of Claremont Draft Transportation Study Guidelines for Vehicle Miles Traveled and Level of Service Assessment (2020). This document specifies impact assessment to be conducted for various types of development projects. Projects noted as potentially exempt include any proposed use that can demonstrate, based on the most current Trip Generation Manual, published by the Institute of Traffic Engineers (ITE), or other approved trip generation data, that there will be less than 50 vehicle trips during peak hours.

Once transported to the site, most construction equipment (backhoe, compactor, etc.) would remain in place for the duration of the construction period, and then be demobilized. Construction necessary for implementation of the recharge project would temporarily increase vehicle miles traveled by:

- The approximately 10 construction workers that would travel to the project site for the 4-6 months of the construction period.

- Truck trips for materials deliveries, soil hauling, and construction debris disposal. Assuming 10 cubic yards per truck load, and a 4 to 6-month construction period, on the order of up to 1 to 3 truck trips would be required per day.

With an estimated maximum of 13 round trips per day (construction workers commuting to the site and haul trucks), traffic related to project construction would be substantially less than 50 peak hour trips.

As mitigated, traffic related to construction and operation of the project would not conflict with any goals of the relevant transportation plans for the project area. The project does not include new transportation systems. As mitigated by the implementation of TR-1, TR-2, and TR-3, impacts on transportation planning would be less than significant.

b) **Less than Significant Impact.** CEQA Guidelines Section 15064.3 describes considerations for evaluating the transportation impacts of projects and states that vehicle miles traveled (the amount and distance of automobile travel attributable to a project) is generally the most appropriate measure of transportation impacts. Since the proposed project is neither a land

development project nor a transportation project that would permanently increase vehicle miles traveled in the project area, vehicle use for construction is considered. With an estimated maximum of 13 round trips per day (construction workers commuting to the site and haul trucks), traffic related to project construction would be substantially less than 50 peak hour trips. Based on the estimated number of workers, material deliveries, soil hauling and debris removal hauling, project construction would have a less than significant impact on CEQA Guidelines Section 15064.3 subdivision (b).

Operation of the project would include annual maintenance that would last a few days to weeks and have limited and temporary impacts on transit systems. Periodic but infrequent hauling of sediment and debris would occur for basin maintenance, and would add a limited number of dump trucks to area roadways. Project-related impacts on vehicle miles traveled during operations would be less than significant. Additionally, the proposed project will remove the need to access the junction structure at the intersection of Baseline Road and Mills Avenue for operation of the slide gate, a beneficial impact.

Overall, construction and operation of the project would have a less than significant impact on vehicle miles traveled.

c) **Less Than Significant Impact with Mitigation Incorporated.** The project does not include any new roadway design features. However, traffic control will be required for the following construction activities:

- Potholing of the 30-inch RCP storm drain adjacent to Mills Avenue
- Removal of the concrete plug and existing slide gate from the junction structure in the intersection of Mills Avenue and Baseline Road
- Demolition of the existing 30-inch storm drain in the location of the proposed vault adjacent to Mills Avenue
- Construction and installation of the proposed transition structure, vault, and slide gate adjacent to Mills Avenue

At this time, it is anticipated that during construction to improve the storm drain system, one lane of traffic in Mills Avenue would be closed for a roadway length of approximately 60 to 100 feet, for approximately two weeks. Consistent with mitigation measure TR-1, a Construction Traffic Management Plan would be prepared for the project and would reference City of Pomona Land Development General Notes:

- Adequate barricades, lights, flagmen, signs and other safety devices shall be provided as specified by the traffic manual published by the state of California Department of Transportation.
- Existing city streets shall be kept clean of all materials resulting from the grading operations. The street right-of-way shall be cleaned up daily, and as necessary, to maintain pedestrian and vehicular passage over the public right-of-way at all times.

Where construction would temporarily block residential or business driveways, coordination with the homeowners/owners would be conducted. Preparation of final traffic control plans for construction related work will be the responsibility of the construction contractor. With implementation of mitigation measures TR-1, TR-2 and TR-3, the planned lane closures for storm drain improvements would have a less than significant impact on roadway hazards.

d) **Less Than Significant Impact with Mitigation Incorporated**. Construction of the storm drain improvements would temporarily close one lane of traffic in Mills Avenue. Emergency vehicles would have restricted access on those roadways for the duration of the lane closures – estimated at approximately two weeks. Emergency response providers (City of Claremont Police and Fire Departments) would be notified in advance of the construction schedule, location, and lane closures. With implementation of mitigation measure TR-1, the impact of lane closures and the approximately 13 additional construction-related round trips per day would have a less than significant impact on emergency access.

Operation of the project would require the infrequent mobilization of heavy construction equipment to the PSG, at most once per month. No roadway closures or impacts to emergency access would occur.

Mitigation Measures

Implementation of the following mitigation measures would reduce transportation impacts related to the proposed project to less than significant levels.

TR-1 Construction Traffic Management Plan. Prior to commencement of construction activities at a project site, the construction contractor shall develop and implement an approved Construction Traffic Management Plan addressing potential construction-related traffic detours and disruptions. In general, the Construction Traffic Management Plan would ensure that to the extent practical, construction traffic would access a project site during off-peak hours or limit access during the peak hours; and that construction traffic would be routed to avoid travel through, or proximate to, sensitive land uses. The Plan shall also include, where necessary, the use of flags, signs and lights, as well as flag persons to direct traffic.

TR-2 Heavy Equipment Travel. As part of the Construction Traffic Management Plan, it shall be stipulated that the delivery and removal of heavy equipment shall be conducted during off-peak hours to minimize heavy truck activity during the morning and evening peak periods (7 am to 9 am and 4 pm to 6 pm) in order to have nominal impacts to traffic and circulation near the vicinity of the project.

TR-3 Haul Trucks. During site grading, where export of material is required, the construction contractor shall limit export activity between the hours of 7 am to 9 am (morning peak period) and 4 pm to 6 pm (evening peak period) to fewer than the equivalent of 50 passenger car equivalent (PCE) truck trips per hour. 50 PCE truck trips equates to approximately 16 total trucks (8 trucks in and 8 trucks out) during the peak periods specified above in order to limit the potential impacts of haul truck activity during these busy commute times. [50 PCE truck trips / 3.0 PCE factor = 16 total trucks during the peak hour]

2.3.18 Tribal Cultural Resources

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
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), or	☐	☒	☐	☐
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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

Discussion: As described in Section 2.3.5, significant cultural resources are not known or expected at the PSG or other project areas. However, mitigation measures have been identified in the event that previously unknown resources are identified during project construction (CR-3 and CR-4).

California Public Resources Code Sections 5097.94(a) and 5097.96 authorize the NAHC in Sacramento to maintain records of Native American sacred sites and burial sites in the Sacred Lands File as well as a Tribal Contact List of Native American who may wish to consult pursuant to AB52. On May 10, 2022, Stantec, on behalf of the City of Pomona, contacted the NAHC and requested a Sacred Lands file search for the entire study area. A response was received from the NAHC on June 10, 2022, indicating that the search had failed to identify any sacred lands and/or sacred sites.

On September 1, 2022, the City of Pomona sent AB52 notification letters via certified mail and follow-up emails to the 12 Native American contacts provided by the NAHC, to request information regarding local knowledge about cultural resources, traditional gathering areas, or sacred lands in or near the project site. Input was received from the Yuhaaviatam of San Manuel Nation and the Gabrieleño Band of Mission Indians - Kizh Nation. The mitigation measures below reflect input provided by the Tribes. Copies of correspondence letters to the NAHC and Native American contacts are contained in Appendix C of the cultural report (on file with the City of Pomona).

a) and b). **Less than Significant with Mitigation Incorporated**. Since archaeological resources are not known for the PSG or other project sites, project construction and operation would not be anticipated to impact Tribal Cultural Resources. However, mitigation measures CR-1 through CR-4 and TCR-1 through TCR-5 shall be implemented to further protect unknown cultural resources. As mitigated, the project would have a less than significant impact on California Register of Historic Resources (CRHR)-listed or eligible resources, or on resources significant to a California Native American tribe.

Mitigation Measures

Implementation of the following mitigation measures would reduce impacts on Tribal cultural resources to less than significant levels.

TCR-1 Tribal Notification. Tribal contacts identified by the NAHC (including the Yuhaaviatam of San Manuel Nation Cultural Resources Department (YSMN) and the Gabrieleño Band of Mission Indians – Kizh Nation) shall be contacted of any pre-contact and/or historic-era cultural resources discovered during project implementation, and be provided information regarding the nature of the find, so as to provide Tribal input with regards to significance and treatment. Should the find be deemed significant, as defined by CEQA (as amended, 2015), a Cultural Resources Monitoring and Treatment Plan shall be created by the qualified archaeologist, in coordination with relevant Tribes, and all subsequent finds shall be subject to this Plan. In the event of a significant find, the Plan shall allow for coordination of Native American monitoring by the YSMN and the Gabrieleño Band of Mission Indians – Kizh Nation.

TCR-2 Document Coordination. As requested, the City of Pomona shall provide archaeological/cultural documents created as a part of the project (isolate records, site records, survey reports, testing reports, etc.) to Tribes identified by the NAHC. The City of Pomona shall, in good faith, consult with interested Tribes identified by the NAHC throughout the life of the project.

TCR-3 Retain a Native American Monitor Prior to Commencement of Ground-Disturbing Activities.

A. The City of Pomona shall retain a Native American Monitor from or approved by the Gabrieleño Band of Mission Indians – Kizh Nation. The monitor shall be retained prior to the commencement of any "ground-disturbing activity" for the subject project at all project locations (i.e., both on-site and any off-site locations that are included in the project description/definition and/or required in connection with the project, such as public improvement work). "Ground-disturbing activity" shall include, but is not limited to, demolition, pavement removal, potholing, auguring, grubbing, tree removal, boring, grading, excavation, drilling, and trenching.

B. A copy of the executed monitoring agreement shall be submitted to the City of Pomona prior to the earlier of the commencement of any ground-disturbing activity, or the issuance of any permit necessary to commence a ground-disturbing activity.

C. The monitor will complete daily monitoring logs that will provide descriptions of the relevant ground-disturbing activities, the type of construction activities performed, locations of ground-disturbing activities, soil types, cultural-related materials, and any other facts, conditions, materials, or discoveries of significance to the Tribe. Monitor logs will identify and describe any discovered TCRs, including but not limited to, Native American cultural and historical artifacts, remains, places of significance, etc., (collectively, tribal cultural resources, or "TCR"), as well as any discovered Native American (ancestral) human remains and burial goods. Copies of monitor logs will be provided to the City of Pomona upon written request to the Tribe.

D. On-site tribal monitoring shall conclude upon the latter of the following (1) written confirmation to the Kizh from a designated point of contact for the City of Pomona that all ground-disturbing activities and phases that may involve ground-disturbing activities on the project site or in connection with the project are complete; or (2) a determination and written notification by the Kizh to the City of Pomona that no future, planned construction activity and/or development/construction phase at the project site possesses the potential to impact Kizh TCRs.

E. Upon discovery of any TCRs, all construction activities in the immediate vicinity of the discovery shall cease (i.e., not less than the surrounding 60 feet) and shall not resume until the discovered TCR has been fully assessed by the Kizh monitor and/or Kizh archaeologist. The Kizh will recover and retain all discovered TCRs in the form and/or manner the Tribe deems appropriate, in the Tribe's sole discretion, and for any purpose the Tribe deems appropriate, including for educational, cultural and/or historic purposes.

TCR-4 Unanticipated Discovery of Human Remains and Associated Funerary Objects.
A. Native American human remains are defined in PRC 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called associated grave goods in Public Resources Code Section 5097.98, are also to be treated according to this statute.

B. If Native American human remains and/or grave goods are discovered or recognized on the project site, then all construction activities shall immediately cease. Health and Safety Code Section 7050.5 dictates that any discoveries of human skeletal material shall be immediately reported to the County Coroner and all ground-disturbing activities shall immediately halt and shall remain halted until the coroner has determined the nature of the remains. If the coroner recognizes the human remains to be those of a Native American or has reason to believe they are Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission, and Public Resources Code Section 5097.98 shall be followed.

C. Human remains and grave/burial goods shall be treated alike per California Public Resources Code section 5097.98(d)(1) and (2).

D. Construction activities may resume in other parts of the project site at a minimum of 200 feet away from discovered human remains and/or burial goods, if the Kizh determines in its

sole discretion that resuming construction activities at that distance is acceptable and provides the project manager express consent of that determination (along with any other feasible mitigation measures the Kizh monitor and/or archaeologist deems necessary). (CEQA Guidelines Section 15064.5(f).)

E. Preservation in place (i.e., avoidance) is the preferred manner of treatment for discovered human remains and/or burial goods. Any historic archaeological material that is not Native American in origin (non-TCR) shall be curated at a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County or the Fowler Museum, if such an institution agrees to accept the material. If no institution accepts the archaeological material, it shall be offered to a local school or historical society in the area for educational purposes.

F. Any discovery of human remains/burial goods shall be kept confidential to prevent further disturbance.

TCR-5 Procedures for Burials and Funerary Remains.
A. As the Most Likely Descendant ("MLD"), the Koo-nas-gna Burial Policy shall be implemented. To the Tribe, the term "human remains" encompasses more than human bones. In ancient as well as historic times, Tribal Traditions included, but were not limited to, the preparation of the soil for burial, the burial of funerary objects with the deceased, and the ceremonial burning of human remains.

B. If the discovery of human remains includes four or more burials, the discovery location shall be treated as a cemetery and a separate treatment plan shall be created.

C. The prepared soil and cremation soils are to be treated in the same manner as bone fragments that remain intact. Associated funerary objects are objects that, as part of the death rite or ceremony of a culture, are reasonably believed to have been placed with individual human remains either at the time of death or later; other items made exclusively for burial purposes or to contain human remains can also be considered as associated funerary objects. Cremations will either be removed in bulk or by means as necessary to ensure complete recovery of all sacred materials.

D. In the case where discovered human remains cannot be fully documented and recovered on the same day, the remains will be covered with muslin cloth and a steel plate that can be moved by heavy equipment placed over the excavation opening to protect the remains. If this type of steel plate is not available, a 24-hour guard should be posted outside of working hours. The Tribe will make every effort to recommend diverting the project and keeping the remains in situ and protected. If the project cannot be diverted, it may be determined that burials will be removed.

E. In the event preservation in place is not possible despite good faith efforts by the City of Pomona, before ground-disturbing activities may resume on the project site, the City of Pomona shall arrange a designated site location within the footprint of the project property for the respectful reburial of the human remains and/or ceremonial objects.

F. Each occurrence of human remains and associated funerary objects will be stored using opaque cloth bags. All human remains, funerary objects, sacred objects and objects of cultural patrimony will be removed to a secure container on site if possible. These items should be retained and reburied within six months of recovery. The site of reburial/repatriation shall be on the project property but at a location agreed upon between the Tribe and the City of Pomona at a site to be protected in perpetuity. There shall be no publicity regarding any cultural materials recovered.

G. The Tribe will work closely with the project's qualified archaeologist to ensure that the excavation is treated carefully, ethically, and respectfully. If data recovery is approved by the Tribe, documentation shall be prepared and shall include (at a minimum) detailed descriptive notes and sketches. All data recovery-related forms of documentation shall be approved in advance by the Tribe. If any data recovery is performed, once complete, a final report shall be submitted to the Tribe and the NAHC. The Tribe does NOT authorize any scientific study or the utilization of any invasive and/or destructive diagnostics on human remains.

2.3.19 Utilities and Service Systems

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electrical power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☒	☐	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
d) 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?	☐	☒	☐	☐
e) Comply with federal, state, and local management and reduction statues and regulations related to solid waste?	☐	☒	☐	☐

Discussion: The proposed storm drain improvements would be installed in Mills Avenue. Existing utilities present near the junction structure and proposed vault include water mains, water laterals, sewer mains, sewer laterals, and communication lines.

a) **Less than Significant Impact with Mitigation Incorporated.** The objective of the project is to capture, treat and recharge storm water to improve the reliability of the local potable water supply. As noted in this Initial Study, potentially significant project-related impacts have been mitigated to below levels of significance.

b) **Less than Significant Impact.** The project would increase the volume of water recharged to the Six Basins groundwater basins, a beneficial impact on water supplies. The project does not include residential, commercial, or industrial development which would create additional water demand. Therefore, project-related impacts on water supplies would be less than significant.

c) **Less than Significant Impact**. Habitable structures are not present on the project site and none are proposed as part of the project. The limited number of construction workers (approximately 10) required to implement the project would not create the need for new or expanded wastewater service. Wastewater generated during construction by temporary workers and for basin operations would be treated locally in compliance with the requirements

of the Los Angeles Regional Water Quality Control Board. The project would have a less than significant impact on wastewater treatment facilities.

d) and e) **Less Than Significant Impact with Mitigation Incorporated**. Construction of the proposed project is not anticipated to generate substantial excess soil requiring disposal – cut and fill will be balanced to the extent feasible. Construction debris will result from installation of the storm drain improvements. The approximately 20 CY of asphalt debris would be transported to a CDI processing facility or permitted landfill. Project maintenance activities would result in additional debris requiring offsite disposal; annual volumes would vary based on the number, frequency, and severity of storms. With implementation of mitigation measure UTIL-1, anticipated wastes would be processed and disposed at properly permitted local facilities and impacts related to solid waste disposal would be less than significant.

Mitigation Measure

The following mitigation measure would reduce project-related impacts on solid waste to less than significant levels.

UTIL-1 Implementation of a Construction and Demolition Disposal Plan. Prior to commencement of construction, the construction contractor shall prepare a Construction and Demolition (C&D) disposal plan for review and approval by the City of Claremont. Per California Green Building Standards Code Section 45.408.1.1, Construction Waste Management Plan, the C&D Disposal Plan shall:

- Identify the construction and demolition waste materials to be diverted from disposal by efficient usage, recycling, reuse on the project or salvage for future use or sale.
- Determine if construction and demolition waste materials will be sorted on-site (source-separated) or bulk mixed (single stream).
- Identify diversion facilities where construction and demolition waste material collected will be taken.
- Specify that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both.

2.3.20 Wildfire

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
b) Due to slope, prevailing winds, or other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

Discussion: The wilderness areas in the northern part of Claremont (over 1 mile north of the PSG) are designated as within a very high fire hazard severity zone (CalFire, 2011). However, the project sites are not mapped within a fire hazard severity zone.

a) **Less than Significant Impact.** In the event of a disaster, specific evacuation routes in the City of Claremont are determined by the Claremont law enforcement agencies (Claremont, 2009). Temporary lane closures during storm drain improvements could impact the movement of emergency vehicles. To protect public safety, flag workers will be placed at intersections near lane closures to direct traffic. Local emergency response agencies (Claremont Police Department and Claremont Fire Department) would be notified of the timing and duration of planned lane closures. Since the project site is not designated as an emergency staging area, and since notifications to emergency providers would be conducted as part of the project, the project would have a less than significant impact on emergency access and evacuation plans.

b) **Less than Significant Impact.** Once installed, the proposed storm drain improvements would be buried and the road surface restored; there would be no impacts on wildfire hazards. As part of operations and maintenance, vegetation at PSG would be removed and managed. The on-going reduction in vegetation would have a beneficial impact on reducing fire risk at the site, as would the greater volumes of water present in the basins. New habitable structures are not proposed as part of the project and none are present on the project site. Therefore, the project would not expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire. Overall, impacts on wildfire risks would be less than significant. Since the PSG and locations for the storm drain improvements are not mapped

within a fire hazard severity zone, the Strategic Plan PEIR mitigation measures HAZ-5 and HAZ-6 would not be applicable to the proposed project.

c) **Less Than Significant Impact**. Construction for the proposed project includes installation of buried storm drain features, grading of existing recharge basins, and maintenance of project facilities. No new roads, fuel breaks, emergency water sources, power lines or utilities other than the storm drain improvements are proposed. Since the buried storm drain facilities would not increase fire risk and basin maintenance would manage vegetation thus reducing fuel for fires, the impact from new infrastructure on fire risk would be less than significant.

d) **No Impact**. Habitable structures are not present on the project sites and none are proposed as part of the project. Landslide and post-fire slope instability are not hazards identified for the project area, and the storm drain features for the project would be buried. Therefore, the project would not expose people or structures to significant wildfire risks.

2.3.21 Mandatory Findings of Significance

	Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a)	Does the project 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?	☐	☒	☐	☐
b)	Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?	☐	☐	☒	☐
c)	Does the project have impacts that are individually limited, but cumulatively considerable ("cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, effects of other current projects, and the effects of probable future projects.)?	☐	☐	☒	☐
d)	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Discussion:

a) **Less than Significant Impact with Mitigation Incorporated.** Most of the sensitive plants and wildlife known from the region have low or no potential to occur on the project site due to the low quality and small size the vegetation communities on the site, and the lack of surrounding native vegetation. A preconstruction survey for sensitive species will be conducted prior to the start of construction and mitigation shall be implemented to avoid significant impacts if a sensitive species occurs on the project site. If project construction occurs during the avian nesting season, mitigation will be implemented to avoid significant impacts to protected nesting bird species. Additional mitigation will be implemented to reduce impacts to riparian habitat (mulefat thickets). As mitigated, the construction and operation of the proposed project would not substantially degrade biological resources and impacts would be less than significant.

Cultural resources are not known for the project sites and mitigation measures have been identified to protect resources in the unlikely event they are discovered during construction. Therefore, the project would not eliminate important examples of the major periods of California history or prehistory.

b) and c) **Less than Significant Impact**. The proposed project is one element of the Six Basins Strategic Plan. The Strategic Plan would improve management of the Six Basins groundwater basins by implementation of improvements to existing facilities as well as development of new facilities. Cumulatively, the projects included in the Strategic Plan would increase recharge

and storage, and improve water quality. Achievement of the Strategic Plan goals would result in the long-term sustainability of the local water supply for residential, commercial, and industrial water users into the future. Overall, the proposed project would increase the reliability of groundwater resources in the Pomona service area, a beneficial long-term goal.

d) **Less than Significant Impact with Mitigation Incorporated.** Implementation of the project would improve the management of stormwater runoff and supplement local groundwater resources. The project would increase the sustainability of the local water supply and improve water quality, beneficial impacts on human beings. Temporary impacts on human beings during construction (e.g., air pollutant emissions, traffic, and noise) would be mitigated to less than significant levels.

Section 3
References, Abbreviations, and Report Preparation

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3.2 ACRONYMS AND ABBREVIATIONS

AAQS	Ambient air quality standards
AB	Assembly Bill
ac	acre
ac-ft	acre-feet
af	acre-feet
afd	acre-feet per day
afy	acre-feet per year
amsl	above mean sea level
AQMP	Air Quality Management Plan
ASCE	American Society of Civil Engineers
BACM	Best available control measure
BERD	Built Environment Resource Directory
BMP	best management practice
BRTR	Biological Resources Technical Report
BSA	Biological Study Area
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
Caltrans	California Department of Transportation
CARB	California Air Resources Board
C&D	Construction and demolition
CDFW	California Department of Fish and Wildlife
CDI	Construction, Demolition, and Inert Debris
CEQA	California Environmental Quality Act
CH_4	Methane
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
Cr-6	hexavalent chromium

CRHR	California Register of Historic Resources
CY	cubic yards
dBA	A-weighted decibels
DCE	1,1-dichloroethene
DPM	diesel particulate matter
DTSC	Department of Toxic Substances Control
EIR	Environmental Impact Report
ESGVWMG	East San Gabriel Valley Watershed Management Group
Farmland	Prime Farmland, Unique Farmland, or Farmland of Statewide Importance
FE	Federally Endangered
FEMA	Federal Emergency Management Agency
FHA	Federal Highway Administration
FMMP	Farmland Mapping and Monitoring Program
FTA	Federal Transit Administration
GHG	greenhouse gas
HDPE	high-density polyethylene
HRA	Health Risk Assessment
ICBO	International Conference of Building Officials
in/hr	inches per hour
IS	Initial Study
ITE	Institute of Traffic Engineers
lbs	pounds
Lmax	maximum sound level during a measurement period or a noise event
LST	Local Significance Thresholds
LUST	Leaking Underground Storage Tank
Ma	Million years ago
MBTA	Migratory Bird Treaty Act
mgd	million gallons per day
MLD	Most Likely Descendant
MMT	million metric tons
MPA	microscopic particulate analysis
MRZ-2	Mineral Zone 2

MS4	Municipal Separate Storm Sewer System
N_2O	nitrous oxide
NAHC	Native American Heritage Commission
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NOx	Nitrogen oxide
O_3	ozone
O&M	Operations and Maintenance
Pb	lead
PCC	Portland Cement Concrete
PCE	Passenger car equivalent
PCE	tetrachloroethene
PDR	Preliminary Design Report
PEIR	Program Environmental Impact Report
PFP	Pedley Filtration Plant
PM	particulate matter
$PM_{2.5}$	particulate matter 2.5 microns or less in diameter
PM_{10}	particulate matter 10 microns or less in diameter
PMMP	Paleontological Monitoring and Mitigation Plan
PPV	peak particle velocity
P/RC	Park/Resource Conservation
PSG	Pedley Spreading Grounds
RCP	Reinforced Concrete Pipe
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategies
RWQCB	Regional Water Quality Control Board
SCAB	South Coast Air Basin
SCAG	Southern California Associations of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SE	State Endangered
SGMA	Sustainable Groundwater Management Act
SGVMVCD	San Gabriel Valley Mosquito and Vector Control District

SLF	Sacred Lands File
SMARA	Surface Mining and Reclamation Act
SO2	sulfur dioxide
SR	State Route
SRA	site receptor area
SSC	species of special concern
Stantec	Stantec Consulting Services Inc.
SVP	Society of Vertebrate Paleontology
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic air contaminant
TCE	trichloroethene
TCP	trichloropropane
TCR	Tribal Cultural Resources
TDS	total dissolved solids
TVMWD	Three Valleys Municipal Water District
UCMP	University of California Museum of Paleontology
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
USNVC	United States National Vegetation Classification
VOC	Volatile Organic Compound
WDID	Waste Discharge Identification
WDR	Waste Discharge Requirements
WMP	Watershed Management Plan
YSMN	Yuhaaviatam of San Manuel Nation

3.3 PREPARERS OF THE INITIAL STUDY

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CEQA Initial Study

Appendix A

Air Quality Modeling Output

Pedley Spreading Grounds Pond Enhancements

CALEEMOD OUTPUT FILES - CONSTRUCTION

Pedley Spreading Basins - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Pedley Spreading Basins

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	2.00	1000sqft	0.05	2,000.00	0
Other Non-Asphalt Surfaces	20.40	Acre	20.40	888,624.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Size of basins, spreading area, and maximum area of pipeline to be improved; 2 ksf concrete emergency spillway

Construction Phase -

Off-road Equipment -

Trips and VMT -

On-road Fugitive Dust -

Grading - 12,316 CY of Cut and 12,045 of fill - 271 CY hauled off site; 128 CY of slope armor imported

Construction Off-road Equipment Mitigation -

Fleet Mix -

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Parking	53437	52272
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblGrading	MaterialExported	0.00	271.00
tblGrading	MaterialImported	0.00	128.00

2.0 Emissions Summary

Pedley Spreading Basins - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					
2023	0.1429	1.4531	1.2504	2.6900e-003	0.4312	0.0614	0.4926	0.1813	0.0565	0.2377	0.0000	237.1351	237.1351	0.0739	4.4000e-004	239.1131
Maximum	**0.1429**	**1.4531**	**1.2504**	**2.6900e-003**	**0.4312**	**0.0614**	**0.4926**	**0.1813**	**0.0565**	**0.2377**	**0.0000**	**237.1351**	**237.1351**	**0.0739**	**4.4000e-004**	**239.1131**

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					
2023	0.1429	1.4531	1.2504	2.6900e-003	0.1999	0.0614	0.2613	0.0831	0.0565	0.1396	0.0000	237.1349	237.1349	0.0739	4.4000e-004	239.1128
Maximum	**0.1429**	**1.4531**	**1.2504**	**2.6900e-003**	**0.1999**	**0.0614**	**0.2613**	**0.0831**	**0.0565**	**0.1396**	**0.0000**	**237.1349**	**237.1349**	**0.0739**	**4.4000e-004**	**239.1128**

	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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**53.63**	**0.00**	**46.95**	**54.13**	**0.00**	**41.28**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Pedley Spreading Basins - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-2-2023	4-1-2023	1.1903	1.1903
2	4-2-2023	7-1-2023	0.3841	0.3841
		Highest	1.1903	1.1903

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0697	0.0000	2.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.6000e-004	5.6000e-004	0.0000	0.0000	5.9000e-004
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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	**0.0697**	**0.0000**	**2.9000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**5.6000e-004**	**5.6000e-004**	**0.0000**	**0.0000**	**5.9000e-004**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.0697	0.0000	2.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.6000e-004	5.6000e-004	0.0000	0.0000	5.9000e-004
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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	**0.0697**	**0.0000**	**2.9000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**5.6000e-004**	**5.6000e-004**	**0.0000**	**0.0000**	**5.9000e-004**

	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	N20	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	Site Preparation	Site Preparation	1/2/2023	1/13/2023	5	10	
2	Grading	Grading	1/14/2023	3/3/2023	5	35	
3	Utilities	Grading	3/4/2023	4/21/2023	5	35	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Paving	Paving	4/22/2023	5/19/2023	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 105

Acres of Paving: 20.45

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Utilities	Excavators	2	8.00	158	0.38
Utilities	Graders	1	8.00	187	0.41
Utilities	Rubber Tired Dozers	1	8.00	247	0.40
Utilities	Scrapers	2	8.00	367	0.48
Utilities	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38

Trips and VMT

Pedley Spreading Basins - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	50.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Utilities	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2023

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					0.0983	0.0000	0.0983	0.0505	0.0000	0.0505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1376	0.0912	1.9000e-004		6.3300e-003	6.3300e-003		5.8200e-003	5.8200e-003	0.0000	16.7254	16.7254	5.4100e-003	0.0000	16.8606
Total	**0.0133**	**0.1376**	**0.0912**	**1.9000e-004**	**0.0983**	**6.3300e-003**	**0.1046**	**0.0505**	**5.8200e-003**	**0.0563**	**0.0000**	**16.7254**	**16.7254**	**5.4100e-003**	**0.0000**	**16.8606**

Pedley Spreading Basins - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2023

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	2.8000e-004	2.2000e-004	2.9300e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.7727	0.7727	2.0000e-005	2.0000e-005	0.7791
Total	**2.8000e-004**	**2.2000e-004**	**2.9300e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**9.9000e-004**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.7727**	**0.7727**	**2.0000e-005**	**2.0000e-005**	**0.7791**

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					0.0442	0.0000	0.0442	0.0227	0.0000	0.0227	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1376	0.0912	1.9000e-004		6.3300e-003	6.3300e-003		5.8200e-003	5.8200e-003	0.0000	16.7253	16.7253	5.4100e-003	0.0000	16.8606
Total	**0.0133**	**0.1376**	**0.0912**	**1.9000e-004**	**0.0442**	**6.3300e-003**	**0.0506**	**0.0227**	**5.8200e-003**	**0.0286**	**0.0000**	**16.7253**	**16.7253**	**5.4100e-003**	**0.0000**	**16.8606**

Pedley Spreading Basins - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	2.2000e-004	2.9300e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.7727	0.7727	2.0000e-005	2.0000e-005	0.7791
Total	**2.8000e-004**	**2.2000e-004**	**2.9300e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**9.9000e-004**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.7727**	**0.7727**	**2.0000e-005**	**2.0000e-005**	**0.7791**

3.3 Grading - 2023

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					0.1611	0.0000	0.1611	0.0639	0.0000	0.0639	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0581	0.6040	0.4909	1.0900e-003		0.0249	0.0249		0.0229	0.0229	0.0000	95.4366	95.4366	0.0309	0.0000	96.2083
Total	**0.0581**	**0.6040**	**0.4909**	**1.0900e-003**	**0.1611**	**0.0249**	**0.1860**	**0.0639**	**0.0229**	**0.0869**	**0.0000**	**95.4366**	**95.4366**	**0.0309**	**0.0000**	**96.2083**

Pedley Spreading Basins - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2023

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	5.0000e-005	3.2400e-003	8.6000e-004	1.0000e-005	4.3000e-004	2.0000e-005	4.5000e-004	1.2000e-004	2.0000e-005	1.4000e-004	0.0000	1.4395	1.4395	9.0000e-005	2.3000e-004	1.5099
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	1.0900e-003	8.4000e-004	0.0114	3.0000e-005	3.8400e-003	2.0000e-005	3.8600e-003	1.0200e-003	2.0000e-005	1.0400e-003	0.0000	3.0049	3.0049	8.0000e-005	8.0000e-005	3.0298
Total	**1.1400e-003**	**4.0800e-003**	**0.0123**	**4.0000e-005**	**4.2700e-003**	**4.0000e-005**	**4.3100e-003**	**1.1400e-003**	**4.0000e-005**	**1.1800e-003**	**0.0000**	**4.4444**	**4.4444**	**1.7000e-004**	**3.1000e-004**	**4.5398**

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					0.0725	0.0000	0.0725	0.0288	0.0000	0.0288	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0581	0.6040	0.4909	1.0900e-003		0.0249	0.0249		0.0229	0.0229	0.0000	95.4365	95.4365	0.0309	0.0000	96.2082
Total	**0.0581**	**0.6040**	**0.4909**	**1.0900e-003**	**0.0725**	**0.0249**	**0.0974**	**0.0288**	**0.0229**	**0.0517**	**0.0000**	**95.4365**	**95.4365**	**0.0309**	**0.0000**	**96.2082**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2023

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	5.0000e-005	3.2400e-003	8.6000e-004	1.0000e-005	4.3000e-004	2.0000e-005	4.5000e-004	1.2000e-004	2.0000e-005	1.4000e-004	0.0000	1.4395	1.4395	9.0000e-005	2.3000e-004	1.5099
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	1.0900e-003	8.4000e-004	0.0114	3.0000e-005	3.8400e-003	2.0000e-005	3.8600e-003	1.0200e-003	2.0000e-005	1.0400e-003	0.0000	3.0049	3.0049	8.0000e-005	8.0000e-005	3.0298
Total	**1.1400e-003**	**4.0800e-003**	**0.0123**	**4.0000e-005**	**4.2700e-003**	**4.0000e-005**	**4.3100e-003**	**1.1400e-003**	**4.0000e-005**	**1.1800e-003**	**0.0000**	**4.4444**	**4.4444**	**1.7000e-004**	**3.1000e-004**	**4.5398**

3.4 Utilities - 2023

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					0.1611	0.0000	0.1611	0.0639	0.0000	0.0639	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0581	0.6040	0.4909	1.0900e-003		0.0249	0.0249		0.0229	0.0229	0.0000	95.4366	95.4366	0.0309	0.0000	96.2083
Total	**0.0581**	**0.6040**	**0.4909**	**1.0900e-003**	**0.1611**	**0.0249**	**0.1860**	**0.0639**	**0.0229**	**0.0869**	**0.0000**	**95.4366**	**95.4366**	**0.0309**	**0.0000**	**96.2083**

Pedley Spreading Basins - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Utilities - 2023

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	1.0900e-003	8.4000e-004	0.0114	3.0000e-005	3.8400e-003	2.0000e-005	3.8600e-003	1.0200e-003	2.0000e-005	1.0400e-003	0.0000	3.0049	3.0049	8.0000e-005	8.0000e-005	3.0298
Total	**1.0900e-003**	**8.4000e-004**	**0.0114**	**3.0000e-005**	**3.8400e-003**	**2.0000e-005**	**3.8600e-003**	**1.0200e-003**	**2.0000e-005**	**1.0400e-003**	**0.0000**	**3.0049**	**3.0049**	**8.0000e-005**	**8.0000e-005**	**3.0298**

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					0.0725	0.0000	0.0725	0.0288	0.0000	0.0288	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0581	0.6040	0.4909	1.0900e-003		0.0249	0.0249		0.0229	0.0229	0.0000	95.4365	95.4365	0.0309	0.0000	96.2082
Total	**0.0581**	**0.6040**	**0.4909**	**1.0900e-003**	**0.0725**	**0.0249**	**0.0974**	**0.0288**	**0.0229**	**0.0517**	**0.0000**	**95.4365**	**95.4365**	**0.0309**	**0.0000**	**96.2082**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Utilities - 2023

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	1.0900e-003	8.4000e-004	0.0114	3.0000e-005	3.8400e-003	2.0000e-005	3.8600e-003	1.0200e-003	2.0000e-005	1.0400e-003	0.0000	3.0049	3.0049	8.0000e-005	8.0000e-005	3.0298
Total	**1.0900e-003**	**8.4000e-004**	**0.0114**	**3.0000e-005**	**3.8400e-003**	**2.0000e-005**	**3.8600e-003**	**1.0200e-003**	**2.0000e-005**	**1.0400e-003**	**0.0000**	**3.0049**	**3.0049**	**8.0000e-005**	**8.0000e-005**	**3.0298**

3.5 Paving - 2023

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	0.0103	0.1019	0.1458	2.3000e-004		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	20.0269	20.0269	6.4800e-003	0.0000	20.1888
Paving	7.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0104**	**0.1019**	**0.1458**	**2.3000e-004**		**5.1000e-003**	**5.1000e-003**		**4.6900e-003**	**4.6900e-003**	**0.0000**	**20.0269**	**20.0269**	**6.4800e-003**	**0.0000**	**20.1888**

Pedley Spreading Basins - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2023

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	4.7000e-004	3.6000e-004	4.8900e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.2878	1.2878	3.0000e-005	3.0000e-005	1.2985
Total	**4.7000e-004**	**3.6000e-004**	**4.8900e-003**	**1.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.2878**	**1.2878**	**3.0000e-005**	**3.0000e-005**	**1.2985**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0103	0.1019	0.1458	2.3000e-004		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	20.0268	20.0268	6.4800e-003	0.0000	20.1888
Paving	7.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0104**	**0.1019**	**0.1458**	**2.3000e-004**		**5.1000e-003**	**5.1000e-003**		**4.6900e-003**	**4.6900e-003**	**0.0000**	**20.0268**	**20.0268**	**6.4800e-003**	**0.0000**	**20.1888**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2023

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	4.7000e-004	3.6000e-004	4.8900e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.2878	1.2878	3.0000e-005	3.0000e-005	1.2985
Total	**4.7000e-004**	**3.6000e-004**	**4.8900e-003**	**1.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.2878**	**1.2878**	**3.0000e-005**	**3.0000e-005**	**1.2985**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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 Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.543401	0.061496	0.184986	0.128935	0.023820	0.006437	0.011961	0.008652	0.000812	0.000508	0.024540	0.000745	0.003706
Other Non-Asphalt Surfaces	0.543401	0.061496	0.184986	0.128935	0.023820	0.006437	0.011961	0.008652	0.000812	0.000508	0.024540	0.000745	0.003706

5.0 Energy Detail

Pedley Spreading Basins - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	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	0.0000

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	tons/yr										MT/yr					
Other 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
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**

Mitigated

	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	tons/yr										MT/yr					
Other 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
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**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
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

Pedley Spreading Basins - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0697	0.0000	2.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.6000e-004	5.6000e-004	0.0000	0.0000	5.9000e-004
Unmitigated	0.0697	0.0000	2.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.6000e-004	5.6000e-004	0.0000	0.0000	5.9000e-004

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	0.0121					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0576					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	2.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.6000e-004	5.6000e-004	0.0000	0.0000	5.9000e-004
Total	**0.0697**	**0.0000**	**2.9000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**5.6000e-004**	**5.6000e-004**	**0.0000**	**0.0000**	**5.9000e-004**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0121					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0576					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	2.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.6000e-004	5.6000e-004	0.0000	0.0000	5.9000e-004
Total	**0.0697**	**0.0000**	**2.9000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**5.6000e-004**	**5.6000e-004**	**0.0000**	**0.0000**	**5.9000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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 Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
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 Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Pedley Spreading Basins - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Pedley Spreading Basins

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	2.00	1000sqft	0.05	2,000.00	0
Other Non-Asphalt Surfaces	20.40	Acre	20.40	888,624.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Size of basins, spreading area, and maximum area of pipeline to be improved; 2 ksf concrete emergency spillway

Construction Phase -

Off-road Equipment -

Trips and VMT -

On-road Fugitive Dust -

Grading - 12,316 CY of Cut and 12,045 of fill - 271 CY hauled off site; 128 CY of slope armor imported

Construction Off-road Equipment Mitigation -

Fleet Mix -

Pedley Spreading Basins - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Parking	53437	52272
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblGrading	MaterialExported	0.00	271.00
tblGrading	MaterialImported	0.00	128.00

2.0 Emissions Summary

Pedley Spreading Basins - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					
2023	3.3880	34.7341	28.7976	0.0649	19.8582	1.4270	21.1254	10.1558	1.3129	11.3216	0.0000	6,299.7614	6,299.7614	1.9546	0.0189	6,354.2646
Maximum	**3.3880**	**34.7341**	**28.7976**	**0.0649**	**19.8582**	**1.4270**	**21.1254**	**10.1558**	**1.3129**	**11.3216**	**0.0000**	**6,299.7614**	**6,299.7614**	**1.9546**	**0.0189**	**6,354.2646**

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					
2023	3.3880	34.7341	28.7976	0.0649	9.0469	1.4270	10.3140	4.5995	1.3129	5.7652	0.0000	6,299.7614	6,299.7614	1.9546	0.0189	6,354.2646
Maximum	**3.3880**	**34.7341**	**28.7976**	**0.0649**	**9.0469**	**1.4270**	**10.3140**	**4.5995**	**1.3129**	**5.7652**	**0.0000**	**6,299.7614**	**6,299.7614**	**1.9546**	**0.0189**	**6,354.2646**

	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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**54.44**	**0.00**	**51.18**	**54.71**	**0.00**	**49.08**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Pedley Spreading Basins - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.3821	2.0000e-005	2.2800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.9000e-003	4.9000e-003	1.0000e-005		5.2200e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	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	**0.3821**	**2.0000e-005**	**2.2800e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**		**4.9000e-003**	**4.9000e-003**	**1.0000e-005**	**0.0000**	**5.2200e-003**

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	0.3821	2.0000e-005	2.2800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.9000e-003	4.9000e-003	1.0000e-005		5.2200e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	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	**0.3821**	**2.0000e-005**	**2.2800e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**		**4.9000e-003**	**4.9000e-003**	**1.0000e-005**	**0.0000**	**5.2200e-003**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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	N20	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	Site Preparation	Site Preparation	1/2/2023	1/13/2023	5	10	
2	Grading	Grading	1/14/2023	3/3/2023	5	35	
3	Utilities	Grading	3/4/2023	4/21/2023	5	35	
4	Paving	Paving	4/22/2023	5/19/2023	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 105

Acres of Paving: 20.45

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Utilities	Excavators	2	8.00	158	0.38
Utilities	Graders	1	8.00	187	0.41
Utilities	Rubber Tired Dozers	1	8.00	247	0.40
Utilities	Scrapers	2	8.00	367	0.48
Utilities	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38

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
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	50.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Utilities	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2023

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					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6570**	**1.2660**	**20.9230**	**10.1025**	**1.1647**	**11.2672**		**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

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	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
Worker	0.0569	0.0384	0.6276	1.7600e-003	0.2012	1.1300e-003	0.2023	0.0534	1.0400e-003	0.0544		177.8853	177.8853	4.3200e-003	4.0500e-003	179.2014
Total	**0.0569**	**0.0384**	**0.6276**	**1.7600e-003**	**0.2012**	**1.1300e-003**	**0.2023**	**0.0534**	**1.0400e-003**	**0.0544**		**177.8853**	**177.8853**	**4.3200e-003**	**4.0500e-003**	**179.2014**

Pedley Spreading Basins - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2023

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					8.8457	0.0000	8.8457	4.5461	0.0000	4.5461			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**8.8457**	**1.2660**	**10.1117**	**4.5461**	**1.1647**	**5.7108**	**0.0000**	**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

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	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
Worker	0.0569	0.0384	0.6276	1.7600e-003	0.2012	1.1300e-003	0.2023	0.0534	1.0400e-003	0.0544		177.8853	177.8853	4.3200e-003	4.0500e-003	179.2014
Total	**0.0569**	**0.0384**	**0.6276**	**1.7600e-003**	**0.2012**	**1.1300e-003**	**0.2023**	**0.0534**	**1.0400e-003**	**0.0544**		**177.8853**	**177.8853**	**4.3200e-003**	**4.0500e-003**	**179.2014**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2023

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					9.2049	0.0000	9.2049	3.6540	0.0000	3.6540			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.2049**	**1.4245**	**10.6294**	**3.6540**	**1.3105**	**4.9645**		**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

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	3.0100e-003	0.1759	0.0491	8.2000e-004	0.0250	1.2300e-003	0.0262	6.8500e-003	1.1800e-003	8.0300e-003		90.6334	90.6334	5.5600e-003	0.0144	95.0683
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
Worker	0.0633	0.0426	0.6974	1.9600e-003	0.2236	1.2600e-003	0.2248	0.0593	1.1600e-003	0.0605		197.6503	197.6503	4.7900e-003	4.5000e-003	199.1127
Total	**0.0663**	**0.2185**	**0.7465**	**2.7800e-003**	**0.2485**	**2.4900e-003**	**0.2510**	**0.0661**	**2.3400e-003**	**0.0685**		**288.2837**	**288.2837**	**0.0104**	**0.0189**	**294.1810**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2023

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					4.1422	0.0000	4.1422	1.6443	0.0000	1.6443			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**4.1422**	**1.4245**	**5.5667**	**1.6443**	**1.3105**	**2.9548**	**0.0000**	**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

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	3.0100e-003	0.1759	0.0491	8.2000e-004	0.0250	1.2300e-003	0.0262	6.8500e-003	1.1800e-003	8.0300e-003		90.6334	90.6334	5.5600e-003	0.0144	95.0683
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
Worker	0.0633	0.0426	0.6974	1.9600e-003	0.2236	1.2600e-003	0.2248	0.0593	1.1600e-003	0.0605		197.6503	197.6503	4.7900e-003	4.5000e-003	199.1127
Total	**0.0663**	**0.2185**	**0.7465**	**2.7800e-003**	**0.2485**	**2.4900e-003**	**0.2510**	**0.0661**	**2.3400e-003**	**0.0685**		**288.2837**	**288.2837**	**0.0104**	**0.0189**	**294.1810**

Pedley Spreading Basins - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Utilities - 2023

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					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.2036**	**1.4245**	**10.6281**	**3.6538**	**1.3105**	**4.9643**		**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

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	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
Worker	0.0633	0.0426	0.6974	1.9600e-003	0.2236	1.2600e-003	0.2248	0.0593	1.1600e-003	0.0605		197.6503	197.6503	4.7900e-003	4.5000e-003	199.1127
Total	**0.0633**	**0.0426**	**0.6974**	**1.9600e-003**	**0.2236**	**1.2600e-003**	**0.2248**	**0.0593**	**1.1600e-003**	**0.0605**		**197.6503**	**197.6503**	**4.7900e-003**	**4.5000e-003**	**199.1127**

Pedley Spreading Basins - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Utilities - 2023

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					4.1416	0.0000	4.1416	1.6442	0.0000	1.6442			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**4.1416**	**1.4245**	**5.5661**	**1.6442**	**1.3105**	**2.9547**	**0.0000**	**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

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	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
Worker	0.0633	0.0426	0.6974	1.9600e-003	0.2236	1.2600e-003	0.2248	0.0593	1.1600e-003	0.0605		197.6503	197.6503	4.7900e-003	4.5000e-003	199.1127
Total	**0.0633**	**0.0426**	**0.6974**	**1.9600e-003**	**0.2236**	**1.2600e-003**	**0.2248**	**0.0593**	**1.1600e-003**	**0.0605**		**197.6503**	**197.6503**	**4.7900e-003**	**4.5000e-003**	**199.1127**

Pedley Spreading Basins - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2023

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	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	6.5500e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0393**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

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	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
Worker	0.0474	0.0320	0.5230	1.4700e-003	0.1677	9.4000e-004	0.1686	0.0445	8.7000e-004	0.0453		148.2377	148.2377	3.6000e-003	3.3800e-003	149.3345
Total	**0.0474**	**0.0320**	**0.5230**	**1.4700e-003**	**0.1677**	**9.4000e-004**	**0.1686**	**0.0445**	**8.7000e-004**	**0.0453**		**148.2377**	**148.2377**	**3.6000e-003**	**3.3800e-003**	**149.3345**

Pedley Spreading Basins - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2023

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	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	6.5500e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0393**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

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	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
Worker	0.0474	0.0320	0.5230	1.4700e-003	0.1677	9.4000e-004	0.1686	0.0445	8.7000e-004	0.0453		148.2377	148.2377	3.6000e-003	3.3800e-003	149.3345
Total	**0.0474**	**0.0320**	**0.5230**	**1.4700e-003**	**0.1677**	**9.4000e-004**	**0.1686**	**0.0445**	**8.7000e-004**	**0.0453**		**148.2377**	**148.2377**	**3.6000e-003**	**3.3800e-003**	**149.3345**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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 Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.543401	0.061496	0.184986	0.128935	0.023820	0.006437	0.011961	0.008652	0.000812	0.000508	0.024540	0.000745	0.003706
Other Non-Asphalt Surfaces	0.543401	0.061496	0.184986	0.128935	0.023820	0.006437	0.011961	0.008652	0.000812	0.000508	0.024540	0.000745	0.003706

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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 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
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**

Mitigated

	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 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
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

Pedley Spreading Basins - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.3821	2.0000e-005	2.2800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.9000e-003	4.9000e-003	1.0000e-005		5.2200e-003
Unmitigated	0.3821	2.0000e-005	2.2800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.9000e-003	4.9000e-003	1.0000e-005		5.2200e-003

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	0.0664					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3155					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.1000e-004	2.0000e-005	2.2800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.9000e-003	4.9000e-003	1.0000e-005		5.2200e-003
Total	**0.3821**	**2.0000e-005**	**2.2800e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**4.9000e-003**	**4.9000e-003**	**1.0000e-005**		**5.2200e-003**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0664					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3155					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.1000e-004	2.0000e-005	2.2800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.9000e-003	4.9000e-003	1.0000e-005		5.2200e-003
Total	**0.3821**	**2.0000e-005**	**2.2800e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**4.9000e-003**	**4.9000e-003**	**1.0000e-005**		**5.2200e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Pedley Spreading Basins - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Pedley Spreading Basins

South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	2.00	1000sqft	0.05	2,000.00	0
Other Non-Asphalt Surfaces	20.40	Acre	20.40	888,624.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Size of basins, spreading area, and maximum area of pipeline to be improved; 2 ksf concrete emergency spillway

Construction Phase -

Off-road Equipment -

Trips and VMT -

On-road Fugitive Dust -

Grading - 12,316 CY of Cut and 12,045 of fill - 271 CY hauled off site; 128 CY of slope armor imported

Construction Off-road Equipment Mitigation -

Fleet Mix -

Pedley Spreading Basins - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Parking	53437	52272
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblGrading	MaterialExported	0.00	271.00
tblGrading	MaterialImported	0.00	128.00

2.0 Emissions Summary

Pedley Spreading Basins - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					
2023	3.3919	34.7461	28.7366	0.0648	19.8582	1.4270	21.1254	10.1558	1.3129	11.3216	0.0000	6,288.8400	6,288.8400	1.9547	0.0192	6,343.4335
Maximum	**3.3919**	**34.7461**	**28.7366**	**0.0648**	**19.8582**	**1.4270**	**21.1254**	**10.1558**	**1.3129**	**11.3216**	**0.0000**	**6,288.8400**	**6,288.8400**	**1.9547**	**0.0192**	**6,343.4335**

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					
2023	3.3919	34.7461	28.7366	0.0648	9.0469	1.4270	10.3140	4.5995	1.3129	5.7652	0.0000	6,288.8400	6,288.8400	1.9547	0.0192	6,343.4335
Maximum	**3.3919**	**34.7461**	**28.7366**	**0.0648**	**9.0469**	**1.4270**	**10.3140**	**4.5995**	**1.3129**	**5.7652**	**0.0000**	**6,288.8400**	**6,288.8400**	**1.9547**	**0.0192**	**6,343.4335**

	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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**54.44**	**0.00**	**51.18**	**54.71**	**0.00**	**49.08**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.3821	2.0000e-005	2.2800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.9000e-003	4.9000e-003	1.0000e-005		5.2200e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	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	**0.3821**	**2.0000e-005**	**2.2800e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**		**4.9000e-003**	**4.9000e-003**	**1.0000e-005**	**0.0000**	**5.2200e-003**

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	0.3821	2.0000e-005	2.2800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.9000e-003	4.9000e-003	1.0000e-005		5.2200e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	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	**0.3821**	**2.0000e-005**	**2.2800e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**		**4.9000e-003**	**4.9000e-003**	**1.0000e-005**	**0.0000**	**5.2200e-003**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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	N20	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	Site Preparation	Site Preparation	1/2/2023	1/13/2023	5	10	
2	Grading	Grading	1/14/2023	3/3/2023	5	35	
3	Utilities	Grading	3/4/2023	4/21/2023	5	35	
4	Paving	Paving	4/22/2023	5/19/2023	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 105

Acres of Paving: 20.45

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Utilities	Excavators	2	8.00	158	0.38
Utilities	Graders	1	8.00	187	0.41
Utilities	Rubber Tired Dozers	1	8.00	247	0.40
Utilities	Scrapers	2	8.00	367	0.48
Utilities	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38

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
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	50.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Utilities	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Pedley Spreading Basins - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2023

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					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6570**	**1.2660**	**20.9230**	**10.1025**	**1.1647**	**11.2672**		**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

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	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
Worker	0.0606	0.0421	0.5721	1.6600e-003	0.2012	1.1300e-003	0.2023	0.0534	1.0400e-003	0.0544		167.9721	167.9721	4.3800e-003	4.3100e-003	169.3658
Total	**0.0606**	**0.0421**	**0.5721**	**1.6600e-003**	**0.2012**	**1.1300e-003**	**0.2023**	**0.0534**	**1.0400e-003**	**0.0544**		**167.9721**	**167.9721**	**4.3800e-003**	**4.3100e-003**	**169.3658**

Pedley Spreading Basins - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2023

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					8.8457	0.0000	8.8457	4.5461	0.0000	4.5461			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**8.8457**	**1.2660**	**10.1117**	**4.5461**	**1.1647**	**5.7108**	**0.0000**	**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

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	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
Worker	0.0606	0.0421	0.5721	1.6600e-003	0.2012	1.1300e-003	0.2023	0.0534	1.0400e-003	0.0544		167.9721	167.9721	4.3800e-003	4.3100e-003	169.3658
Total	**0.0606**	**0.0421**	**0.5721**	**1.6600e-003**	**0.2012**	**1.1300e-003**	**0.2023**	**0.0534**	**1.0400e-003**	**0.0544**		**167.9721**	**167.9721**	**4.3800e-003**	**4.3100e-003**	**169.3658**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2023

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					9.2049	0.0000	9.2049	3.6540	0.0000	3.6540			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.2049**	**1.4245**	**10.6294**	**3.6540**	**1.3105**	**4.9645**		**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

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	2.8200e-003	0.1838	0.0498	8.2000e-004	0.0250	1.2400e-003	0.0262	6.8500e-003	1.1800e-003	8.0300e-003		90.7266	90.7266	5.5500e-003	0.0144	95.1658
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
Worker	0.0674	0.0467	0.6357	1.8500e-003	0.2236	1.2600e-003	0.2248	0.0593	1.1600e-003	0.0605		186.6357	186.6357	4.8700e-003	4.7900e-003	188.1842
Total	**0.0702**	**0.2305**	**0.6855**	**2.6700e-003**	**0.2485**	**2.5000e-003**	**0.2510**	**0.0661**	**2.3400e-003**	**0.0685**		**277.3623**	**277.3623**	**0.0104**	**0.0192**	**283.3500**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2023

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					4.1422	0.0000	4.1422	1.6443	0.0000	1.6443			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**4.1422**	**1.4245**	**5.5667**	**1.6443**	**1.3105**	**2.9548**	**0.0000**	**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

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	2.8200e-003	0.1838	0.0498	8.2000e-004	0.0250	1.2400e-003	0.0262	6.8500e-003	1.1800e-003	8.0300e-003		90.7266	90.7266	5.5500e-003	0.0144	95.1658
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
Worker	0.0674	0.0467	0.6357	1.8500e-003	0.2236	1.2600e-003	0.2248	0.0593	1.1600e-003	0.0605		186.6357	186.6357	4.8700e-003	4.7900e-003	188.1842
Total	**0.0702**	**0.2305**	**0.6855**	**2.6700e-003**	**0.2485**	**2.5000e-003**	**0.2510**	**0.0661**	**2.3400e-003**	**0.0685**		**277.3623**	**277.3623**	**0.0104**	**0.0192**	**283.3500**

Pedley Spreading Basins - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Utilities - 2023

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					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.2036**	**1.4245**	**10.6281**	**3.6538**	**1.3105**	**4.9643**		**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

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	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
Worker	0.0674	0.0467	0.6357	1.8500e-003	0.2236	1.2600e-003	0.2248	0.0593	1.1600e-003	0.0605		186.6357	186.6357	4.8700e-003	4.7900e-003	188.1842
Total	**0.0674**	**0.0467**	**0.6357**	**1.8500e-003**	**0.2236**	**1.2600e-003**	**0.2248**	**0.0593**	**1.1600e-003**	**0.0605**		**186.6357**	**186.6357**	**4.8700e-003**	**4.7900e-003**	**188.1842**

Pedley Spreading Basins - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Utilities - 2023

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					4.1416	0.0000	4.1416	1.6442	0.0000	1.6442			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**4.1416**	**1.4245**	**5.5661**	**1.6442**	**1.3105**	**2.9547**	**0.0000**	**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

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	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
Worker	0.0674	0.0467	0.6357	1.8500e-003	0.2236	1.2600e-003	0.2248	0.0593	1.1600e-003	0.0605		186.6357	186.6357	4.8700e-003	4.7900e-003	188.1842
Total	**0.0674**	**0.0467**	**0.6357**	**1.8500e-003**	**0.2236**	**1.2600e-003**	**0.2248**	**0.0593**	**1.1600e-003**	**0.0605**		**186.6357**	**186.6357**	**4.8700e-003**	**4.7900e-003**	**188.1842**

Pedley Spreading Basins - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2023

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	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	6.5500e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0393**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

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	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
Worker	0.0505	0.0351	0.4768	1.3800e-003	0.1677	9.4000e-004	0.1686	0.0445	8.7000e-004	0.0453		139.9767	139.9767	3.6500e-003	3.5900e-003	141.1381
Total	**0.0505**	**0.0351**	**0.4768**	**1.3800e-003**	**0.1677**	**9.4000e-004**	**0.1686**	**0.0445**	**8.7000e-004**	**0.0453**		**139.9767**	**139.9767**	**3.6500e-003**	**3.5900e-003**	**141.1381**

Pedley Spreading Basins - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2023

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	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	6.5500e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0393**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

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	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
Worker	0.0505	0.0351	0.4768	1.3800e-003	0.1677	9.4000e-004	0.1686	0.0445	8.7000e-004	0.0453		139.9767	139.9767	3.6500e-003	3.5900e-003	141.1381
Total	**0.0505**	**0.0351**	**0.4768**	**1.3800e-003**	**0.1677**	**9.4000e-004**	**0.1686**	**0.0445**	**8.7000e-004**	**0.0453**		**139.9767**	**139.9767**	**3.6500e-003**	**3.5900e-003**	**141.1381**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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 Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.543401	0.061496	0.184986	0.128935	0.023820	0.006437	0.011961	0.008652	0.000812	0.000508	0.024540	0.000745	0.003706
Other Non-Asphalt Surfaces	0.543401	0.061496	0.184986	0.128935	0.023820	0.006437	0.011961	0.008652	0.000812	0.000508	0.024540	0.000745	0.003706

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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 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
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**

Mitigated

	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 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
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

Pedley Spreading Basins - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.3821	2.0000e-005	2.2800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.9000e-003	4.9000e-003	1.0000e-005		5.2200e-003
Unmitigated	0.3821	2.0000e-005	2.2800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.9000e-003	4.9000e-003	1.0000e-005		5.2200e-003

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	0.0664					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3155					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.1000e-004	2.0000e-005	2.2800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.9000e-003	4.9000e-003	1.0000e-005		5.2200e-003
Total	**0.3821**	**2.0000e-005**	**2.2800e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**4.9000e-003**	**4.9000e-003**	**1.0000e-005**		**5.2200e-003**

Pedley Spreading Basins - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0664					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3155					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.1000e-004	2.0000e-005	2.2800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.9000e-003	4.9000e-003	1.0000e-005		5.2200e-003
Total	**0.3821**	**2.0000e-005**	**2.2800e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**4.9000e-003**	**4.9000e-003**	**1.0000e-005**		**5.2200e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

CALEEMOD OUTPUT FILES - OPERATION

Pedley Spreading Basins - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Pedley Spreading Basins

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	2.00	1000sqft	0.05	2,000.00	0
Other Non-Asphalt Surfaces	20.40	Acre	20.40	888,624.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Size of basins, spreading area, and maximum area of pipeline to be improved; 2 ksf concrete emergency spillway

Construction Phase - Operational soil removal and grubbing

Off-road Equipment -

Trips and VMT -

On-road Fugitive Dust -

Grading -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Pedley Spreading Basins - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Area Coating -

Operational Off-Road Equipment - Wood chipper modeled as other construction equipment. Chainsaws modeled as industrial saws.
Sweepers for road clearing activities.
Off-highway truck modeled for vacuum truck needed for other operational activities, would occur semi-annually.
Assume two man team would operate one piece of each equipment.

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	35.00	10.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	12.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	12.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	2.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	12.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	12.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00

2.0 Emissions Summary

Pedley Spreading Basins - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					
2023	0.0169	0.1728	0.1435	3.2000e-004	0.0471	7.1300e-003	0.0542	0.0186	6.5600e-003	0.0251	0.0000	28.1261	28.1261	8.8400e-003	2.0000e-005	28.3537
Maximum	**0.0169**	**0.1728**	**0.1435**	**3.2000e-004**	**0.0471**	**7.1300e-003**	**0.0542**	**0.0186**	**6.5600e-003**	**0.0251**	**0.0000**	**28.1261**	**28.1261**	**8.8400e-003**	**2.0000e-005**	**28.3537**

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					
2023	0.0169	0.1728	0.1435	3.2000e-004	0.0471	7.1300e-003	0.0542	0.0186	6.5600e-003	0.0251	0.0000	28.1261	28.1261	8.8400e-003	2.0000e-005	28.3537
Maximum	**0.0169**	**0.1728**	**0.1435**	**3.2000e-004**	**0.0471**	**7.1300e-003**	**0.0542**	**0.0186**	**6.5600e-003**	**0.0251**	**0.0000**	**28.1261**	**28.1261**	**8.8400e-003**	**2.0000e-005**	**28.3537**

	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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.01**	**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**

Pedley Spreading Basins - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2023	8-31-2023	0.1897	0.1897
		Highest	0.1897	0.1897

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0700	0.0000	2.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.6000e-004	5.6000e-004	0.0000	0.0000	5.9000e-004
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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Offroad	5.9000e-003	0.0531	0.0673	1.1000e-004		2.6800e-003	2.6800e-003		2.5300e-003	2.5300e-003	0.0000	9.8686	9.8686	2.3100e-003	0.0000	9.9262
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	**0.0759**	**0.0531**	**0.0676**	**1.1000e-004**	**0.0000**	**2.6800e-003**	**2.6800e-003**	**0.0000**	**2.5300e-003**	**2.5300e-003**	**0.0000**	**9.8691**	**9.8691**	**2.3100e-003**	**0.0000**	**9.9268**

Pedley Spreading Basins - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.0700	0.0000	2.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.6000e-004	5.6000e-004	0.0000	0.0000	5.9000e-004
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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Offroad	5.9000e-003	0.0531	0.0673	1.1000e-004		2.6800e-003	2.6800e-003		2.5300e-003	2.5300e-003	0.0000	9.8686	9.8686	2.3100e-003	0.0000	9.9262
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	**0.0759**	**0.0531**	**0.0676**	**1.1000e-004**	**0.0000**	**2.6800e-003**	**2.6800e-003**	**0.0000**	**2.5300e-003**	**2.5300e-003**	**0.0000**	**9.8691**	**9.8691**	**2.3100e-003**	**0.0000**	**9.9268**

	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	N20	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	Soil Removal and Grubbing	Grading	6/1/2023	6/14/2023	5	10	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 30

Acres of Paving: 20.45

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Soil Removal and Grubbing	Excavators	2	8.00	158	0.38
Soil Removal and Grubbing	Graders	1	8.00	187	0.41
Soil Removal and Grubbing	Rubber Tired Dozers	1	8.00	247	0.40
Soil Removal and Grubbing	Scrapers	2	8.00	367	0.48
Soil Removal and Grubbing	Tractors/Loaders/Backhoes	2	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
Soil Removal and Grubbing	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Soil Removal and Grubbing - 2023

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					0.0460	0.0000	0.0460	0.0183	0.0000	0.0183	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0166	0.1726	0.1403	3.1000e-004		7.1200e-003	7.1200e-003		6.5500e-003	6.5500e-003	0.0000	27.2676	27.2676	8.8200e-003	0.0000	27.4881
Total	**0.0166**	**0.1726**	**0.1403**	**3.1000e-004**	**0.0460**	**7.1200e-003**	**0.0531**	**0.0183**	**6.5500e-003**	**0.0248**	**0.0000**	**27.2676**	**27.2676**	**8.8200e-003**	**0.0000**	**27.4881**

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	3.1000e-004	2.4000e-004	3.2600e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1000e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.8585	0.8585	2.0000e-005	2.0000e-005	0.8657
Total	**3.1000e-004**	**2.4000e-004**	**3.2600e-003**	**1.0000e-005**	**1.1000e-003**	**1.0000e-005**	**1.1000e-003**	**2.9000e-004**	**1.0000e-005**	**3.0000e-004**	**0.0000**	**0.8585**	**0.8585**	**2.0000e-005**	**2.0000e-005**	**0.8657**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Soil Removal and Grubbing - 2023

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					0.0460	0.0000	0.0460	0.0183	0.0000	0.0183	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0166	0.1726	0.1403	3.1000e-004		7.1200e-003	7.1200e-003		6.5500e-003	6.5500e-003	0.0000	27.2676	27.2676	8.8200e-003	0.0000	27.4880
Total	**0.0166**	**0.1726**	**0.1403**	**3.1000e-004**	**0.0460**	**7.1200e-003**	**0.0531**	**0.0183**	**6.5500e-003**	**0.0248**	**0.0000**	**27.2676**	**27.2676**	**8.8200e-003**	**0.0000**	**27.4880**

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	3.1000e-004	2.4000e-004	3.2600e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1000e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.8585	0.8585	2.0000e-005	2.0000e-005	0.8657
Total	**3.1000e-004**	**2.4000e-004**	**3.2600e-003**	**1.0000e-005**	**1.1000e-003**	**1.0000e-005**	**1.1000e-003**	**2.9000e-004**	**1.0000e-005**	**3.0000e-004**	**0.0000**	**0.8585**	**0.8585**	**2.0000e-005**	**2.0000e-005**	**0.8657**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
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	0.0000	0.0000	0.0000
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	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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 Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Pedley Spreading Basins - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.544109	0.060768	0.184625	0.129879	0.023845	0.006339	0.011719	0.008584	0.000815	0.000515	0.024285	0.000743	0.003774
Other Non-Asphalt Surfaces	0.544109	0.060768	0.184625	0.129879	0.023845	0.006339	0.011719	0.008584	0.000815	0.000515	0.024285	0.000743	0.003774

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	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	0.0000

Pedley Spreading Basins - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	tons/yr										MT/yr					
Other 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
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**

Mitigated

	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	tons/yr										MT/yr					
Other 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
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**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
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

Pedley Spreading Basins - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0700	0.0000	2.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.6000e-004	5.6000e-004	0.0000	0.0000	5.9000e-004
Unmitigated	0.0700	0.0000	2.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.6000e-004	5.6000e-004	0.0000	0.0000	5.9000e-004

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	0.0124					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0576					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	2.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.6000e-004	5.6000e-004	0.0000	0.0000	5.9000e-004
Total	**0.0700**	**0.0000**	**2.9000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**5.6000e-004**	**5.6000e-004**	**0.0000**	**0.0000**	**5.9000e-004**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0124					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0576					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	2.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.6000e-004	5.6000e-004	0.0000	0.0000	5.9000e-004
Total	**0.0700**	**0.0000**	**2.9000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**5.6000e-004**	**5.6000e-004**	**0.0000**	**0.0000**	**5.9000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

Pedley Spreading Basins - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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 Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
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 Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Aerial Lifts	1	8.00	12	63	0.31	Diesel
Concrete/Industrial Saws	1	8.00	12	81	0.73	Diesel
Off-Highway Trucks	1	8.00	2	402	0.38	Diesel
Other Construction Equipment	1	8.00	12	172	0.42	Diesel
Sweepers/Scrubbers	1	8.00	12	64	0.46	Diesel

UnMitigated/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
Equipment Type	tons/yr										MT/yr					
Aerial Lifts	2.1000e-004	3.2000e-003	6.5500e-003	1.0000e-005		6.0000e-005	6.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.8852	0.8852	2.9000e-004	0.0000	0.8923
Concrete/Industrial Saws	2.0000e-003	0.0155	0.0219	4.0000e-005		7.7000e-004	7.7000e-004		7.7000e-004	7.7000e-004	0.0000	3.2259	3.2259	1.6000e-004	0.0000	3.2299
Off-Highway Trucks	5.0000e-004	3.5700e-003	3.2900e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.2000e-004	1.2000e-004	0.0000	1.1611	1.1611	3.8000e-004	0.0000	1.1705
Other Construction Equipment	2.0900e-003	0.0206	0.0240	4.0000e-005		1.0700e-003	1.0700e-003		9.9000e-004	9.9000e-004	0.0000	3.2564	3.2564	1.0500e-003	0.0000	3.2827
Sweepers/Scrubbers	1.0900e-003	0.0102	0.0115	2.0000e-005		6.5000e-004	6.5000e-004		6.0000e-004	6.0000e-004	0.0000	1.3400	1.3400	4.3000e-004	0.0000	1.3508
Total	**5.8900e-003**	**0.0532**	**0.0673**	**1.2000e-004**		**2.6800e-003**	**2.6800e-003**		**2.5300e-003**	**2.5300e-003**	**0.0000**	**9.8686**	**9.8686**	**2.3100e-003**	**0.0000**	**9.9262**

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Pedley Spreading Basins - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Pedley Spreading Basins

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	2.00	1000sqft	0.05	2,000.00	0
Other Non-Asphalt Surfaces	20.40	Acre	20.40	888,624.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Size of basins, spreading area, and maximum area of pipeline to be improved; 2 ksf concrete emergency spillway

Construction Phase - Operational soil removal and grubbing

Off-road Equipment -

Trips and VMT -

On-road Fugitive Dust -

Grading -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Pedley Spreading Basins - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Area Coating -

Operational Off-Road Equipment - Wood chipper modeled as other construction equipment. Chainsaws modeled as industrial saws.
Sweepers for road clearing activities.
Off-highway truck modeled for vacuum truck needed for other operational activities, would occur semi-annually.
Assume two man team would operate one piece of each equipment.

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	35.00	10.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	12.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	12.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	2.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	12.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	12.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00

2.0 Emissions Summary

Pedley Spreading Basins - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					
2023	3.3850	34.5582	28.7485	0.0641	9.4271	1.4258	10.8529	3.7130	1.3117	5.0247	0.0000	6,209.1280	6,209.1280	1.9490	4.5000e-003	6,259.1962
Maximum	**3.3850**	**34.5582**	**28.7485**	**0.0641**	**9.4271**	**1.4258**	**10.8529**	**3.7130**	**1.3117**	**5.0247**	**0.0000**	**6,209.1280**	**6,209.1280**	**1.9490**	**4.5000e-003**	**6,259.1962**

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					
2023	3.3850	34.5582	28.7485	0.0641	9.4271	1.4258	10.8529	3.7130	1.3117	5.0247	0.0000	6,209.1280	6,209.1280	1.9490	4.5000e-003	6,259.1962
Maximum	**3.3850**	**34.5582**	**28.7485**	**0.0641**	**9.4271**	**1.4258**	**10.8529**	**3.7130**	**1.3117**	**5.0247**	**0.0000**	**6,209.1280**	**6,209.1280**	**1.9490**	**4.5000e-003**	**6,259.1962**

	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	N20	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**

Pedley Spreading Basins - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.3835	2.0000e-005	2.2900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.9000e-003	4.9000e-003	1.0000e-005		5.2200e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Offroad	1.4027	11.8290	13.9590	0.0299		0.5543	0.5543		0.5202	0.5202	0.0000	2,879.6121	2,879.6121	0.7689		2,898.8332
Total	**1.7862**	**11.8291**	**13.9613**	**0.0299**	**0.0000**	**0.5543**	**0.5543**	**0.0000**	**0.5202**	**0.5202**	**0.0000**	**2,879.6170**	**2,879.6170**	**0.7689**	**0.0000**	**2,898.8385**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	lb/day										lb/day					
Area	0.3835	2.0000e-005	2.2900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.9000e-003	4.9000e-003	1.0000e-005		5.2200e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Offroad	1.4027	11.8290	13.9590	0.0299		0.5543	0.5543		0.5202	0.5202	0.0000	2,879.6121	2,879.6121	0.7689		2,898.8332
Total	**1.7862**	**11.8291**	**13.9613**	**0.0299**	**0.0000**	**0.5543**	**0.5543**	**0.0000**	**0.5202**	**0.5202**	**0.0000**	**2,879.6170**	**2,879.6170**	**0.7689**	**0.0000**	**2,898.8385**

	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	N20	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	Soil Removal and Grubbing	Grading	6/1/2023	6/14/2023	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 30

Pedley Spreading Basins - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Acres of Paving: 20.45

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Soil Removal and Grubbing	Excavators	2	8.00	158	0.38
Soil Removal and Grubbing	Graders	1	8.00	187	0.41
Soil Removal and Grubbing	Rubber Tired Dozers	1	8.00	247	0.40
Soil Removal and Grubbing	Scrapers	2	8.00	367	0.48
Soil Removal and Grubbing	Tractors/Loaders/Backhoes	2	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
Soil Removal and Grubbing	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Pedley Spreading Basins - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Soil Removal and Grubbing - 2023

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					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.2036**	**1.4245**	**10.6281**	**3.6538**	**1.3105**	**4.9643**		**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

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	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
Worker	0.0633	0.0426	0.6974	1.9600e-003	0.2236	1.2600e-003	0.2248	0.0593	1.1600e-003	0.0605		197.6503	197.6503	4.7900e-003	4.5000e-003	199.1127
Total	**0.0633**	**0.0426**	**0.6974**	**1.9600e-003**	**0.2236**	**1.2600e-003**	**0.2248**	**0.0593**	**1.1600e-003**	**0.0605**		**197.6503**	**197.6503**	**4.7900e-003**	**4.5000e-003**	**199.1127**

Pedley Spreading Basins - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Soil Removal and Grubbing - 2023

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					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.2036**	**1.4245**	**10.6281**	**3.6538**	**1.3105**	**4.9643**	**0.0000**	**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

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	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
Worker	0.0633	0.0426	0.6974	1.9600e-003	0.2236	1.2600e-003	0.2248	0.0593	1.1600e-003	0.0605		197.6503	197.6503	4.7900e-003	4.5000e-003	199.1127
Total	**0.0633**	**0.0426**	**0.6974**	**1.9600e-003**	**0.2236**	**1.2600e-003**	**0.2248**	**0.0593**	**1.1600e-003**	**0.0605**		**197.6503**	**197.6503**	**4.7900e-003**	**4.5000e-003**	**199.1127**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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 Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Pedley Spreading Basins - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.544109	0.060768	0.184625	0.129879	0.023845	0.006339	0.011719	0.008584	0.000815	0.000515	0.024285	0.000743	0.003774
Other Non-Asphalt Surfaces	0.544109	0.060768	0.184625	0.129879	0.023845	0.006339	0.011719	0.008584	0.000815	0.000515	0.024285	0.000743	0.003774

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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 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
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**

Mitigated

	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 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
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

Pedley Spreading Basins - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.3835	2.0000e-005	2.2900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.9000e-003	4.9000e-003	1.0000e-005		5.2200e-003
Unmitigated	0.3835	2.0000e-005	2.2900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.9000e-003	4.9000e-003	1.0000e-005		5.2200e-003

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	0.0679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3155					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.1000e-004	2.0000e-005	2.2900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.9000e-003	4.9000e-003	1.0000e-005		5.2200e-003
Total	**0.3835**	**2.0000e-005**	**2.2900e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**4.9000e-003**	**4.9000e-003**	**1.0000e-005**		**5.2200e-003**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3155					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.1000e-004	2.0000e-005	2.2900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.9000e-003	4.9000e-003	1.0000e-005		5.2200e-003
Total	**0.3835**	**2.0000e-005**	**2.2900e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**4.9000e-003**	**4.9000e-003**	**1.0000e-005**		**5.2200e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Aerial Lifts	1	8.00	12	63	0.31	Diesel
Concrete/Industrial Saws	1	8.00	12	81	0.73	Diesel
Off-Highway Trucks	1	8.00	2	402	0.38	Diesel

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Other Construction Equipment	1	8.00	12	172	0.42	Diesel
Sweepers/Scrubbers	1	8.00	12	64	0.46	Diesel

UnMitigated/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
Equipment Type	lb/day										lb/day					
Aerial Lifts	0.0346	0.5332	1.0920	1.6800e-003		9.2100e-003	9.2100e-003		8.4700e-003	8.4700e-003	0.0000	162.6199	162.6199	0.0526		163.9347
Concrete/Industrial Saws	0.3337	2.5842	3.6574	6.2600e-003		0.1283	0.1283		0.1283	0.1283	0.0000	592.6657	592.6657	0.0292		593.3957
Off-Highway Trucks	0.5039	3.5679	3.2885	0.0132		0.1290	0.1290		0.1187	0.1187	0.0000	1,279.8885	1,279.8885	0.4139		1,290.2371
Other Construction Equipment	0.3484	3.4378	4.0026	6.1800e-003		0.1790	0.1790		0.1647	0.1647	0.0000	598.2617	598.2617	0.1935		603.0989
Sweepers/Scrubbers	0.1820	1.7059	1.9186	2.5400e-003		0.1088	0.1088		0.1001	0.1001	0.0000	246.1764	246.1764	0.0796		248.1669
Total	**1.4027**	**11.8290**	**13.9590**	**0.0299**		**0.5543**	**0.5543**		**0.5202**	**0.5202**	**0.0000**	**2,879.6121**	**2,879.6121**	**0.7688**		**2,898.8332**

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Equipment Type	Number

11.0 Vegetation

Pedley Spreading Basins - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Pedley Spreading Basins

South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	2.00	1000sqft	0.05	2,000.00	0
Other Non-Asphalt Surfaces	20.40	Acre	20.40	888,624.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Size of basins, spreading area, and maximum area of pipeline to be improved; 2 ksf concrete emergency spillway

Construction Phase - Operational soil removal and grubbing

Off-road Equipment -

Trips and VMT -

On-road Fugitive Dust -

Grading -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Pedley Spreading Basins - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Area Coating -

Operational Off-Road Equipment - Wood chipper modeled as other construction equipment. Chainsaws modeled as industrial saws.
Sweepers for road clearing activities.
Off-highway truck modeled for vacuum truck needed for other operational activities, would occur semi-annually.
Assume two man team would operate one piece of each equipment.

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	35.00	10.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	12.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	12.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	2.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	12.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	12.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00

2.0 Emissions Summary

Pedley Spreading Basins - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					
2023	3.3891	34.5623	28.6869	0.0639	9.4271	1.4258	10.8529	3.7130	1.3117	5.0247	0.0000	6,198.1134	6,198.1134	1.9491	4.7900e-003	6,248.2678
Maximum	**3.3891**	**34.5623**	**28.6869**	**0.0639**	**9.4271**	**1.4258**	**10.8529**	**3.7130**	**1.3117**	**5.0247**	**0.0000**	**6,198.1134**	**6,198.1134**	**1.9491**	**4.7900e-003**	**6,248.2678**

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					
2023	3.3891	34.5623	28.6869	0.0639	9.4271	1.4258	10.8529	3.7130	1.3117	5.0247	0.0000	6,198.1134	6,198.1134	1.9491	4.7900e-003	6,248.2677
Maximum	**3.3891**	**34.5623**	**28.6869**	**0.0639**	**9.4271**	**1.4258**	**10.8529**	**3.7130**	**1.3117**	**5.0247**	**0.0000**	**6,198.1134**	**6,198.1134**	**1.9491**	**4.7900e-003**	**6,248.2677**

	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	N20	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**

Pedley Spreading Basins - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.3835	2.0000e-005	2.2900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.9000e-003	4.9000e-003	1.0000e-005		5.2200e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Offroad	1.4027	11.8290	13.9590	0.0299		0.5543	0.5543		0.5202	0.5202	0.0000	2,879.6121	2,879.6121	0.7689		2,898.8332
Total	**1.7862**	**11.8291**	**13.9613**	**0.0299**	**0.0000**	**0.5543**	**0.5543**	**0.0000**	**0.5202**	**0.5202**	**0.0000**	**2,879.6170**	**2,879.6170**	**0.7689**	**0.0000**	**2,898.8385**

Pedley Spreading Basins - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	lb/day										lb/day					
Area	0.3835	2.0000e-005	2.2900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.9000e-003	4.9000e-003	1.0000e-005		5.2200e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Offroad	1.4027	11.8290	13.9590	0.0299		0.5543	0.5543		0.5202	0.5202	0.0000	2,879.6121	2,879.6121	0.7689		2,898.8332
Total	**1.7862**	**11.8291**	**13.9613**	**0.0299**	**0.0000**	**0.5543**	**0.5543**	**0.0000**	**0.5202**	**0.5202**	**0.0000**	**2,879.6170**	**2,879.6170**	**0.7689**	**0.0000**	**2,898.8385**

	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	N20	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	Soil Removal and Grubbing	Grading	6/1/2023	6/14/2023	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 30

Pedley Spreading Basins - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Acres of Paving: 20.45

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Soil Removal and Grubbing	Excavators	2	8.00	158	0.38
Soil Removal and Grubbing	Graders	1	8.00	187	0.41
Soil Removal and Grubbing	Rubber Tired Dozers	1	8.00	247	0.40
Soil Removal and Grubbing	Scrapers	2	8.00	367	0.48
Soil Removal and Grubbing	Tractors/Loaders/Backhoes	2	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
Soil Removal and Grubbing	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Pedley Spreading Basins - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Soil Removal and Grubbing - 2023

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					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.2036**	**1.4245**	**10.6281**	**3.6538**	**1.3105**	**4.9643**		**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

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	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
Worker	0.0674	0.0467	0.6357	1.8500e-003	0.2236	1.2600e-003	0.2248	0.0593	1.1600e-003	0.0605		186.6357	186.6357	4.8700e-003	4.7900e-003	188.1842
Total	**0.0674**	**0.0467**	**0.6357**	**1.8500e-003**	**0.2236**	**1.2600e-003**	**0.2248**	**0.0593**	**1.1600e-003**	**0.0605**		**186.6357**	**186.6357**	**4.8700e-003**	**4.7900e-003**	**188.1842**

Pedley Spreading Basins - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Soil Removal and Grubbing - 2023

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					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.2036**	**1.4245**	**10.6281**	**3.6538**	**1.3105**	**4.9643**	**0.0000**	**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

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	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
Worker	0.0674	0.0467	0.6357	1.8500e-003	0.2236	1.2600e-003	0.2248	0.0593	1.1600e-003	0.0605		186.6357	186.6357	4.8700e-003	4.7900e-003	188.1842
Total	**0.0674**	**0.0467**	**0.6357**	**1.8500e-003**	**0.2236**	**1.2600e-003**	**0.2248**	**0.0593**	**1.1600e-003**	**0.0605**		**186.6357**	**186.6357**	**4.8700e-003**	**4.7900e-003**	**188.1842**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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 Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.544109	0.060768	0.184625	0.129879	0.023845	0.006339	0.011719	0.008584	0.000815	0.000515	0.024285	0.000743	0.003774
Other Non-Asphalt Surfaces	0.544109	0.060768	0.184625	0.129879	0.023845	0.006339	0.011719	0.008584	0.000815	0.000515	0.024285	0.000743	0.003774

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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 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
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**

Mitigated

	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 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
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

Pedley Spreading Basins - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.3835	2.0000e-005	2.2900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.9000e-003	4.9000e-003	1.0000e-005		5.2200e-003
Unmitigated	0.3835	2.0000e-005	2.2900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.9000e-003	4.9000e-003	1.0000e-005		5.2200e-003

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	0.0679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3155					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.1000e-004	2.0000e-005	2.2900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.9000e-003	4.9000e-003	1.0000e-005		5.2200e-003
Total	**0.3835**	**2.0000e-005**	**2.2900e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**4.9000e-003**	**4.9000e-003**	**1.0000e-005**		**5.2200e-003**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3155					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.1000e-004	2.0000e-005	2.2900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.9000e-003	4.9000e-003	1.0000e-005		5.2200e-003
Total	**0.3835**	**2.0000e-005**	**2.2900e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**4.9000e-003**	**4.9000e-003**	**1.0000e-005**		**5.2200e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Aerial Lifts	1	8.00	12	63	0.31	Diesel
Concrete/Industrial Saws	1	8.00	12	81	0.73	Diesel
Off-Highway Trucks	1	8.00	2	402	0.38	Diesel

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Other Construction Equipment	1	8.00	12	172	0.42	Diesel
Sweepers/Scrubbers	1	8.00	12	64	0.46	Diesel

UnMitigated/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
Equipment Type	lb/day										lb/day					
Aerial Lifts	0.0346	0.5332	1.0920	1.6800e-003		9.2100e-003	9.2100e-003		8.4700e-003	8.4700e-003	0.0000	162.6199	162.6199	0.0526		163.9347
Concrete/Industrial Saws	0.3337	2.5842	3.6574	6.2600e-003		0.1283	0.1283		0.1283	0.1283	0.0000	592.6657	592.6657	0.0292		593.3957
Off-Highway Trucks	0.5039	3.5679	3.2885	0.0132		0.1290	0.1290		0.1187	0.1187	0.0000	1,279.8885	1,279.8885	0.4139		1,290.2371
Other Construction Equipment	0.3484	3.4378	4.0026	6.1800e-003		0.1790	0.1790		0.1647	0.1647	0.0000	598.2617	598.2617	0.1935		603.0989
Sweepers/Scrubbers	0.1820	1.7059	1.9186	2.5400e-003		0.1088	0.1088		0.1001	0.1001	0.0000	246.1764	246.1764	0.0796		248.1669
Total	**1.4027**	**11.8290**	**13.9590**	**0.0299**		**0.5543**	**0.5543**		**0.5202**	**0.5202**	**0.0000**	**2,879.6121**	**2,879.6121**	**0.7688**		**2,898.8332**

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Pedley Spreading Basins - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Equipment Type	Number

11.0 Vegetation

EMFAC2021 OUTPUT AND MOBILE SOURCE EMISSION CALCULATIONS

Source: EMFAC2021 (v1.0.2) Emission Rates
Region Type: Air District
Region: South Coast AQMD
Calendar Year: 2023
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/dav for CVMT and EVMT. trios/dav for Trios. e/mile for RUNEX. PMBW and PMTW. e/trio for STREX. HOTSOAK and RUNLOSS. e/vehicle/dav for IDLEX and DIURN. PHEV calculated based on total VMT.

Region	Calenda	Vehicle Ca	Model Year	Speed	Fuel	Population	Total VMT	Percentage	CVMT	NOx RUNEX	NOx IDLEX	NOx STREX	PM2.5 RUNEX	PM2.5 IDLE	PM2.5 STR	PM2.5 PMTW	PM2.5 PMI	PM10 RUN	PM10 IDLE	PM10 STRE	PM10 PMT	PM10 PMB	CO2 RUNEX	CO2 IDLEX	CO2 STREX
South Coast AQM	2023	LDA	Aggregate	Aggregate	Gasoline	5515653.532	2.21E+08	0.922528605	221235120.5	0.045660663	0	0.253832271	0.001379172	0	0.002008	0.002000001	0.002921	0.0015	0	0.002184	0.008	0.008347	291.3840658	0	70.82935702
South Coast AQM	2023	LDA	Aggregate	Aggregate	Diesel	16111.17729	499312.2	0.002082083	499312.1869	0.231787551	0	0	0.024474232	0	0	0.002000001	0.002949	0.025581	0	0	0.008	0.008424	248.8742612	0	0
South Coast AQM	2023	LDA	Aggregate	Aggregate	Electricity	246800.9377	11426023	0.047645388	0	0	0	0	0	0	0	0.002000001	0.001528	0	0	0	0.008	0.004367	0	0	0
South Coast AQM	2023	LDA	Aggregate	Aggregate	Plug-in Hybric	140112.2438	6653377	0.027743924	3358942.142	0.003369354	0	0.111280174	0.000719902	0	0.002097	0.002000001	0.001417	0.000783	0	0.002281	0.008	0.004047	148.7558906	0	65.53119402
							2.4E+08																		

CH4_RUNEX	CH4_IDLEX	CH4_STREX	N2O_RUNEX	N2O_IDLEX	N2O_STREX	ROG_RUNEX	ROG_IDLEX	ROG_STREX	ROG_HOTSA	ROG_RUNLS	ROG_DIURN	TOG_RUNEX	TOG_IDLEX	TOG_STREX	TOG_HOTSA	TOG_RUNLS	TOG_DIURN	NH3_RUNEX	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNEX	SOx_IDLEX	SOx_STREX
0.002936199	0	0.071256	0.004935	0	0.032904	0.01134	0	0.324578	0.09453	0.233305	1.534223	0.016542	0	0.355371	0.09453	0.233305	1.534223	0.034028	0.842358	0	3.128847	0.002881	0	0.0007
0.001859976	0	0	0.03921	0	0	0.040044	0	0	0	0	0	0.045588	0	0	0	0	0	0.0031	0.414482	0	0	0.002358	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.000516534	0	0.040425	0.000624	0	0.020576	0.001613	0	0.162255	0.041061	0.03568	0.485305	0.002354	0	0.177649	0.041061	0.03568	0.485305	0.019558	0.242445	0	1.234164	0.001471	0	0.000648

Daily

Fuel	Daily Max Trips	Miles per Trips*	Total Miles per Day	ROG_RunEx	ROG_Idlex	Total ROG	NOx Runex	Nox Idlex	Total Nox	Sox Runex	Sox Idlex	Total Sox	CO Runex	CO Idlex	CO TOTAL	PM10 Runex	PM10 Idlex	PM10 Tire Wear	PM10 Brake Wear	Total PM10	PM2.5 Runex	PM2.5 Idlex	PM2.5 Tire Wear	PM2.5 Brake Wear	Total PM2.5
Gasoline	11.0703433	16.6	183.767698	42.8739496	0	42.8739496	8.39095498	0	8.39095498	0.5293664	0	0.5293664	154.79824	0	154.79824	0.275644	0	1.47014201	0.35785487	2.10364087	0.2534472	0	0.3675355	0.1252492	0.7462319
Diesel	0.02498499	16.6	0.41475084	0	0	0	0.09613408	0	0.09613408	0.00097807	0	0.00097807	0.1719069	0	0.1719069	0.01060968	0	0.00331801	0	0.01392769	0.01015071	0	0.0008295	0	0.01098021
Electricity	0.57174466	16.6	9.49096134	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.07592771	0	0.07592771	0	0	0.01898193	0	0.01898193
Plug-in Hybric	0.33292709	16.6	5.52658976	0.19718824	0	0.19718824	0.01862104	0	0.01862104	0.00812742	0	0.00812742	1.33989485	0	1.33989485	0.00432709	0	0.04421273	0.0007981	0.04933792	0.0039786	0	0.01105318	0.0002793	0.01531112
*mileage pulled from CalEEMod, assumes commercial to work					grams/day	43.0711378			8.5057101			0.53847189			156.310042					2.24283419					0.79150516
distance for SCAQMD					lbs/day	0.0947565			0.01871256			0.00118464			0.34388209					0.00493424					0.00174131

LST ACRES GRADED PER DAY CALCULATIONS

Acres of Grading per Day (Construction and Operation [Grubbing and Soil Removal])

Equipment Type	Acres/8hr-day
Crawler Tractors	0.5
Graders	0.5
Rubber Tired Dozers	0.5
Scrapers	1

Grading Equipment	#	Acres/8hr-day/piece of equipment	Total by equipment type	
Excavators	2	0	0	
Graders	1	0.5	0.5	
Rubber Tired Dozers	1	0.5	0.5	
Scrapers	2	1	2	
Tractors/Loaders/Backhoes	2	0.5	1	
			4	**acres graded per day**

Source: http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf?sfvrsn=2

Source: EMFAC2021 (v1.0.2) Emission Rates
GHG Employee Mobile-Source Emissions
Region Type: Air District
Region: South Coast AQMD
Calendar Year: 2023
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN. PHEV calculated based on total VMT.

Region	Calendar Ye	Vehicle Cate	Model Year	Speed	Fuel	Population	Total VMT	Percentage	CVMT	CO2_RUNEX	CO2_IDLEX	CO2_STREX	CH4_RUNEX	CH4_IDLEX	CH4_STREX	N2O_RUNEX	N2O_IDLEX	N2O_STREX
South Coast	2023	LDA	Aggregate	Aggregate	Gasoline	5515653.532	221235120.5	0.922528605	221235120.5	291.3840658	0	70.82935702	0.002936199	0	0.0712556	0.0049349	0	0.0329038
South Coast	2023	LDA	Aggregate	Aggregate	Diesel	16111.17729	499312.1869	0.002082083	499312.1869	248.8742612	0	0	0.001859976	0	0	0.0392102	0	0
South Coast	2023	LDA	Aggregate	Aggregate	Electricity	246800.9377	11426023.17	0.047645388	0	0	0	0	0	0	0	0	0	0
South Coast	2023	LDA	Aggregate	Aggregate	Plug-in Hybrid	140112.2438	6653376.867	0.027743924	3358942.142	148.7558906	0	65.53119402	0.000516534	0	0.040425	0.0006235	0	0.0205759
							239813832.7											

Annual

Fuel	Annual Trips	Miles per Trips*	Total Miles per Year	CO2_RunEx	CO2_Idlex	Total CO2	CH4_RunEx	CH4_Idlex	Total CH4	N2O_RunEx	N2O_Idlex	Total N2O	CO2e TOTAL	
Gasoline	95.94	16.6	1592.6534	464073.8181	0	464073.8181	4.676347576	0	4.676347576	7.859556852	0	7.859556852	**466532.8748**	
Diesel	0.22	16.6	3.5945072	894.580335	0	894.580335	0.006685697	0	0.006685697	0.140941496	0	0.140941496	**936.7480433**	
Electricity	4.96	16.6	82.254998	0	0	0	0	0	0	0	0	0	**0**	
Plug-in Hybr	2.89	16.6	47.897111	7124.977441	0	7124.977441	0.024740469	0	0.024740469	0.029864203	0	0.029864203	**7134.495485**	
					CO2 grams/year	472093.3759		CH4 grams/yr	4.707773743		N2O grams/yr	8.03036255	**474604.1183**	***CO2e total (grams/year)***
					CO2 MT/year	0.472093376		CH4 MT/yr	4.70777E-06		N2O MT/yr	8.03036E-06	***0.474604118***	***CO2e (MT/year)***

*mileage pulled from CalEEMod, assumes commercial to work distance for SCAQMD
**GWP CH4= 25 and N2O = 298, see: https://unfccc.int/process-and-meetings/transparency-and-reporting/greenhouse-gas-data/frequently-asked-questions/global-warming-potentials-ipcc-fourth-assessment-report

Annual Trip Estimations
48 annual trips for tree trimming (2 employees, 12 days per year)
48 annual trips for road clearing (2 employees, 12 days per year)
8 annual trips for other maintainenance (semi-annually, assume 2 employees)
104 total employee trips per year

CEQA Initial Study

Appendix B

Biological Resources Technical Report

Pedley Spreading Grounds Pond Enhancements

BIOLOGICAL RESOURCES TECHNICAL REPORT

Pedley Spreading Grounds Pond Enhancements

October 19, 2022

Prepared for:
City of Pomona, Water Resources Department
148 N Huntington Street
Pomona, CA 91768

Prepared by:
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The conclusions in the Report titled Biological Resources Technical Report are Stantec's professional opinion, as of the time of the Report, and concerning the scope described in the Report. The opinions in the document are based on conditions and information existing at the time the scope of work was conducted and do not take into account any subsequent changes. The Report relates solely to the specific project for which Stantec was retained and the stated purpose for which the Report was prepared. The Report is not to be used or relied on for any variation or extension of the project, or for any other project or purpose, and any unauthorized use or reliance is at the recipient's own risk.

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Prepared by: Ashleigh Townsend

Signature

Ashleigh Townsend, Project Biologist

Printed Name

Reviewed by: Melissa Tu

Signature

Melissa Tu, Senior Biologist

Printed Name

Reviewed/Approved by:

Signature

Jared Varonin, Principal Biologist/Ecosystems Technical Resource Group Leader

Printed Name

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LIST OF APPENDICES

Acronyms / Abbreviations

°	Degrees
BGEPA	Bald and Golden Eagle Protection Act
BRTR	Biological Resources Technical Report
BSA	Biological Study Area
CCH	Consortium of California Herbaria
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
CWA	Clean Water Act
DCH	Designated Critical Habitat
F	Fahrenheit
FESA	Federal Endangered Species Act
FGC	Fish and Game Code
iPaC	Information for Planning and Consultation
LID	Low Impact Development
LSAA	Lake or Streambed Alteration Agreement
MBTA	Migratory Bird Treaty Act
MCVII	second edition of A Manual of California Vegetation
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NPPA	Native Plant Protection Act
Project	Pedley Spreading Grounds Enhancement Project
PSG	Pedley Spreading Grounds
RHA	Rivers and Harbors Act
RWQCB	Regional Water Quality Control Boards
SCWP	Safe Clean Water Program
SEA	Significant Ecological Area
SSC	Species of Special Concern
Stantec	Stantec Consulting Services Inc.
U.S.	United States
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service

USGS	United States Geological Survey
USNVC	U. S. National Vegetation Classification
WOTUS	waters of the United States

1 Introduction

This Biological Resources Technical Report (BRTR) is intended to document the biological resources that are associated with the Pedley Spreading Grounds (PSG) Pond Enhancements Project (Project) located in Claremont, California (refer to Appendix A, Figure 1). The surveys conducted and discussions presented within this BRTR are intended to support planning and regulatory agency permitting and associated documentation.

A reconnaissance-level survey was conducted on May 2, 2022, by Stantec Consulting Services Inc. (Stantec) Biologist Ashleigh Townsend within accessible portions of the Project site in addition to a surrounding 300-foot buffer area. This approximately 87-acre area is defined as the Biological Study Area (BSA). The BRTR describes the existing environmental conditions that occur within the BSA and surrounding areas and evaluates the potential for biological resources to occur based on those conditions with an emphasis on special-status plant and wildlife species, wildlife corridors, and special-status/sensitive natural communities.

1.1 Project Location

The Project is located in the City of Claremont, in Los Angeles County, California. The Project site is in Sections 3 and 34; Township 1 South and Township 1 North; Range 8 West; San Bernadino Meridian; within the United States (U.S.) Geological Survey (USGS) Ontario 7.5-minute topographic quadrangle. The Project limits are Interstate 210 to the north, Claremont College to the south, Chaparral Elementary School to the east, and California Botanic Garden to the west. In general, the Project site is characterized as industrial within an urban area. Land use to the north is comprised of residential housing and Interstate 210, while uses to the south include residential, private university property, and State Route 66. Land uses to the east include residential, while to the west is private Claremont College property.

1.2 Project Description

The Project site is an existing stormwater spreading facility located in the City of Claremont but owned and operated by the City of Pomona. The Project was originally conceived in 2010 primarily to enhance groundwater recharge through capture of urban runoff. In 2020, Stantec, in partnership with the City of Pomona and the East San Gabriel Valley Watershed Management Group, submitted the PSG enhancement project to the Safe Clean Water Program (SCWP) for funding consideration. This Project proposes to divert local urban runoff and deepen the basins at the PSG to increase their capacity to handle the additional flows from surrounding storm drain lines. The SCWP's Upper San Gabriel River Watershed Area Steering Committee selected to award the Project funding for planning, design, and construction in fiscal year 2020-2021.

This Project proposes to capture, treat, and infiltrate local urban runoff into the existing spreading grounds by enhancing the stormwater recharge for added water supply and decrease impact of non-point source pollutants in consistency with the SCWP goals. The objectives of the Project are:

- Decrease impact of non-point source pollutants discharged into local water bodies.
- Optimize stormwater management and conveyance.
- Prepare for more extreme and frequent drought conditions by capturing and recharging groundwater.
- Provide community education and awareness as it relates to the SCWP and Pedley Spreading Grounds Project beneficial use.

The existing PSG consists of three stormwater spreading basins (total of approximately 4 ponded acres). The existing facilities receive stormwater flows from the neighborhood to the north through 42-inch and 18-inch storm drains, as well as from the adjacent Pedley Filtration Plant.

The Project would enhance groundwater recharge to the Six Basins groundwater basins through capture of urban runoff. The Six Basins are a group of adjacent groundwater basins, located just south of the San Gabriel Mountains in eastern Los Angeles and western San Bernardino Counties. The existing spreading basins will be regraded to increase their capacity by 2.66 acre-feet and drivable berms will be re-established between the basins. To convey flows to the deepened basins, the Project includes improving an existing 30-inch storm drain by removing the slide gate at a junction structure on Baseline Road at Mills Avenue, removing the plug material at the upstream opening of the pipe, and adding a vault along the 30-inch storm drain between the junction structure and the Interstate 210 overpass. The vault would include a transition pipe, motorized gate, and digitized Supervisory Control and Data Acquisition controls. The Project also includes new park and educational facilities (bioswale, plantings, educational signage, and trash receptacle) to be installed at Chaparral Park (located northeast of the PSG).

2 Methodologies

This biological resources assessment of the BSA includes but was not limited to a literature review, reconnaissance-level, non-protocol survey to detect the presence of special-status plant and wildlife species, and a non-protocol avian survey to document the presence of birds, including listed species, if present. Prior to the survey, a preliminary literature review of readily available resources was performed. The surveys were conducted where accessible, based on terrain and availability of public access.

2.1 Literature Review

A focused literature search of the BSA was conducted prior to the field survey. The BSA is located within the USGS Ontario, California, 7.5-minute topographic quadrangle. A search of the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) was conducted for the BSA and a surrounding ten-mile buffer area to determine special-status plants, wildlife, and vegetation communities that have been documented within this area (CDFW 2022a). The database included portions of the following quadrangles surrounding the BSA:

- Guasti
- Prado Dam
- Mt. Baldy
- Corona North
- Glendora
- Cucamonga Peak
- San Dimas
- Yorba Linda

Additional data regarding the potential occurrence of special-status species and policies relating to these special-status natural resources were gathered from the following sources:

- State and Federally Listed Endangered, Threatened, and Rare Plants of California (CDFW 2022b)
- State and Federally Listed Endangered and Threatened Animals of California (CDFW 2022c)
- Special Animals List (CDFW 2022d)
- California's Wildlife – Life History and Range (CDFW 2022e)
- California Sensitive Natural Communities (CDFW 2022f)
- U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (iPaC) (USFWS 2022a)
- Inventory of Rare and Endangered Vascular Plants of California (CNPS 2022)
- Consortium of California Herbaria (CCH) (CCH 2022)

2.2 Biological Survey and Habitat Assessment

2.2.1 SITE RECONNAISSANCE AND WILDLIFE SURVEYS

Stantec conducted a habitat assessment and reconnaissance-level survey to document the environmental conditions present within the BSA on May 2, 2022. The primary goal of the survey was to identify and assess habitat that may be capable of supporting special-status plant or wildlife species and determine the potential need for additional focused surveys for special-status resources. Biologists recorded all plant and wildlife observations.

The survey was conducted during a season and time of day when resident and migratory birds would be expected to be present and exhibiting normal activity, small mammals would be active and detectable visually or by sign, and above-ground amphibian and reptile movement would generally be detectable. However, it should be noted that some wildlife species and individuals may have been difficult to detect due to their elusive nature, cryptic morphology, or nocturnal behavior. The survey was conducted during daylight hours when temperatures were such that reptiles and other wildlife would be active (i.e., between 65-95 degrees [°] Fahrenheit [F]). Additional focused surveys were conducted and described in the following sections.

The BSA was investigated on foot (where accessible) by an experienced field Biologist walking throughout publicly accessible areas at an average pace of approximately 1.5 kilometers per hour while visually scanning for wildlife and their sign and listening to wildlife songs and calls. The Biologist paused as necessary to listen for wildlife or to identify, record, or enumerate any observed species. Species present were identified and recorded through direct visual observation, sound, or their sign (e.g., scat, tracks, etc.). Species identifications conform to the most up-to-date online databases and technical literature.

2.2.2 VEGETATION MAPPING

Vegetation descriptions and nomenclature are based on the second edition of A Manual of California Vegetation (MCVII) (Sawyer et al. 2009), where applicable, and have been defined to the alliance level.

Vegetation maps were prepared by recording tentative vegetation type boundaries over recent aerial photograph base maps using the ESRI Field Maps for ArcGIS app on an Apple iPad coupled with an Arrow 100 Submeter GNSS Receiver external global positioning system (GPS) unit. Mapping was further refined in the office using ESRI ArcGIS (version 10.7) with aerial photograph base maps with an accuracy of one foot. Most boundaries shown on the maps are accurate within approximately three feet; however, boundaries between some vegetation types are less precise due to difficulties in interpreting aerial imagery and accessing stands of vegetation.

Vegetation communities can overlap in many characteristics and over time may shift from one community type to another. All vegetation maps and descriptions are subject to variability for the following reasons:

- In some cases, vegetation boundaries result from distinct events, such as wildfire or flooding, but vegetation types usually tend to intergrade on the landscape, without precise boundaries between them. Even distinct boundaries caused by fire or flood can be disguised after years of post-disturbance succession. Mapped boundaries represent best professional judgment, but usually should not be interpreted as literal delineations between sharply defined vegetation types.
- Natural vegetation tends to exist in generally recognizable types, but also may vary over time and geographic region. Written descriptions cannot reflect all local or regional variation. Many (perhaps most) stands of natural vegetation do not strictly fit into any named type. Therefore, a mapped unit is given the best name available in the classification system being used, but this name does not imply that the vegetation unambiguously matches written descriptions.
- Vegetation tends to be patchy. Small patches of one named type are often included within larger stands mapped as units of another type.

3 Regulatory Environment

3.1 Federal Regulations

3.1.1 FEDERAL ENDANGERED SPECIES ACT

Federal Endangered Species Act (FESA) provisions protect federally listed threatened and endangered species and their habitats from unlawful “take” and ensure that federal actions do not jeopardize the continued existence of a listed species or result in the destruction or adverse modification of Designated Critical Habitat (DCH). Under FESA, take is defined as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any of the specifically enumerated conduct.” The USFWS regulations define harm to mean “an act which actually kills or injures wildlife.” Such an act “may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering” (50 Code of Federal Regulations [CFR] Section 17.3).

DCH is defined in FESA Section 3(5)(A) as “(i) the specific areas within the geographical area occupied by the species on which are found those physical or biological features: (I) essential to the conservation

of the species; (II) which may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by the species upon a determination by the Secretary of Commerce or the Secretary of the Interior that such areas are essential for the conservation of the species." The effects analyses for DCH must consider the role of the critical habitat in both the continued survival and the eventual recovery (i.e., the conservation) of the species in question, consistent with the recent Ninth Circuit judicial opinion, Gifford Pinchot Task Force v. USFWS.

Activities that may result in "take" of individuals are regulated by USFWS. USFWS produced an updated list of candidate species December 6, 2007 (72 Federal Register [FR] 69034). Candidate species are not afforded any legal protection under FESA; however, candidate species typically receive special attention from federal and state agencies during the environmental review process.

3.1.2 MIGRATORY BIRD TREATY ACT

The Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S. Code [USC] 703-711) makes it unlawful to possess, buy, sell, purchase, barter or take any migratory bird listed in Title 50 of CFR Part 10. "Take" is defined as possession or destruction of migratory birds, their nests, and eggs. Disturbances that cause nest abandonment or loss of reproductive effort or the loss of habitats upon which these birds depend may be a violation of the MBTA. The MBTA prohibits killing, possessing, or trading in migratory birds except in accordance with regulations prescribed by the Secretary. The MBTA encompasses whole birds, parts of birds, bird nests, and eggs.

3.1.3 BALD AND GOLDEN EAGLE PROTECTION ACT OF 1940 (16 USC 668)

The Bald and Golden Eagle Protection Act (BGEPA) of 1940 (16 USC 668, enacted by 54 Stat. 250) protects bald and golden eagles by prohibiting the taking, possession, and commerce of such birds and establishes civil penalties for violation of this Act. Take of bald and golden eagles is defined as follows: "disturb means to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior'' (72 FR 31132; 50 CFR 22.3).

USFWS is the primary federal authority charged with the management of golden eagles in the U.S. A permit for take of golden eagles, including take from disturbance such as loss of foraging habitat, may be required for this Project. USFWS guidance on the applicability of current BGEPA statutes and mitigation is currently under review. On November 10, 2009, the USFWS implemented new rules (74 FR 46835) governing the take of golden and bald eagles. The new rules were released under the existing BGEPA, which has been the primary regulatory protection for unlisted eagle populations since 1940.

All activities that may disturb or incidentally take an eagle or its nest as a result of an otherwise legal activity must be permitted by the USFWS under this act. The definition of disturb (72 FR 31132) includes interfering with normal breeding, feeding, or sheltering behavior to the degree that it causes or is likely to cause decreased productivity or nest abandonment. If a permit is required, due to the current uncertainty

on the status of golden eagle populations in the western U.S., it is expected that permits would only be issued for safety emergencies or if conservation measures implemented in accordance with a permit would result in a reduction of ongoing take or a net take of zero.

3.1.4 FISH AND WILDLIFE COORDINATION ACT

The Fish and Wildlife Coordination Act, as amended in 1964, requires that all federal agencies consult with National Marine Fisheries Service (NMFS), USFWS, and state wildlife agencies (i.e., CDFW) when proposed actions might result in modification of a natural stream or body of water. Federal agencies must consider effects that these projects would have on fish and wildlife development and provide for improvement of these resources. The Fish and Wildlife Coordination Act allows NMFS, USFWS, and CDFW to provide comments to U.S. Army Corps of Engineers (USACE) during review of projects under Section 404 of the Clean Water Act (concerning the discharge of dredged materials into navigable waters of the U.S. [WOTUS]) and Section 10 of the Rivers and Harbors Act (RHA) regarding obstructions in navigable waterways. NMFS comments provided under the Fish and Wildlife Coordination Act are intended to reduce environmental impacts to migratory, estuarine, and marine fisheries and their habitats. Since the Project involves impacts to WOTUS, the USACE will be the lead federal agency and will initiate consultation with the USFWS and CDFW per the requirements of this act.

3.1.5 FEDERALLY REGULATED HABITATS

Areas that meet the regulatory definition of “waters of the U.S.” (WOTUS) are subject to the jurisdiction of the USACE under provisions of Section 404 of the Clean Water Act (CWA) (1972) and Section 10 of the RHA (1899). WOTUS may include all waters used or potentially used for interstate commerce, including all waters subject to the ebb and flow of the tide, all interstate waters, all other waters (e.g., intrastate lakes, rivers, streams, mudflats, sandflats, playa lakes, natural ponds, etc.), all impoundments of waters otherwise defined as WOTUS, tributaries of waters otherwise defined as WOTUS, territorial seas, and wetlands (i.e., “Special Aquatic Sites”) adjacent to WOTUS (33 CFR Part 328, Section 328.3). The Project Area falls within the South Pacific Division of the USACE and is under the jurisdiction of the Los Angeles District.

Construction activities within WOTUS are regulated by USACE. The placement of fill into such waters must comply with permit requirements of USACE. No USACE permit would be effective in the absence of State Water Quality Certification pursuant to Section 401 of the CWA. As a part of the permit process, the USACE works directly with the USFWS to assess potential project impacts on biological resources. The jurisdictional extent of USACE regulation changed with the 2001 Solid Waste Agency of Northern Cook County ruling. The U.S. Supreme Court held that the USACE could not apply Section 404 of the CWA to extend their jurisdiction over an isolated quarry pit. The Court ruled that the CWA does not extend Federal regulatory jurisdiction over non-navigable, isolated, intra-state waters. However, the Court made it clear that non-navigable wetlands adjacent to navigable waters are still subject to USACE jurisdiction.

The U.S. Environmental Protection Agency announced on October 21, 2021, that both it and the USACE will cease implementation of the Navigable Water Protection Rule and are instead interpreting WOTUS consistent with pre-2015 regulatory regime (i.e., the 2015 Clean Water Rule) until further notice.

3.1.6 NATIONAL ENVIRONMENTAL POLICY ACT

The National Environmental Policy Act (NEPA) of 1969 requires all federal agencies to examine the environmental impacts of their actions, incorporate environmental information, and use public participation in the planning and implementation of all actions. Federal agencies must integrate NEPA into other planning requirements and prepare appropriate NEPA documents to facilitate better environmental decision-making. NEPA requires Federal agencies to review and comment on Federal agency environmental plans and documents when the agency has jurisdiction by law or special expertise with respect to any environmental impacts involved (42 USC 4321- 4327; 40 CFR 1500-1508). These guidelines establish an overall federal process for the environmental evaluation of projects.

3.2 State Regulations

3.2.1 CALIFORNIA ENVIRONMENTAL QUALITY ACT

The California Environmental Quality Act (CEQA) establishes state policy to prevent significant and avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures. CEQA applies to actions directly undertaken, financed, or permitted by state lead agencies. Regulations for implementation are found in the CEQA Guidelines published by the California Natural Resources Agency. These guidelines establish an overall state of California process for the environmental evaluation of projects.

3.2.2 CALIFORNIA ENDANGERED SPECIES ACT

Provisions of the California Endangered Species Act protect state-listed threatened and endangered species. The CDFW regulates activities that may result in take of individuals (i.e., take is defined as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill”). Habitat degradation or modification is not expressly included in the definition of take under the California Fish and Game Code (FGC). Additionally, the FGC contains lists of vertebrate species designated as “fully protected” (FGC Sections 3511 [birds], 4700 [mammals], 5050 [reptiles and amphibians], and 5515 [fish]). Such species may not be taken or possessed.

In addition to federal and State-listed species, the CDFW also has produced a list of Species of Special Concern (SSC) to serve as a “watch list.” Species on this list are of limited distribution or the extent of their habitats has been reduced substantially, such that threat to their populations may be imminent. SSC may receive special attention during environmental review, but they do not have statutory protection.

Birds of prey are protected in California under the FGC. FGC Section 3503.5 states that it is “unlawful to ‘take’, possess, or destroy any birds of prey (in the order Falconiformes or Strigiformes) or to ‘take’, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this Code or any regulation adopted pursuant thereto.” Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered take by the CDFW. Under Sections 3503 and 3503.5 of the FGC, activities that would result in the taking, possessing, or destroying

of any birds-of-prey, taking or possessing of any migratory nongame bird as designated in the MBTA, or the taking, possessing, or needlessly destroying of the nest or eggs of any raptors or non-game birds protected by the MBTA, or the taking of any non-game bird pursuant to FGC Section 3800 are prohibited.

3.2.3 SECTION 1602 OF THE CALIFORNIA FISH AND GAME CODE

Section 1602 of the FGC requires any person, state or local governmental agency, or public utility which proposes a project that will substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake, or use materials from a streambed, or result in the disposal or deposition of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into any river, stream, or lake, to first notify the CDFW of the proposed project. Notification is generally required for any project that would take place in or in the vicinity of a river, stream, lake, or their tributaries. This includes rivers or streams that flow at least periodically or permanently through a bed or channel with banks that support fish or other aquatic life and watercourses having a surface or subsurface flow that support or have supported riparian vegetation. Based on the notification materials submitted, the CDFW would determine whether the proposed project may impact fish or wildlife resources.

If the CDFW determines that a proposed project may substantially adversely affect existing fish or wildlife resources, a Lake or Streambed Alteration Agreement (LSAA) would be required. A completed CEQA document must be submitted to CDFW before an LSAA would be issued. The Project area falls within the South Coast Region of the CDFW.

3.2.4 PORTER-COLOGNE WATER QUALITY CONTROL ACT

California Regional Water Quality Control Boards (RWQCBs) regulate the “discharge of waste” to “waters of the State”. All projects proposing to discharge waste that could affect waters of the State must file a Waste Discharge Report with the appropriate RWQCB. The board responds to the report by issuing Waste Discharge Requirements or by waiving them for that project discharge. Both terms “discharge of waste” and waters of the State are broadly defined such that discharges of waste include fill, any material resulting from human activity, or any other “discharge.” Isolated wetlands within California, which are no longer considered waters of the State, as defined by Section 404 of the CWA, are addressed under the Porter Cologne Water Quality Control Act. The Project area falls under the jurisdiction of Region 4 – Los Angeles RWQCB.

3.2.5 STATE-REGULATED HABITATS

The State Water Resources Control Board is the state agency (together with the RWQCBs) charged with implementing water quality certification in California.

The CDFW extends the definition of stream to include “intermittent and ephemeral streams, rivers, creeks, dry washes, sloughs, blue-line streams (USGS-defined), and watercourses with subsurface flows. Canals, aqueducts, irrigation ditches, and other means of water conveyance can also be considered

streams if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife" (CDFW 1994).

Activities that result in the diversion or obstruction of the natural flow of a stream; that substantially change its bed, channel, or bank; or that use any materials (including vegetation) from the streambed may require that the project applicant enter an LSAA with the CDFW.

3.2.6 NATIVE PLANT PROTECTION ACT

Under FGC Sections 1900 to 1913, the Native Plant Protection Act (NPPA) requires all state agencies to use their authority to carry out programs to conserve endangered and rare native plants. Provisions of NPPA prohibit the taking of listed plants from the wild and require notification of the CDFW at least 10 days in advance of any change in land use. This allows CDFW to salvage listed plant species that would otherwise be destroyed. a project applicant is required to conduct botanical inventories and consult with CDFW during project planning to comply with the provisions of the NPPA and sections of CEQA that apply to rare or endangered plants.

3.3 Other Applicable Regulations, Plans and Standards

3.3.1 CITY OF CLAREMONT GENERAL PLAN – CHAPTER 5, OPEN SPACE, PARKLAND, CONSERVATION AND AIR QUALITY ELEMENT

This City of Claremont General Plan focuses on preserving natural resources, including but not limited to open space, natural habitat and vegetation, wildlife, and blue line streams and riparian water courses (City of Claremont 2022).

3.3.1.1 Open Space and Parkland

The open Space and Parkland element of the City of Claremont General Plan ensures the protection of valuable natural open space areas and provides additional areas of constructed open space throughout the urban areas of the city.

The goals and policies relative to preservation of natural open space resources that apply to the BSA are as follows:

> ***Goal 5-1:*** *Maintain unique and diverse open space resources throughout Claremont for purposes of resource and habitat protection.*
>
> > ***Policy 5-1.3:*** *Encourage new development to preserve, where possible, on-site natural elements that contribute to the community's aesthetic character.*
> >
> > ***Policy 5-1.9****: Minimize impacts to birds by site disturbance activities.*
>
> ***Goal 5-4:*** *Protect groundwater resources.*

> ***5-4.2:*** *Encourage use of drainage improvements designed with native vegetation where possible to retain or detain stormwater runoff, minimizing volume and pollutant concentrations.*

3.3.1.2 Conservation

The Conservation element of the City of Claremont General Plan is intended to provide long term guidance for protecting Claremont's natural resources with the overall goal of achieving sustainability.

The goals and policies relative to natural resources that apply to the BSA are as follows:

> ***Goal 5-12:*** *Conserve and properly manage natural resources for future generations.*
>
> > ***Policy 5-12.2:*** *Consider the environmental impacts of proposed development of natural areas, recognizing the loss of natural resources is irreversible. The environmental analysis shall carefully weigh the costs and benefits of such development.*
> >
> > ***Policy 5-12.5:*** *Promote the use of public/private partnerships to upgrade existing buildings for energy efficiency, water conservation and storm water runoff pollution reduction.*

3.3.1.3 Water

The Water Resources Element of the General Plan is intended to enhance water resources to detain and retain groundwater and is planned to be achieved through minimizing the number of impervious surfaces and increasing percolation facilities.

The goals and policies relative to local water resources that apply to the BSA are as follows:

> ***Goal 5-15:*** *Achieve the highest level of water conservation possible.*
>
> > ***Policy 5-15.4:*** *District staff to work with Sanitation Districts of Los Angeles County to explore infrastructure improvements that could make it possible to use reclaimed water in Claremont for non-potable uses, such as landscape irrigation.*

3.3.2 CALIFORNIA NATIVE PLANT SOCIETY RARE PLANT PROGRAM

The mission of the California Native Plant Society (CNPS) Rare Plant Program is to develop current, accurate information on the distribution, ecology, and conservation status of California's rare and endangered plants and to use this information to promote science-based plant conservation in California. Once a species has been identified as being of potential conservation concern, it is put through an extensive review process. Once a species has gone through the review process, information on all aspects of the species (e.g., listing status, habitat, distribution, threats, etc.) is entered into the online CNPS Rare Plant Inventory and given a California Rare Plant Rank (CRPR). The Rare Plant Program currently recognizes more than 1,600 plant taxa (species, subspecies, and varieties) as rare or endangered in California (CNPS 2022).

Vascular plants listed as rare or endangered by the CNPS, but which might not have a designated status under state endangered species legislation, are defined by the following CRPRs:

- CRPR 1A: Plants considered by the CNPS to be extinct in California
- CRPR 1B: Plants rare, threatened, or endangered in California and elsewhere
- CRPR 2: Plants rare, threatened, or endangered in California, but more numerous elsewhere
- CRPR 3: Plants about which we need more information – a review list
- CRPR 4: Plants of limited distribution – a watch list

In addition to the CRPR designations above, the CNPS adds a Threat Rank as an extension added onto the CRPR and designates the level of endangerment by a 0.1 to 0.3 ranking, with 0.1 being the most endangered and 0.3 being the least endangered and are described as follows:

- 0.1: Seriously threatened in California (high degree/immediacy of threat)
- 0.2: Fairly threatened in California (moderate degree/immediacy of threat)
- 0.3: Not very threatened in California (low degree or immediacy of threats or no current threats known)

4 Existing Conditions

4.1 Setting

The BSA is located adjacent to the California Botanic Garden, Chaparral Elementary School, and between Interstate 210 and State Route 66. Elevation within the BSA is approximately 1,400 feet above mean sea level. Average annual temperatures range from a minimum of 44°F to a high of 92°F. Annual precipitation is 16.7 inches. The photographic log for the survey is included in Appendix B and depicts representative environmental conditions within the BSA and surrounding areas.

4.2 Vegetation and Land Covers

As defined in MCVII (Sawyer et al. 2009), a vegetation alliance is “a category of vegetation classification which describes repeating patterns of plants across a landscape. Each alliance is defined by plant species composition and reflects the effects of local climate, soil, water, disturbance, and other environmental factors.” Generally, Stantec’s mapping and description of plant communities follows the classification system described in MCVII. The MCVII is generally limited to communities that are native to or naturalized within California; however, (generally disturbed) habitat occurs within the BSA that is not defined in MCVII. Therefore, land cover types assigned to these types of habitats are descriptive in nature and are not specifically referenced in the MCVII. A list of vegetation communities and acreages in the BSA are included in Table 1. The botanical nomenclature within this report follows the Jepson Herbarium online database, eFlora (Jepson Flora Project 2022). Plant species documented during the reconnaissance survey are provided in Section 4.2.3.

Within the BSA, Stantec Biologist mapped three plant communities defined by Sawyer et al. (2009) and U. S. National Vegetation Classification (USNVC) (2022), one vegetation community descriptive in nature, and seven land cover types. These are described below, summarized in Table 1, and depicted in Figure 2 in Appendix A.

Table 1 Vegetation Communities and Land Cover Types occurring within the BSA

Vegetation Communities and Land Cover Types	Area (acres) of BSA
Vegetation Communities	
Lotus scoparius Shrubland Association – Common deerweed shrubland	3.08
Baccharis salicifolia Shrubland Alliance – Mulefat thickets	0.98
Eucalyptus spp. Ruderal Forest Alliance – Eucalyptus woodland	1.04
Olea spp. Semi-Natural Stand – Olive woodland	3.09
Subtotal	*8.19*
Land Cover Types	
Disturbed/Developed	68.33
- Concrete Lined Channel	0.03
California Botanic Garden	6.42
Residential Landscaping	1.21
Retention Pond	1.91
Vegetated Channel	0.02
Ruderal herbaceous	0.80
Subtotal	*78.72*
Total	**86.91**

4.2.1 VEGETATION COMMUNITIES

4.2.1.1 *Lotus scoparius* Shrubland Association – Common Deerweed Shrubland

This community occurs in large patches in the northern half of the BSA and species diversity varies amongst the patches between deerweed (*Acmispon glaber*) (formerly *Lotus scoparius*), California sagebrush (*Artemisia californica*), and California buckwheat (*Eriogonum fasciculatum*. This community covers approximately 3.08 acres of the BSA. The *Lotus scoparius* shrubland association is classified under the *Lotus scoparius - Lupinus albifrons* scrub alliance. This low shrubland is a disturbance-induced community that occurs on ground damaged by clearing or fire. The low-shrub layer is dominated by deerweed, California sagebrush, and California buckwheat. The herbaceous layer is diverse and often includes non-native species such as wild oats (*Avena* spp.), bromes (*Bromus* spp.), tocalote (*Centaurea melitensis*), filaree (*Erodium* spp.), shortpod mustard (*Hirschfeldia incana*) and native species, such as tarragon (*Artemisia dracunculus*), California croton (*Croton californicus*), dodder (*Cuscuta californica*), and clover (*Trifolium* spp.).

4.2.1.2 *Baccharis salicifolia* Shrubland Alliance- Mulefat Thickets

This community is limited to the edges of retention ponds where water is abundant. Approximately 0.98 acres of this community occur in the BSA. These shrublands are dominated by mulefat (*Baccharis salicifolia*). Non-native salt cedar (*Tamarix ramosissima*) is often found but usually in relatively low cover. Goodding's willow (*Salix gooddingii*) may be emergent in some stands. Associated scrubs include California sagebrush, coyote brush (*Baccharis pilularis*), laurel sumac (*Malosma laurina*), tree tobacco

(*Nicotiana glauca*), sandbar willow (*Salix exigua*), arroyo willow (*Salix lasiolepis*), and elderberry (*Sambucus nigra*); emergent trees include California sycamore (*Platanus racemosa*), Fremont's cottonwood (*Populus fremontii*), oaks (*Quercus* spp.), willows (*Salix* spp.); and herbs include mugwort (*Artemisia douglasiana*) and sedges (*Cyperus* spp.).

4.2.1.3 *Eucalyptus* spp. Ruderal Forest Alliance – Eucalyptus Woodland

This vegetation community is primarily along the northeastern edge of the BSA; approximately 1.04 acres of this community occurs in the BSA. This alliance consists of planted (and now abandoned) or naturalized groves of Eucalyptus species. Understories in groves of these fast-growing, long-lived trees are usually depauperate. A buildup of allelopathic chemicals in the soil and high volumes of debris inhibit establishment of other plants, though sometimes other non-natives, such as English ivy (*Hedera helix*), or natives, such as poison oak (*Toxicodendron diversilobum*), spread extensively in stands.

4.2.1.4 *Olea* spp. Semi-Natural Stand – Olive Woodland

This vegetation community consists of large olive trees with patches of California sagebrush in the herbaceous layer throughout the BSA but is most highly concentrated on the southeastern corner. Approximately 3.09 acres of this community occurs in the BSA. Vegetation characteristics of the *Olea* spp. semi-natural stand are present throughout much of the BSA. This unofficial classification is associated with common olive (*Olea europaea)* dominant in the tree canopy with >50% cover. The shrub layer is composed of mostly California sagebrush and other low-laying shrub species or bare ground.

4.2.2 LAND COVER TYPES

4.2.2.1 Disturbed/Developed

This land cover type includes areas that have been graded or paved and are developed with urban infrastructure. These areas are generally periodically maintained for weed control, precluding any significant growth of non-ornamental species, but may be sparsely interspersed with ruderal pioneer plant species that readily colonize open disturbed soil such as along disturbed areas or roadsides. This land cover occupies 68.33 acres of the BSA.

4.2.2.2 Residential landscaping

This land cover type is used to classify all vegetation on privately owned or city regulated property that was intentionally installed and is maintained regularly with landscaping. Species composition varies but is characterized by ornamental non-natives. Residential landscaping covers 1.21 acres of the BSA.

4.2.2.3 Retention Pond

This land cover type is used to map approximate limits of the fluctuating water levels present in the retention ponds within the BSA. This land cover type covers approximately 1.91 acres of the BSA.

4.2.2.4 Vegetated Channel

This landcover type is used to describe the channel where water is discharged from a culvert and flows into a retention pond. It is characterized by abundant native and non-native mesic species including mulefat, mugwort, cattails (*Typha* spp.), docks (*Rumex* spp.) and clover (*Melilotus* spp.). Vegetated channels make up 0.02 acre of the BSA.

4.2.2.5 Ruderal Herbaceous

This land cover type is typically sparsely vegetated with pioneer plant species that readily colonize open disturbed soil. In the BSA this land cover type occurs when vegetation is disturbed due to the increase of standing water present in the retention ponds. Species associated with this land cover type include native deerweed, non-native annual grasses, redstem filaree and tocalote. The ruderal herbaceous cover occupies approximately 0.80 acre of the BSA.

4.2.3 PLANT SPECIES OBSERVED

The survey resulted in the documentation of 94 species of native and non-native plants within the BSA, a detailed list of which is provided in Table 2. No special status plant species were identified during the field survey.

Table 2 Vascular Plant Species Observed in the BSA

Scientific Name	Common Name
Acmispon glaber	deerweed
*Agave americana**	century plant
*Agave victoriae-reginae**	Queen Victoria agave
Ambrosia acanthicarpa	flatspine bur ragweed
*Anagallis arvensis**	scarlet pimpernel
Artemisia californica	California sagebrush
Artemisia douglasiana	California mugwort
Asclepias fascicularis	narrowleaf milkweed
*Asparagus aethiopicus**	Sprenger's asparagus
Baccharis salicifolia	mule fat
Baccharis sarothroides	broom baccharis
*Betula pendula**	silver birch
*Bromus diandrus**	great brome
Calystegia macrostegia	island morning glory
Camissoniopsis bistorta	California suncup
Camissoniopsis micrantha	miniature suncup
*Carduus pycnocephalus**	Italian thistle
Cedrus sp.*	cedar
*Centaurea melitensis**	tocalote
*Cinnamomum camphora**	camphor tree
*Crassula ovata**	jade plant
Croton californicus	California croton
*Cupressus sempervirens**	Mediterranean cypress
*Cyclospermum leptophyllum**	marsh parsley

Scientific Name	Common Name
Cylindropuntia californica	California cholla
Cyperus sp.	nutsedges
Datura wrightii	sacred datura
*Dysphania ambrosioides**	Mexican tea
Ericameria pinifolia	pine bush
Erigeron sp.	fleabane
Eriodictyon trichocalyx	hairy yerba santa
Eriogonum fasciculatum	California buckwheat
Eriophyllum confertiflorum	yellow yarrow
*Erodium cicutarium**	common stork's-bill
*Eucalyptus camaldulensis**	river redgum
Eucrypta chrysanthemifolia	common eucrypta
Euphorbia glyptosperma	ridge-seed spurge
Funastrum cynanchoides ssp. *heterophyllum*	Hartweg's climbing milkweed
*Hedera canariensis**	Canary Island ivy
*Hedera helix**	English ivy
Hesperoyucca whipplei	chaparral yucca
Heteromeles arbutifolia	toyon
Heterotheca grandiflora	telegraphweed
Heterotheca sessiliflora	sessileflower false goldenaster
*Hirschfeldia incana**	shortpod mustard
Laennecia coulteri	Coulter's horseweed
Lepidospartum squamatum	scale broom
Lespedeza cuneata	Chinese bushclover
*Logfia gallica**	narrowleaf cottonrose
*Magnolia grandiflora**	Southern magnolia
Malosma laurina	laurel sumac
Marah macrocarpa	wild cucumber
*Marrubium vulgare**	white horehound
*Medicago polymorpha**	California burclover
*Melilotus albus**	white sweetclover
*Melilotus indicus**	annual yellow sweetclover
Mirabilis laevis var. *crassifolia*	wishbone bush
Navarretia hamata	hooked pincushionplant
*Nerium oleander**	oleander
*Nicotiana glauca**	tree tobacco
Nicotiana quadrivalvis	Indian tobacco
*Olea europaea**	common olive
Pectocarya setosa	moth combseed
Penstemon spectabilis	showy penstemon
Phacelia distans	distant phacelia
*Pinus halepensis**	Aleppo pine
*Pistacia chinensis**	Chinese pistache
Platanus racemosa	California sycamore
*Platycladus orientalis**	Oriental arborvitae
*Plumbago auriculata**	blue plumbago
*Prunus caroliniana**	Carolina cherry laurel
Prunus ilicifolia	hollyleaf cherry
*Punica granatum**	pomegranate

Scientific Name	Common Name
*Quercus ilex**	evergreen oak
*Quercus rubra**	Northern red oak
Rhamnus crocea	spiny redberry
*Rhaphiolepis indica**	Indian hawthorn
Ribes aureum	golden currant
*Ricinus communis**	castor bean
*Rosmarinus officinalis**	rosemary
Rubus ursinus	California blackberry
Rumex sp.	dock
Salix gooddingii	Goodding's Black Willow
Sambucus nigra	elderberry
*Schinus mole**	Peruvian peppertree
*Schismus barbatus**	common Mediterranean grass
*Sisymbrium irio**	London rocket
Solanum douglasii	greenspot nightshade
Sonchus sp.*	sowthistle
Toxicodendron diversilobum	poison oak
*Trifolium repens**	white clover
Typha sp.	cattails
*Verbascum virgatum**	wand mullein
*Washingtonia robusta**	Mexican fan palm
Notes: * indicates non-native species	

4.3 Common Wildlife

This section describes the common wildlife observed during the reconnaissance-level survey and those species expected to occur within the BSA based on habitat characteristics and species known to occur in the region.

4.3.1 TERRESTRIAL INVERTEBRATES

As in all ecological systems, invertebrates in the BSA play a crucial role in biological processes. They serve as the primary or secondary food source for amphibian, bird, reptile, and mammal predators; they provide important pollination vectors for numerous plant species; they act as efficient components in controlling pest populations; and they support the naturally occurring maintenance of an area by consuming detritus and contributing to necessary soil nutrients. Though heavily urbanized, habitat conditions within the BSA provide a suite of microhabitat conditions for a wide variety of terrestrial insects and other invertebrates that are known to adapt to such disturbance. A focused insect survey was not performed within the BSA for this Project and no invertebrate species were recorded.

4.3.2 FISH

Water was present during the field survey and no fish species were observed within the BSA. Habitat conditions in the retention ponds are not ideal for fish species that are known to occur in the area.

Species not observed in the BSA but known to occur in the area include western mosquitofish (*Gambusia affinis*).

4.3.3 AMPHIBIANS

Amphibians often require a source of standing or flowing water to complete their life cycle. However, some terrestrial species can survive in drier areas by remaining in moist environments found beneath leaf litter and fallen logs, or by burrowing into the soil. These species are highly cryptic and often difficult to detect. Downed logs, bark, and other woody material in various stages of decay (often referred to as coarse woody debris), which is generally not present within the BSA, could provide shelter and feeding sites for a variety of wildlife, including amphibians and reptiles (Aubry et al. 1988; Maser and Trappe 1984). Amphibian species were not observed during the reconnaissance-level survey within the BSA. Species not observed in the BSA but known to occur in the area include American bullfrog (*Lithobates catesbeianu*s), western toad (*Anaxyrus boreas*), Baja California tree frog (*Pseudacris hypochondriaca*) and garden slender salamander (*Batrachoseps major*).

4.3.4 REPTILES

The number and type of reptile species that may occur at a given site is related to biotic and abiotic features present in the BSA. These include the diversity of plant communities, substrate, soil type, and presence of refugia such as rock piles, boulders, and native debris. Weather conditions were favorable during the survey for reptile activity.

Many reptile species, even if present, are difficult to detect because they are cryptic and their life history characteristics (e.g., foraging, thermoregulatory behavior, fossorial nature, camouflage etc.) limit their ability to be observed during most surveys. Further, many species are only active within relatively narrow thermal limits, avoiding both cold and hot conditions, and most take refuge in microhabitats that are not directly visible to the casual observer, such as rodent burrows, in crevices, under rocks and boards, and in dense vegetation where they are protected from unsuitable environmental conditions and predators (USACE and CDFG 2010). In some cases, they are only observed when flushed from their refugia.

The BSA includes suitable habitat for common reptile species including western fence lizard (*Sceloporus occidentalis*), common side-blotched lizard (*Uta stansburiana*) and gopher snake (*Pituophis catenifer*).

4.3.5 BIRDS

Birds were identified by sight and song and were observed throughout the BSA. Bird species observed during the survey include red-winged blackbird (*Agelaius phoeniceus*), California quail (*Callipepla californica*), killdeer (*Charadrius vociferus*), California towhee (*Melozone crissalis*), and Anna's hummingbird (*Calypte anna*); additional species are listed in Table 3. Species not observed but are known to occur within the vicinity of the BSA include California thrasher (*Toxostoma redivivum*), spotted towhee (*Pipilo maculatus*), and bushtit (*Psaltriparus minimus*).

4.3.6 MAMMALS

Generally, the distribution of mammals on a given site is associated with the presence of factors such as access to perennial water, topographical and structural components (e.g., rock piles, vegetation) that provide cover and support prey base, and the presence of suitable soils for fossorial mammals (e.g., sandy areas). California ground squirrels (*Otospermophilus beecheyi*) were observed during the survey. Other common mammals that were not observed but are known to occur in the region include coyotes (*Canis latrans*), racoons (*Procyon lotor*), bobcats (*Lynx rufus*) and Botta's pocket gophers (*Thomomys bottae*).

Table 3 Wildlife Species Observed in the BSA

Scientific Name	Common Name
Birds	
Agelaius phoeniceus	Red-winged blackbird
Anas platyrhynchos	mallard
Aphelocoma californica	California scrub jay
Ardea alba	egret
Callipepla californica	California quail
Calypte anna	Anna's hummingbird
Charadrius vociferus	killdeer
Fulica americana	American coot
Haemorhous mexicanus	house finch
Icterus cucullatus	hooded oriole
Melospiza melodia	song sparrow
Melozone crissalis	California towhee
Mimus polyglottos	Northern mockingbird
Psaltriparus minimus	bushtit
Spinus psaltria	lesser goldfinch
Thryomanes bewickii	Bewick's wren
Turdus migratorius	American robin
Zenaida macroura	mourning dove
Mammals	
Otospermophilus beecheyi	California ground squirrel

4.4 Soils

Prior to conducting the field reconnaissance, historic soils data from the Natural Resources Conservation Service were used to determine potential soil types that may occur within the BSA (refer to Appendix A, Figure 3). One historic soil is present in the BSA and is summarized in Table 4; there are no hydric soils present in the BSA.

Table 4 Historic Soil Units Occurring in the BSA.

Map Unit Symbol	Map Unit Name	Description	Area within BSA (acres)
1006	Urban land-Soboba complex, 0 to 5 percent slopes	An excessively drained non-hydric soil associated with alluvial fans and flood plains at elevations of 25 to 3,700 feet, very slow runoff; gravelly sand, very cobbly sand to extremely cobbly sand; parent material consists of discontinuous human-transported material over alluvium derived from granite; minor components include Tujunga, Palmview and Typic xerorthents.	86.91

5 Special Status Biological Resources

The background information presented above combined with habitat assessments performed during the surveys was used to evaluate special-status natural communities and special-status plant and animal taxa that either occur or may have the potential to occur within the BSA and adjacent habitats. For the purposes of this BRTR, special-status taxa are defined as plants or animals that:

- Have been designated as either rare, threatened, or endangered by CDFW or the USFWS, and are protected under either the California Endangered Species Act or FESA,
- Are candidate species being considered or proposed for listing under these same acts,
- Are recognized as SSC by the CDFW,
- Are ranked by CNPS as CRPR 1, 2, 3, or 4 plant species,
- Are fully protected by the FGC, Sections 3511, 4700, 5050, or 5515,
- Are of expressed concern to resource/regulatory agencies, or local jurisdictions.

5.1 SPECIAL-STATUS NATURAL COMMUNITIES

Special-status natural communities are defined by CDFW (2009) as, "...communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects." All vegetation within the state is ranked with an "S" rank; however, only those that are of special concern (S1-S3 rank) are evaluated under CEQA. There are no special status natural communities within in the BSA. The BSA does not occur within a Natural Community Conservation Plan or Habitat Conservation Plan.

5.2 DESIGNATED CRITICAL HABITAT

Designated Critical Habitat (DCH) is defined by the USFWS (2022b) as 'specific geographic areas that contain features essential to the conservation of an endangered or threatened species and that may require special management and protection. DCH habitat may also include areas that are not currently occupied by the species but will be needed for its recovery.' The BSA is not located directly within a DCH but there are critical habitats surrounding it. There is coastal California gnatcatcher (*Polioptila californica californica*) critical habitat approximately 4.75 miles to the southwest, San Bernardino Merriam's kangaroo rat (*Dipodomys merriami parvus*) critical habitat approximately 9 miles to the northeast, and thread-leaved brodiaea (*Brodiaea filifolia*) critical habitat approximately 6 miles to the northwest of the BSA. The suitable habitat present BSA is limited for these species and the potential for any of them to occur within the BSA is low.

5.3 SPECIAL-STATUS PLANTS

Table 5 presents a list of special-status plants, including federally- and state-listed species and CRPR 1-4 species that are known to occur in the region surrounding the BSA (within ten miles) (Appendix A Figure 4).

Records searches of the USFWS iPaC CNDDB, the CNPS Online Inventory, and the CCH were performed for special-status plant taxa. Each of the taxa identified in the record searches was assessed for their potential to occur within the BSA based on the following criteria:

- **Present:** Taxa were observed within the BSA during recent botanical surveys or population has been acknowledged by CDFW, USFWS, or local experts.
- **High:** Both a documented recent record (within 10 years) exists of the taxa within the BSA, or immediate vicinity (approximately 5 miles) and the environmental conditions (including soil type) associated with taxa presence occur within the BSA.
- **Moderate:** Both a documented recent record (within 10 years) exists of the taxa within the BSA, or the immediate vicinity (approximately 5 miles) and the environmental conditions associated with taxa presence are marginal and/or limited within the BSA; the BSA is located within the known current distribution of the taxa and the environmental conditions (including soil type) associated with taxa presence occur within the BSA.
- **Low:** A historical record (over 10 years) exists of the taxa within the BSA, or general vicinity (approximately 10 miles) and the environmental conditions (including soil type) associated with taxa presence are marginal and/or limited within the BSA.
- **Not Likely to Occur:** The environmental conditions associated with taxa presence do not occur within the BSA.

Table 5 Known and Potential Occurrences of Special-Status Plant Taxa within the BSA

Scientific Name	Common Name	Status	Habitat and Distribution	Blooming Period	Potential to Occur
Arctostaphylos glandulosa ssp. *gabrielensis*	San Gabriel manzanita	S3, 1B.2	Chaparral on granitic soils; 950-2000 meters (m).	Jan – Apr	**Low:** Limited marginally suitable habitat occurs within the BSA. The nearest and most recent recorded occurrence is approximately 5.40 miles north of the BSA; this occurrence was recorded in 1996.
Atriplex coulteri	Coulter's saltbush	S1S2, 1B.2	Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland; alkaline or clay soils; <500 m.	Mar – Oct	**Low:** Limited marginally suitable habitat occurs within the BSA. The nearest and most recent recorded occurrence is approximately 7.85 miles south of the BSA; this occurrence was recorded in 1917.
Berberis nevinii	Nevin's barberry	FE, SE, S1, 1B.1	Chaparral, cismontane woodland, coastal scrub, riparian scrub; sandy to gravelly soils, washes; <650 m.	Mar – May	**Moderate:** Suitable habitat occurs within the BSA. The nearest recorded occurrence is approximately 0.52 mile south of the BSA; this occurrence was recorded in 1999.
Brodiaea filifolia	thread-leaved brodiaea	FT, SE, S2, 1B.1	Chaparral (openings), cismontane woodland, coastal scrub, playas, valley and foothill grassland, vernal pools; clay; 25 - 860 m.	Mar – Jun	**Low:** Limited marginally suitable habitat occurs within the BSA. The nearest and most recent recorded occurrence is approximately 5.99 miles west of the BSA; this occurrence was recorded in 2020.
Calochortus clavatus var. *gracilis*	slender mariposa-lily	S2S3, 1B.2	Chaparral, coastal scrub, valley and foothill grassland; shaded foothill canyons; <1000 m.	May – Jun	**Low:** Limited marginally suitable habitat occurs within the BSA. The nearest recorded occurrence is approximately 1.27 miles north of the BSA; this occurrence was recorded in 1999.
Calochortus plummerae	Plummer's mariposa-lily	S4, 4.2	Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, valley and foothill grassland; dry, rocky chaparral, yellow-pine forest; <1700 m.	May – Jul	**Low:** Limited marginally suitable habitat occurs within the BSA. The nearest recorded occurrence is within the BSA; this occurrence was recorded in 1937.

Scientific Name	Common Name	Status	Habitat and Distribution	Blooming Period	Potential to Occur
Calochortus weedii var. *intermedius*	intermediate mariposa-lily	S3, 1B.2	Chaparral, coastal scrub, valley and foothill grassland; rocky, calcareous substrates; <680 m.	Jun – Jul	**Moderate:** Suitable habitat occurs within the BSA. The nearest and most recent recorded occurrence is approximately 4.2 miles north of the BSA; this occurrence was recorded in 2020.
Calystegia felix	lucky morning-glory	S1, 1B.1	Meadows and seeps, historically associated with wetland and marshy places, but possibly in drier situations as well. Possibly silty loam and alkaline; 30 - 215 m.	Mar – Sept	**Moderate:** Suitable habitat occurs within the BSA. The nearest recorded occurrence is approximately 7.62 miles south of the BSA; this occurrence was recorded in 2013.
Centromadia pungens ssp. *Laevis*	smooth tarplant	S2, 1B.1	Chenopod scrub, meadows and seeps, playas, riparian woodland, valley and foothill grassland; alkaline; open, poorly drained flats, depressions, waterway banks and beds, grassland, disturbed sites; 90- 500 m.	Apr – Sept	**Low:** Limited marginally suitable habitat occurs within the BSA. The nearest and most recent recorded occurrence is approximately 9.43 miles south of the BSA; this occurrence was recorded in 1903.
Chorizanthe parryi var. *parryi*	Parry's spineflower	S2, 1B.1	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland; openings, rocky (sometimes) and sandy substrates; 90 – 800 m.	May – Jun	**Low:** Limited marginally suitable habitat occurs within the BSA. The nearest recorded occurrence is approximately 1.04 miles north of the BSA; this occurrence was recorded in 1936.
Cladium californicum	California saw-grass	S2, 2B.2	Meadows and seeps, marshes and swamps (alkaline/ freshwater); 2150 m.	Jun – Sept	**Low:** Limited marginally suitable habitat occurs within the BSA. The nearest and most recent recorded occurrence is approximately 4.25 miles east of the BSA; this occurrence was recorded in 1918.
Claytonia peirsonii ssp. *Peirsonii*	Peirson's spring beauty	S2, 1B.2	Subalpine coniferous forest, upper montane coniferous forest; granitic, metamorphic, scree and talus substrates; 1510 – 2745 m.	May – Jun	**Low:** Limited marginally suitable habitat occurs within the BSA. The nearest and most recent recorded occurrence is approximately 9.61 miles northeast of the BSA; this occurrence was recorded in 2012.

Scientific Name	Common Name	Status	Habitat and Distribution	Blooming Period	Potential to Occur
Dodecahema leptoceras	slender-horned spineflower	FE, SE, S1, 1B.1	Chaparral, cismontane woodland, coastal scrub (alluvial fans); sand or gravel; 200 – 700m.	May – Jun	**Low:** Limited marginally suitable habitat occurs within the BSA. The nearest and most recent recorded occurrence is approximately 2.54 miles east of the BSA; this occurrence was recorded in 1905.
Dudleya densiflora	San Gabriel Mountains dudleya	S2, 1B.1	Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, riparian woodland; granitic substrates; 300 – 520 m.	Jun	**Low:** Limited marginally suitable habitat occurs within the BSA. The nearest and most recent recorded occurrence is approximately 9.79 miles northwest of the BSA; this occurrence was recorded in 1985.
Dudleya multicaulis	many-stemmed dudleya	S2, 1B.2	Chaparral, coastal scrub, valley and foothill grassland; heavy, often clay soils, coastal plains, sandstone outcrops; < 600 m.	May – Jun	**Low:** Limited marginally suitable habitat occurs within the BSA. The nearest recorded occurrence is approximately 1.73 miles northwest of the BSA; this occurrence was recorded in 1980.
Eriogonum microthecum var. *johnstonii*	Johnston's buckwheat	S2, 1B.3	Subalpine coniferous forest, upper montane coniferous forest; rocky substrates; 1829 – 2926 m.	Jul – Sept	**Low:** Limited marginally suitable habitat occurs within the BSA. The nearest and most recent recorded occurrence is approximately 9.12 miles northeast of the BSA; this occurrence was recorded in 2005.
Horkelia cuneata var. *puberula*	mesa horkelia	S1, 1B.1	Chaparral (maritime), cismontane woodland, coastal scrub; dry, sandy, coastal chaparral; 70 – 870 m.	Mar – Jul	**Low:** Limited marginally suitable habitat occurs within the BSA. The nearest and most recent recorded occurrence is approximately 0.36 mile south of the BSA; this occurrence was recorded in 2009.
Imperata brevifolia	California satintail	S3, 2B.1	Chaparral, coastal scrub, Mojavean desert scrub, meadows and seeps (often alkali), riparian scrub; mesic, wet springs, meadows, streambanks, floodplains; < 500 m.	Sept – May	**Low:** Limited marginally suitable habitat occurs within the BSA. The nearest and most recent recorded occurrence is approximately 5.23 miles northwest of the BSA; this occurrence was recorded in 1943.

Scientific Name	Common Name	Status	Habitat and Distribution	Blooming Period	Potential to Occur
Lepidium virginicum var. robinsonii	Robinson's pepper-grass	S3, 4.3	Chaparral, coastal scrub; dry, disturbed areas, bottomland, riverbanks, meadows, fields, pastures, cliffs, scrub; < 2800 m.	Mar – Jun	**Low:** Limited marginally suitable habitat occurs within the BSA. The nearest recorded occurrence is approximately 0.40 mile south of the BSA; this occurrence was recorded in 1963.
Lilium parryi	lemon lily	S3, 1B.2	Lower montane coniferous forest, meadows and seeps, riparian forest, upper montane coniferous forest; mesic, meadows and streams in montane conifer forest; 1300 – 2600 m.	Jun – Sept	**Not Likely to Occur:** Suitable habitat does not occur within the BSA. The nearest and most recent recorded occurrence is approximately 9.22 miles north of the BSA; this occurrence was recorded in 1996.
Linanthus concinnus	San Gabriel linanthus	S2, 1B.2	Chaparral, lower montane coniferous forest, upper montane coniferous forest; dry rocky slopes, openings; 1700 – 2800 m.	May – Jun	**Not Likely to Occur:** Suitable habitat does not occur within the BSA. The nearest and most recent recorded occurrence is approximately 9.58 miles north of the BSA; this occurrence was recorded in 1917.
Monardella australis ssp. *Jokerstii*	Jokerst's monardella	S1, 1B.1	Chaparral, lower montane coniferous forest; alluvial terraces, drainages, scree, slopes, talus, washes, steep scree or talus, stony benches on canyon bottoms in montane forest (or chaparral); 1350 – 1750 m.	Jul – Sept	**Not Likely to Occur:** Suitable habitat does not occur within the BSA. The nearest and most recent recorded occurrence is approximately 9.89 miles northeast of the BSA; this occurrence was recorded in 2006.
Monardella macrantha ssp. *Hallii*	Hall's monardella	S3, 1B.3	Broadleaved upland forest, chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland; 600 – 2000 m.	May – Aug	**Not Likely to Occur:** Suitable habitat does not occur within the BSA. The nearest recorded occurrence is approximately 3.66 miles north of the BSA; this occurrence was recorded in 1924.
Muhlenbergia californica	California muhly	S4, 4.3	Chaparral, coastal scrub, lower montane coniferous forest, meadows and seeps; mesic, streambanks, canyons, seeps; 100 – 2000 m.	Jun – Sept	**Low:** Limited marginally suitable habitat occurs within the BSA. The nearest and most recent recorded occurrence is approximately 4.25 miles east of the BSA; this occurrence was recorded in 1916.

Scientific Name	Common Name	Status	Habitat and Distribution	Blooming Period	Potential to Occur
Muhlenbergia utilis	aparejo grass	S2S3, 2B.2	Chaparral, cismontane woodland, coastal scrub, meadows and seeps, marshes and swamps; alkaline, serpentinite, wet sites along streams, ponds; 250 – 1000 m.	Oct – Mar	**Low:** Limited marginally suitable habitat occurs within the BSA. The nearest and most recent recorded occurrence is approximately 4.25 miles east of the BSA; this occurrence was recorded in 1916.
Navarretia prostrata	prostrate vernal pool navarretia	S2, 1B.2	Coastal scrub, meadows and seeps, valley and foothill grassland (alkaline), vernal pools; mesic, alkaline floodplains, vernal pools; < 700 m.	Apr – Jul	**Low:** Limited marginally suitable habitat occurs within the BSA. The nearest and most recent recorded occurrence is approximately 4.25 miles east of the BSA; this occurrence was recorded in 1918.
Oreonana vestita	woolly mountain-parsley	S3, 1B.3	Lower montane coniferous forest, subalpine coniferous forest, upper montane coniferous forest; gravelly (sometimes), talus (sometimes) substrates; 1670 – 3500 m.	Mar – Jul	**Not Likely to Occur:** Suitable habitat does not occur within the BSA. The nearest recorded occurrence is approximately 8.56 miles north of the BSA; this occurrence was recorded in 1995.
Orobanche valida ssp. *Valida*	Rock Creek broomrape	S2, 1B.2	Chaparral, pinyon and juniper woodland; granitic substrates; 1030 – 2000 m.	May – Sept	**Not Likely to Occur:** Suitable habitat does not occur within the BSA. The nearest and most recent recorded occurrence is approximately 6.54 miles north of the BSA; this occurrence was recorded in 1996.
Phacelia stellaris	Brand's star phacelia	S1, 1B.1	Coastal dunes, coastal scrub; open areas, coastal sage scrub; < 400 m.	Mar – May	**Not Likely to Occur:** Suitable habitat does not occur within the BSA. The nearest and most recent recorded occurrence is approximately 9.56 miles east of the BSA; this occurrence was recorded in 2003.
Pseudognaphalium leucocephalum	white rabbit-tobacco	S2, 2B.2	Chaparral, cismontane woodland, coastal scrub, and riparian woodland; sandy or gravelly benches, dry stream bottoms, canyon bottoms; < 500 m.	Jul – Oct	**Moderate:** Suitable habitat occurs within the BSA. The nearest and most recent recorded occurrence is approximately 0.68 mile west of the BSA; this occurrence was recorded in 1931.

Scientific Name	Common Name	Status	Habitat and Distribution	Blooming Period	Potential to Occur
Sagittaria sanfordii	Sanford's arrowhead	S3, 1B.2	Marshes and swamps (shallow freshwater); ponds, ditches; < 300 m.	May – Oct	**Moderate:** Suitable habitat occurs within the BSA. The nearest recorded occurrence is approximately 3.63 miles west of the BSA; this occurrence was recorded in 2015.
Senecio aphanactis	chaparral ragwort	S2, 2B.2	Chaparral, cismontane woodland, coastal scrub; alkaline flats, dry open rocky areas; 10 – 550 m.	Feb – May	**Not Likely to Occur:** Suitable habitat does not occur within the BSA. The nearest recorded occurrence is approximately 5.56 miles west of the BSA; this occurrence was recorded in 1932.
Sidalcea neomexicana	salt spring checkerbloom	S2, 2B.2	Chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub, playas; mesic, alkaline springs, marshes; < 1500 m.	Apr – Jun	**Low:** Limited marginally suitable habitat occurs within the BSA. The nearest and most recent recorded occurrence is approximately 0.28 miles south of the BSA; this occurrence was recorded in 1909.
Symphyotrichum defoliatum	San Bernardino aster	S2, 1B.2	Cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, valley and foothill grassland (vernally mesic), near ditches streams, springs; < 2050 m.	Jul – Nov	**Low:** Limited marginally suitable habitat occurs within the BSA. The nearest recorded occurrence is approximately 3.59 miles southwest of the BSA; this occurrence was recorded in 1896.
Symphyotrichum greatae	Greata's aster	S2, 1B.3	Broad leaved upland forest, chaparral, cismontane woodland, lower montane coniferous forest, riparian woodland; mesic, damp places in canyons; 300 – 2000 m.	Aug – Oct	**Not Likely to Occur:** Suitable habitat does not occur within the BSA. The nearest recorded occurrence is approximately 3.42 miles north of the BSA; this occurrence was recorded in 1932.
Thelypteris puberula var. *sonorensis*	Sonoran maiden fern	S2, 2B.2	Meadows and seeps, along streams, seepage areas; 50 – 800 m.	Jan – Sept	**Not Likely to Occur:** Suitable habitat does not occur within the BSA. The nearest and most recent recorded occurrence is approximately 9.10 miles west of the BSA; this occurrence was recorded in 1997.

Scientific Name	Common Name	Status	Habitat and Distribution	Blooming Period	Potential to Occur
Thysanocarpus rigidus	rigid fringepod	S2, 1B.2	Pinyon and juniper woodland, oak/pine woodland; dry rocky slopes; 600 – 2200 m.	Feb – May	**Not Likely to Occur:** Suitable habitat does not occur within the BSA. The nearest recorded occurrence is within the BSA; this occurrence was recorded in 1923.
Viola pinetorum ssp. *Grisea*	grey-leaved violet	S3, 1B.2	Meadows and seeps, subalpine coniferous forest, upper montane coniferous forest; mountain peaks, alpine zones; 1980 – 3700 m.	Jun – Jul	**Not Likely to Occur:** Suitable habitat does not occur within the BSA. The nearest and most recent recorded occurrence is approximately 8.81miles northeast of the BSA; this occurrence was recorded in 2014.

Sources: CDFW 2022a, CNPS 2022, Jepson Flora Project 2022

Federal Designation

FE = Federally Endangered

FT = Federally Threatened

FC = Federal Candidate Species for Listing CDFW State Designation

State Ranking

SE = State Endangered

SR = State Rare

ST = State Threatened

S1 = Critically Imperiled

S2 = Imperiled

S3 = Vulnerable

S4 = Apparently Secure

S5 = Secure

California Rare Plant Rank (CRPR)

1A Plants considered by the CNPS to be extinct in California.

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

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

3 Review List: Plants about which more information is needed

4 Plants of limited distribution – a watch list.

.1 Seriously threatened in California (high degree/immediacy of threat).

.2 Fairly threatened in California (moderate degree/immediacy of threat).

.3 Not very threatened in California (low degree/ immediacy of threat or no current threats known).

5.4 SPECIAL-STATUS WILDLIFE

Special-status taxa include those listed as threatened or endangered under the federal or California Endangered Species Acts, taxa proposed for such listing, Species of Special Concern, and other taxa that have been identified by the USFWS, CDFW, or local jurisdictions as unique or rare and which have the potential to occur within the BSA.

The CNDDB was queried for occurrences of special-status wildlife taxa within the BSA and surrounding ten-mile area, as discussed above in Section 2.0. Table 6 summarizes the special-status wildlife taxa known to occur regionally (within 10 miles) and their potential for occurrence in the BSA (Appendix A Figure 4).

Each of the taxa identified in the database reviews/searches were assessed for its potential to occur within the BSA based on the following criteria:

- **Present:** Taxa (or sign) were observed in the BSA or in the same watershed (aquatic taxa only) during the most recent surveys, or a population has been acknowledged by CDFW, USFWS, or local experts.
- **High:** Habitat (including soils) for the taxa occurs on site and a known occurrence occurs within the BSA or adjacent areas (within 5 miles of the BSA) within the past 20 years; however, these taxa were not detected during the most recent surveys.
- **Moderate:** Habitat (including soils) for the taxa occurs on site and a known regional record occurs within the database search, but not within 5 miles of the BSA or within the past 20 years; or a known occurrence occurs within 5 miles of the BSA and within the past 20 years and marginal or limited amounts of habitat occurs on site; or the taxa's range includes the geographic area and suitable habitat exists.
- **Low:** Limited habitat for the taxa occurs on site and no known occurrences were found within the database search and the taxa's range includes the geographic area.
- **Not Likely to Occur:** The environmental conditions associated with taxa presence do not occur within the BSA.

Table 6 Known and Potential Occurrences of Special-Status Wildlife within the BSA

Taxa		Status	Habitat Types	Comments	Occurrence Potential
Scientific Name	**Common Name**				
Invertebrates					
Bombus crotchii	Crotch bumble bee	S1S2	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include *Antirrhinum*, *Phacelia*, *Clarkia*, *Dendromecon*, *Eschscholzia*, and *Eriogonum*.	Suitable habitat occurs within the BSA. The nearest recorded occurrence is approximately 0.16 mile south of the BSA; this occurrence was recorded in 2020.	**High**
Callophrys mossii hidakupa	San Gabriel Mountains elfin butterfly	S1S2	Habitat consists of rocky outcrops, woody canyons, and cliffs.	No suitable habitat within the BSA. The nearest and most recent recorded occurrence is approximately 5.65 miles north of the BSA; this occurrence was recorded in 1976.	**Not Likely to Occur**
Diplectrona californica	California diplectronan caddisfly	S1S2	Habitat is apparently unknown for this genus.	Limited marginally suitable habitat occurs within the BSA. The nearest recorded occurrence is approximately 0.28 mile south of the BSA.	**Low**
Glyptostoma gabrielense	San Gabriel chestnut	S2	Rocky hillsides under plant debris, in rock piles, wood rat nests, and spaces beneath logs, stumps, and boulders.	No suitable habitat within the BSA. The nearest recorded occurrence is approximately 4.21 miles northwest of the BSA; this occurrence was recorded in 1949.	**Not Likely to Occur**
Gonidea angulata	western ridged mussel	S1S2	Inhabits creeks and rivers of all sizes and can be found on substrates varying from firm mud to coarse particles; is rarely found in lakes or reservoirs.	No suitable habitat within the BSA. The nearest and most recent recorded occurrence is approximately 5.78 miles south of the BSA; this occurrence was recorded in 1910.	**Not Likely to Occur**
Neolarra alba	white cuckoo bee	SA	Southern California west of the mountains.	Limited marginally suitable habitat occurs within the BSA. The nearest recorded occurrence is approximately 0.28 mile south of the BSA.	**Low**

Taxa		Status	Habitat Types	Comments	Occurrence Potential
Scientific Name	**Common Name**				
Rhaphiomidas terminatus abdominalis	Delhi Sands flower-loving fly	FE, S1	Fine, sandy soils, often with wholly or partly consolidated dunes. Restricted to a particular soil type classified as the 'Dehli' series.	No suitable habitat within the BSA. The nearest recorded occurrence is approximately 4.58 miles east of the BSA; this occurrence was recorded in 2001.	**Not Likely to Occur**
Fish					
Catostomus santaanae	Santa Ana sucker	FT, S1	Includes clear, cool rocky pools and runs of creeks and small to medium rivers.	No suitable habitat within the BSA. The nearest and most recent recorded occurrence is approximately 3.91 miles west of the BSA; this occurrence was recorded in 2008.	**Not Likely to Occur**
Gila orcuttii	arroyo chub	S2, SSC	Includes headwaters, creeks, and small to medium rivers, often intermittent streams.	No suitable habitat within the BSA. The nearest recorded occurrence is approximately 7.24 miles north of the BSA; this occurrence was recorded in 2003.	**Not Likely to Occur**
Rhinichthys osculus ssp. *8*	Santa Ana speckled dace	S1, SSC	Occurs in many kinds of habitats: riffles, runs, and pools of cool flowing headwaters, creeks, and small to medium rivers with mostly rocky substrates; large and small lakes (rarely); warm, permanent and intermittent streams; and outflows of desert springs.	No suitable habitat within the BSA. The nearest and most recent recorded occurrence is approximately 7.88 miles north of the BSA; this occurrence was recorded in 2003.	**Not Likely to Occur**
Amphibians					
Anaxyrus californicus	arroyo toad	FE, S2S3, SSC	Semi-arid regions near washes or intermittent streams. Habitats used include valley-foothill and desert riparian as well as a variety of more arid habitats including desert wash, palm oasis, and Joshua tree, mixed chaparral, and sage brush. Adults active from March to July.	No suitable habitat within the BSA. The nearest and most recent recorded occurrence is approximately 4.21 miles east of the BSA; this occurrence was recorded in 2005.	**Not Likely to Occur**

Taxa		Status	Habitat Types	Comments	Occurrence Potential
Scientific Name	**Common Name**				
Batrachoseps gabrieli	San Gabriel slender salamander	S2S3	Occurs on talus slopes surrounded by a variety of conifer and montane hardwood species, including big cone spruce, pine, white fir, incense cedar, canyon live oak, black oak, and California laurel.	No suitable habitat within the BSA. The nearest and most recent recorded occurrence is approximately 7.09 miles north of the BSA; this occurrence was recorded in 2016.	**Not Likely to Occur**
Ensatina eschscholtzii klauberi	large-blotched salamander	S3, WL	Inhabits scattered stands of conifer as well as mixed conifer forest.	No suitable habitat within the BSA. The nearest and most recent recorded occurrence is approximately 6.56 miles northwest of the BSA; this occurrence was recorded in 1999.	**Not Likely to Occur**
Rana boylii	foothill yellow-legged frog	SE, S3, SSC	Found in or near rocky streams in a variety of habitats, including valley-foothill hardwood, valley-foothill hardwood-conifer, valley-foothill riparian, ponderosa pine, mixed conifer, coastal scrub, mixed chaparral, and wet meadow types.	No suitable habitat within the BSA. The nearest and most recent recorded occurrence is approximately 1.19 miles north of the BSA; this occurrence was recorded in 2014.	**Not Likely to Occur**
Rana muscosa	southern mountain yellow-legged frog	FE, SE, S1, WL	In southern California, populations are restricted to streams in ponderosa pine, montane hardwood-conifer, and montane riparian habitats.	No suitable habitat within the BSA. The nearest and most recent recorded occurrence is approximately 4.08 miles north of the BSA; this occurrence was recorded in 2001.	**Not Likely to Occur**
Spea hammondii	western spadefoot	S3, SSC	occurs primarily in grasslands, but occasional populations also occur in valley-foothill hardwood woodlands. Some populations persist for a few years in orchard or vineyard habitats.	No suitable habitat within the BSA. The nearest recorded occurrence is approximately 0.5 mile west of the BSA; this occurrence was recorded in 1941.	**Not Likely to Occur**
Taricha torosa	Coast Range newt	S4, SSC	Occupy various upland habitats such as grassland, woodland, and forest.	Limited marginally suitable habitat occurs within the BSA. The nearest recorded occurrence is approximately 1.85 miles north of the BSA; this occurrence was recorded in 2007.	**Not Likely to Occur**
Reptiles					

Taxa		Status	Habitat Types	Comments	Occurrence Potential
Scientific Name	**Common Name**				
Anniella stebbinsi	Southern California legless lizard	S3, SSC	Coastal sand dunes and a variety of interior habitats such as sandy washes and alluvial fans.	Limited marginally suitable habitat occurs within the BSA. The nearest recorded occurrence is approximately 0.04 mile south of the BSA; this occurrence was recorded in 2010.	**Moderate**
Arizona elegans occidentalis	California glossy snake	S2, SSC	Inhabits arid scrub, rocky washes, grasslands, chaparral.	Limited marginally suitable habitat occurs within the BSA. The nearest recorded occurrence is approximately 0.50 mile west of the BSA; this occurrence was recorded in 1946.	**Low**
Aspidoscelis tigris stejnegeri	coastal whiptail	S3, SSC	Hot and dry open areas with sparse foliage - chaparral, woodland, and riparian areas.	Limited marginally suitable habitat occurs within the BSA. The nearest recorded occurrence is approximately 4.25 miles north of the BSA; this occurrence was recorded in 2006.	**Low**
Crotalus ruber	red-diamond rattlesnake	S3, SSC	Occurs in chaparral, woodland, and arid desert habitats in rocky areas and dense vegetation.	No suitable habitat within the BSA. The nearest and most recent recorded occurrence is approximately 8.94 miles south of the BSA; this occurrence was recorded in 2017.	**Not Likely to Occur**
Emys marmorata	western pond turtle	S3, SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches usually with aquatic vegetation, below 6000 ft elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	Limited marginally suitable habitat occurs within the BSA. The nearest and most recent recorded occurrence is approximately 9.30 miles south of the BSA; this occurrence was recorded in 1987.	**Low**

Taxa		Status	Habitat Types	Comments	Occurrence Potential
Scientific Name	**Common Name**				
Phrynosoma blainvillii	coast horned lizard	S3S4, SSC	Occurs in a variety of habitats, including scrubland, grassland, coniferous woods, and broadleaf woodlands; typically, it is found in areas with sandy soil, scattered shrubs, and ant colonies, such as along the edges of arroyo bottoms or dirt roads.	Limited marginally suitable habitat occurs within the BSA. The nearest recorded occurrence is approximately 0.50 mile west of the BSA; this occurrence was recorded in 1941.	**Low**
Thamnophis hammondii	two-striped gartersnake	S3S4, SSC	Generally found in or near permanent fresh water, often along streams with rocky beds bordered by willows and other riparian vegetation, including mountain slopes and desert oases.	Limited marginally suitable habitat occurs within the BSA. The nearest and most recent recorded occurrence is approximately 1.82 miles west of the BSA; this occurrence was recorded in 2010.	**Low**
Birds					
Accipiter cooperii	Cooper's hawk	S4, WL	Dense stands of live oak, riparian deciduous, or other forest habitats near water used most frequently for breeding.	Limited marginally suitable habitat occurs within the BSA. The nearest and most recent recorded occurrence is approximately 9.23 miles south of the BSA; this occurrence was recorded in 2012.	**Nesting: Low** **Foraging: Moderate**
Agelaius tricolor	tricolored blackbird	ST, S1S2, SSC	Breeds near fresh water, preferably in emergent wetland with tall, dense cattails or tules, but also in thickets of willow, blackberry, wild rose, tall herbs. Feeds in grassland and cropland habitats.	No suitable habitat within the BSA. The nearest and most recent recorded occurrence is approximately 9.13 miles south of the BSA; this occurrence was recorded in 2014.	**Not Likely to Occur**
Aimophila ruficeps canescens	southern California rufous-crowned sparrow	S3, WL	Moderate to steep, dry, rocky, south-, west-, or east-facing slopes vegetated with low scattered scrub cover interspersed with patches of grasses and forbs or rock outcrops.	No suitable habitat within the BSA. The nearest recorded occurrence is approximately 3.58 miles east of the BSA; this occurrence was recorded in 2001.	**Not Likely to Occur**
Aquila chrysaetos	golden eagle	S3, FP, WL	Habitat typically consists of rolling foothills, mountain areas, sage-juniper flats, desert. Nests on cliffs of all	No suitable habitat within the BSA. The nearest and most recent recorded occurrence is approximately 7.82 miles	**Not Likely to Occur**

Taxa		Status	Habitat Types	Comments	Occurrence Potential
Scientific Name	Common Name				
			heights and in large trees in open areas.	south of the BSA; this occurrence was recorded in 2007.	
Asio otus	long-eared owl	SSC	Deciduous and evergreen forests, orchards, wooded parks, farm woodlots, river woods, desert oases. Wooded areas with dense vegetation needed for roosting and nesting, open areas for hunting.	No suitable habitat within the BSA. The nearest and most recent recorded occurrence is approximately 9.87 miles south of the BSA; this occurrence was recorded in 1925.	**Not Likely to Occur**
Athene cunicularia	burrowing owl	S3, SSC	A yearlong resident of open, dry grassland and desert habitats, and in grass, forb and open shrub stages of pinyon-juniper and ponderosa pine habitats. Usually nests in old burrow of ground squirrel, or other small mammal. May dig own burrow in soft soil. Nest chamber lined with excrement, pellets, debris, grass, feathers; sometimes unlined. Pipes, culverts, and nest boxes used where burrows scarce.	No suitable habitat within the BSA. The nearest recorded occurrence is approximately 7.51 miles south of the BSA; this occurrence was recorded in 2006.	**Not Likely to Occur**
Buteo swainsoni	Swainson's hawk	ST, S3	Breeds in stands with few trees in juniper-sage flats, riparian areas, and in oak savannah in the Central Valley. Forages in adjacent grasslands or suitable grain or alfalfa fields, or livestock pastures.	No suitable habitat within the BSA. The nearest and most recent recorded occurrence is approximately 5.50 miles south of the BSA; this occurrence was recorded in 1920.	**Not Likely to Occur**
Coccyzus americanus occidentalis	western yellow-billed cuckoo	FT, SE, S1	Breeding habitat is generally deciduous riparian woodland, especially including dense stands of cottonwood and willow.	No suitable habitat within the BSA. The nearest and most recent recorded occurrence is approximately 7.85 miles south of the BSA; this occurrence was recorded in 1931.	**Not Likely to Occur**
Cypseloides niger	black swift	S2, SSC	Nests in moist crevice or cave on sea cliffs above the surf, or on cliffs behind, or adjacent to, waterfalls in deep canyons. Forages widely over many habitats.	No suitable habitat within the BSA. The nearest and most recent recorded occurrence is approximately 4.33 miles north of the BSA; this occurrence was recorded in 1986.	**Not Likely to Occur**

Taxa		Status	Habitat Types	Comments	Occurrence Potential
Scientific Name	**Common Name**				
Falco columbarius	merlin	S3S4, WL	Frequents coastlines, open grasslands, savannahs, woodlands, lakes, wetlands, edges, and early successional stages.	No suitable habitat within the BSA. The nearest and most recent recorded occurrence is approximately 6.52 miles west of the BSA; this occurrence was recorded in 1993.	**Not Likely to Occur**
Laterallus jamaicensis coturniculus	California black rail	ST, S1, FP	Various habitats, from high coastal marshes to freshwater marshes along the lower Colorado River. Along the coast, favors marshland with unrestricted tidal influence (estuarine, intertidal, emergent, regularly flooded). In coastal and estuarine saltmarshes, favored areas are dominated by pickleweed, bulrushes, and matted salt grass and other marsh vegetation; has an affinity for tidal sloughs. Nests in or along edge of marsh, usually in site hidden in marsh grass or at base or Salicornia, sometimes on damp ground but usually on mat of previous year's dead grasses.	No suitable habitat within the BSA. The nearest and most recent recorded occurrence is approximately 1.91 miles south of the BSA; this occurrence was recorded in 1931.	**Not Likely to Occur**
Polioptila californica californica	coastal California gnatcatcher	FT, S2, SSC	Several distinctive sub-associations of the coastal sage scrub plant community, especially those dominated by *Artemisia californica*. Generally, avoids crossing even small areas of unsuitable habitat. Dry coastal slopes, washes, and mesas; areas of low plant growth (about 1 m high). Nests in shrubs.	Limited marginally suitable habitat occurs within the BSA. The nearest recorded occurrence is within the BSA; this occurrence was recorded in 1994.	**Nesting: Not Likely to Occur** **Foraging: Low**
Setophaga petechia	yellow warbler	S3S4, SSC	Breeds in montane chaparral, and in open ponderosa pine and mixed conifer habitats with substantial amounts of brush.	No suitable habitat within the BSA. The nearest and most recent recorded occurrence is approximately 9.59 miles southwest of the BSA; this occurrence was recorded in 2015.	**Not Likely to Occur**
Vireo bellii pusillus	least Bell's vireo	FE, SE, S2	Dense brush, mesquite, willow-cottonwood forest, streamside	No suitable habitat within the BSA.	**Not Likely to Occur**

Taxa		Status	Habitat Types	Comments	Occurrence Potential
Scientific Name	Common Name				
			thickets, and scrub oak, in arid regions but often near water. Nests in shrub or low tree, usually averaging about 1 m above ground, usually in horizontal or down sloping twig fork, typically near edge of thicket.	The nearest and most recent recorded occurrence is approximately 8.31 miles south of the BSA; this occurrence was recorded in 2011.	
Mammals					
Antrozous pallidus	pallid bat	S3, SSC	Occupies a large variety of habitats, including grasslands, shrublands, woodlands, and forests from sea level up through mixed conifer forests. The species is most common in open, dry habitats with rocky areas for roosting.	No suitable habitat within the BSA. The nearest recorded occurrence is approximately 3.79 miles southeast of the BSA; this occurrence was recorded in 1951.	**Not Likely to Occur**
Chaetodipus fallax fallax	northwestern San Diego pocket mouse	S3S4, SSC	Common resident of sandy herbaceous areas, usually in association with rocks or course gravel including coastal scrub, chamise-redshank chaparral, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon-juniper, and annual grassland.	No suitable habitat within the BSA. The nearest recorded occurrence is approximately 0.43 mile east of the BSA; this occurrence was recorded in 2001.	**Not Likely to Occur**
Dipodomys merriami parvus	San Bernardino kangaroo rat	FE, SCE, S1, SSC	Occurs in alluvial scrub/coastal sage scrub habitats on gravelly and sandy soils adjoining river and stream terraces and on alluvial fans.	Limited marginally suitable habitat occurs within the BSA. The nearest recorded occurrence is approximately 0.40 mile east of the BSA; this occurrence was recorded in 1998.	**Low**
Eumops perotis californicus	western mastiff bat	S3S4, SSC	Occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, annual and perennial grasslands, palm oases, chaparral, desert scrub, and urban.	Limited marginally suitable habitat occurs within the BSA. The nearest recorded occurrence is approximately 2.29 miles west of the BSA; this occurrence was recorded in 1952.	**Low**

Taxa		Status	Habitat Types	Comments	Occurrence Potential
Scientific Name	**Common Name**				
Lasiurus cinereus	hoary bat	S4	During migration in southern California, males are found in foothills, deserts and mountains; females in lowlands and coastal valleys. Habitats suitable for bearing young include all woodlands and forests with medium to large-size trees and dense foliage.	No suitable habitat within the BSA. The nearest recorded occurrence is approximately 1.67 miles northwest of the BSA; this occurrence was recorded in 2006.	**Not Likely to Occur**
Lasiurus xanthinus	western yellow bat	S3, SSC	Recorded in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats.	No suitable habitat within the BSA. The nearest and most recent recorded occurrence is approximately 3.59 miles southwest of the BSA; this occurrence was recorded in 1985.	**Not Likely to Occur**
Lepus californicus bennettii	San Diego black-tailed jackrabbit	S3S4	Open grasslands, agricultural fields, and sparse coastal scrub.	Limited marginally suitable habitat occurs within the BSA. The nearest and most recent recorded occurrence is approximately 9.05 miles east of the BSA; this occurrence was recorded in 2005.	**Low**
Myotis yumanensis	Yuma myotis	S4	Optimal habitats are open forests and woodlands with sources of water over which to feed.	No suitable habitat within the BSA. The nearest recorded occurrence is approximately 4.15 miles northwest of the BSA; this occurrence was recorded in 2003.	**Not Likely to Occur**
Neotoma lepida intermedia	San Diego desert woodrat	S3S4, SSC	Sagebrush scrub; chaparral.	Limited marginally suitable habitat occurs within the BSA. The nearest recorded occurrence is approximately 0.43 mile northwest of the BSA; this occurrence was recorded in 2001.	**Moderate**
Nyctinomops femorosaccus	pocketed free-tailed bat	S3, SSC	Habitats used include pinyon-juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oasis.	No suitable habitat within the BSA. The nearest and most recent recorded occurrence is approximately 9.32 miles west of the BSA; this occurrence was recorded in 1985.	**Not Likely to Occur**

Taxa		Status	Habitat Types	Comments	Occurrence Potential
Scientific Name	**Common Name**				
Nyctinomops macrotis	big free-tailed bat	S3, SSC	Arroyo, shrub desert, woodland, and moist Chisos woodland -- although most animals were in the floodplain-arroyo association.	No suitable habitat within the BSA. The nearest and most recent recorded occurrence is approximately 3.59 miles southwest of the BSA; this occurrence was recorded in 1987.	**Not Likely to Occur**
Ovis canadensis nelsoni	desert bighorn sheep	S3, FP	Mesic to xeric, alpine to desert grasslands or shrub-steppe in mountains, foothills, or river canyons.	No suitable habitat within the BSA. The nearest and most recent recorded occurrence is approximately 7.24 miles north of the BSA; this occurrence was recorded in 1986.	**Not Likely to Occur**
Perognathus longimembris brevinasus	Los Angeles pocket mouse	S1S2, SSC	Includes lower elevation grassland, alluvial sage scrub, and coastal sage scrub.	Limited marginally suitable habitat occurs within the BSA. The nearest and most recent recorded occurrence is approximately 9.71 miles east of the BSA; this occurrence was recorded in 2003.	**Low**
Taxidea taxus	American badger	S3, SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils.	Limited marginally suitable habitat occurs within the BSA. The nearest and most recent recorded occurrence is approximately 6.11 miles west of the BSA; this occurrence was recorded in 2008.	**Low**
Sources: CDFW 2022a, 2022e; Nafis 2022; NatureServe 2022					

Taxa		Status	Habitat Types	Comments	Occurrence Potential
Scientific Name	**Common Name**				
Federal Rankings: FE = Federally Endangered FT = Federally Threatened FC = Federal Candidate for Listing			State Rankings: FP = Fully Protected SE= State Endangered ST = State Threatened SA = CDFW Special Animal SC = State Candidate for Listing WL = CDFW Watch List SSC = Species of Special Concern S1 = Critically Imperiled S2 = Imperiled S3 = Vulnerable S4 = Apparently Secure		

5.5 WILDLIFE CORRIDORS AND SPECIAL LINKAGES

Linkages and corridors facilitate regional animal movement and are generally centered in or around waterways, riparian corridors, flood control channels, contiguous habitat, and upland habitat. Drainages generally serve as movement corridors because wildlife can move easily through these areas, and fresh water is available. Corridors also offer wildlife unobstructed terrain for foraging and for dispersal of young individuals.

As the movements of wildlife species are more intensively studied using radio-tracking devices, there is mounting evidence that some wildlife species do not necessarily restrict their movements to some obvious landscape element, such as a riparian corridor. For example, recent radio-tracking and tagging studies of Coast Range newts, California red-legged frogs, southwestern pond turtles, and two-striped garter snakes found that long-distance dispersal involved radial or perpendicular movements away from a water source with little regard to the orientation of the assumed riparian "movement corridor" (Hunt 1993; Rathbun et al., 1992; Bulger et al. 2002; Trentham 2002; Ramirez 2003). Likewise, carnivores do not necessarily use riparian corridors as movement corridors, frequently moving overland in a straight line between two points when traversing large distances (Newmark 1995; Beier 1993, 1995; Noss et al. 1996; Noss et al. no date). In general, the following corridor functions can be utilized when evaluating impacts to wildlife movement corridors:

- Movement corridors are physical connections that allow wildlife to move between patches of suitable habitat. Simberloff et al. (1992) and Beier and Loe (1992) correctly state that, for most species, we do not know what corridor traits (length, width, adjacent land use, etc.) are required for a corridor to be useful. But, as Beier and Loe (1992) also note, the critical features of a movement corridor may not be its physical traits but rather how well a particular piece of land fulfills several functions, including allowing dispersal, plant propagation, genetic interchange, and recolonization following local extirpation.

- Dispersal corridors are relatively narrow, linear landscape features embedded in a dissimilar matrix that links two or more areas of suitable habitat that would otherwise be fragmented and isolated from one another by rugged terrain, changes in vegetation, or human-altered environments. Corridors of habitat are essential to the local and regional population dynamics of a species because they provide physical links for genetic exchange and allow animals to access alternative territories as dictated by fluctuating population densities.

- Habitat linkages are broader connections between two or more habitat areas. This term is commonly used as a synonym for a wildlife corridor (Meffe and Carroll 1997). Habitat linkages may themselves serve as source areas for food, water, and cover, particularly for small- and medium-size animals.

- Travel routes are usually landscape features, such as ridgelines, drainages, canyons, or riparian corridors within larger natural habitat areas that are used frequently by animals to facilitate movement and provide access to water, food, cover, den sites, or other necessary resources. A travel route is generally preferred by a species because it provides the least amount of

topographic resistance in moving from one area to another yet still provides adequate food, water, or cover (Meffe and Carroll 1997).

Wildlife crossings are small, narrow areas of limited extent that allow wildlife to bypass an obstacle or barrier. Crossings typically are human-made and include culverts, underpasses, drainage pipes, bridges, tunnels to provide access past roads, highways, pipelines, or other physical obstacles. Wildlife crossings often represent “choke points” along a movement corridor because useable habitat is physically constricted at the crossing by human-induced changes to the surrounding areas (Meffe and Carroll 1997).

5.6 Wildlife movement in the BSA

The BSA is located in a highly urbanized area and there are no known/mapped wildlife corridors within the BSA. There is potential for the area to serve as a refuge for wildlife that stray from their normal habitats, considering the surrounding habitat is part of the California Botanic Garden.

However, the BSA is a part of the Pacific Flyway, a major north-south flyway for migratory birds in America, extending from Alaska to Patagonia. Each year, at least one billion birds migrate along the Pacific Flyway (Audubon 2022).

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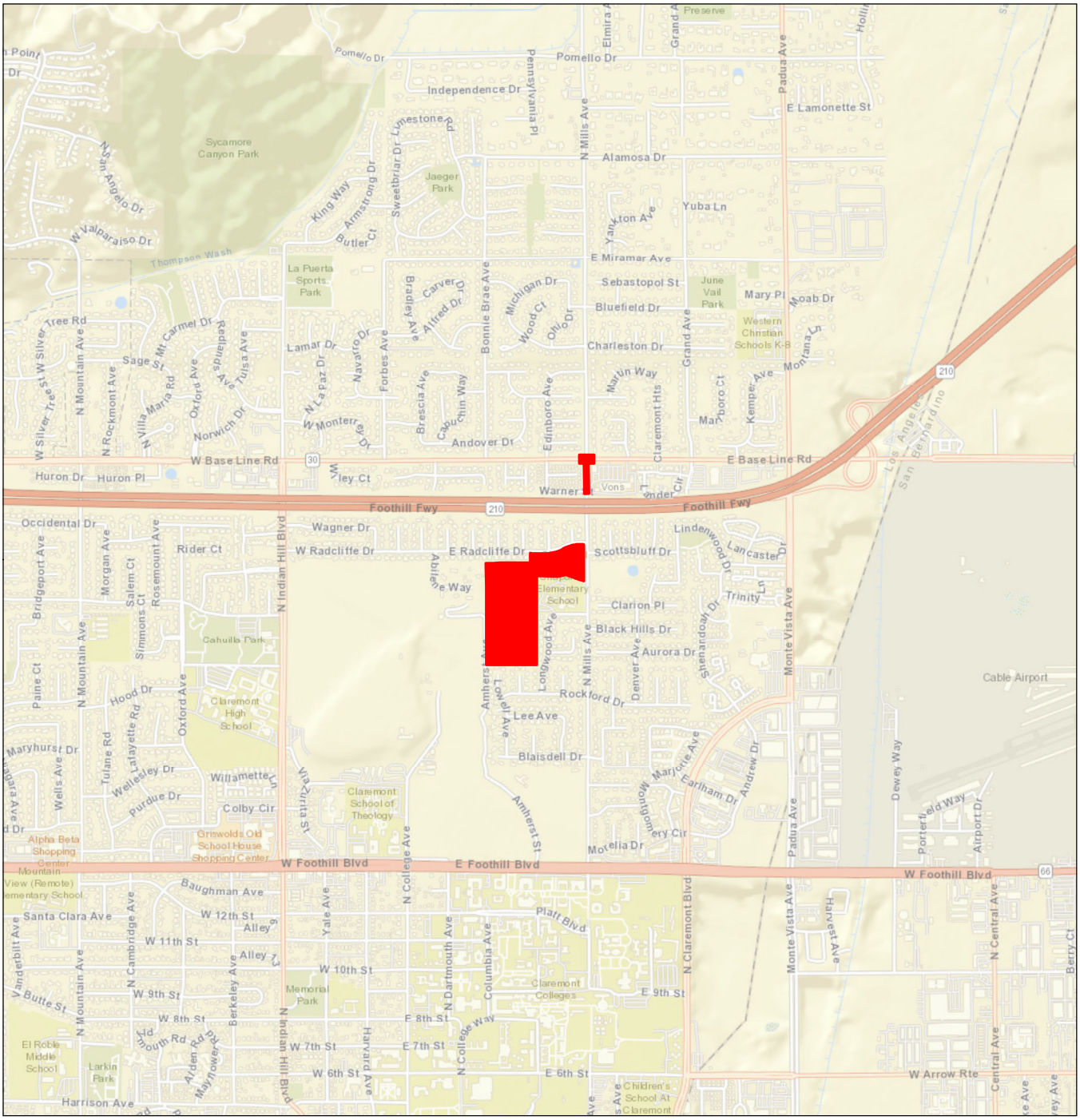
Appendix A Figures



Notes

1. Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
2. Data Sources: Stantec 2022.
3. Background: Sources: Esri, GEBCO, NOAA, National Geographic, Garmin, HERE, Geonames.org, and other contributors
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
Esri, Garmin, GEBCO, NOAA NGDC, and other contributors

Stantec

Project Location
Claremont
Los Angeles County, California

Prepared by DL on 2022-06-21
TR by SET on 2022-06-21
IR by JV on 2022-06-21

Client/Project
184031542
City of Pomona
Pedley Spreading Grounds Pond Enhancement Project
Biological Resources Technical Report

Figure No.
1

Title
Project Location

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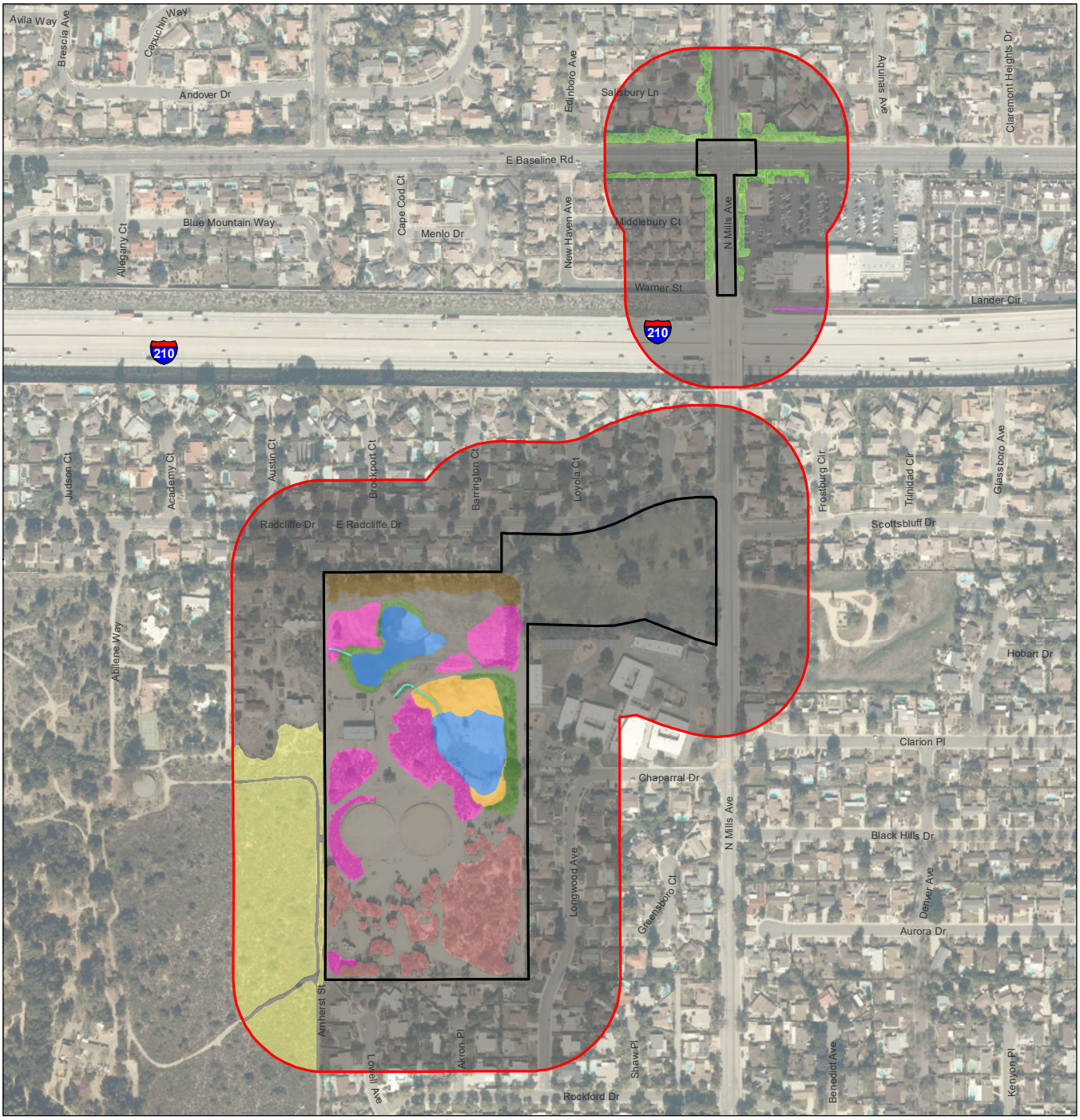


Biological Survey Area
Project Footprint

Vegetation Communities and Land Cover Types

- Mulefat thickets
- California Botanic Garden
- Concrete Lined Channel
- Disturbed/Developed
- Common deerweed shrubland
- Eucalyptus woodland
- Olive woodland
- Residential Landscaping
- Retention Pond
- Ruderal herbaceous
- Vegetated Channel

0 250 500 Feet

(At original document size of 8.5x11)
1:6,000

N

Notes

1. Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
2. Data Sources: Stantec 2022. Township/Section/ Range Data from BLM 2018. Quadrangle data from USGS 2017.
3. Background: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Stantec

Project Location
Claremont
Los Angeles County, California

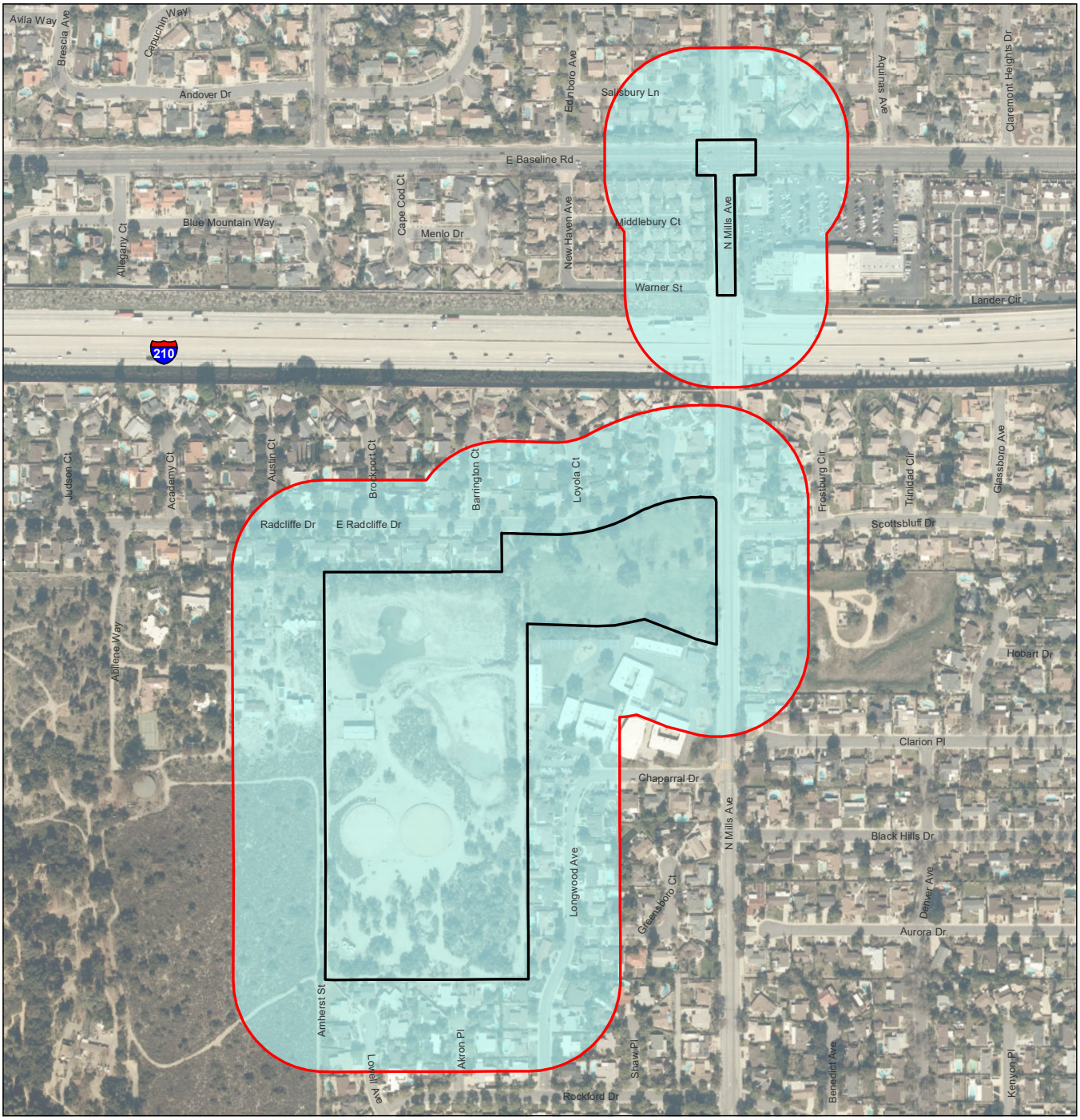
Prepared by DL on 2022-06-21
TR by SET on 2022-06-21
IR by JV on 2022-06-21

Client/Project 184031542
City of Pomona
Pedley Spreading Grounds Pond Enhancement Project
Biological Resources Technical Report

Figure No.
2

Title
Vegetation Communities and Land Cover Types

V:\1858\Active\184031542_PedleySpreadingGrounds\03_data\gis\BRTR_Figure2_VegetationMap_20220621.mxd Revised: 2022-07-05 By: Dalaw



Biological Survey Area

Project Footprint

Soils Map Unit Symbol

1006: Urban land-Soboba complex, 0 to 5 percent slopes

0 250 500 Feet

(At original document size of 8.5x11)
1:6,000

N

Stantec

Project Location	Prepared by DL on 2022-06-21
Claremont	TR by SET on 2022-06-21
Los Angeles County, California	IR by JV on 2022-06-21
Client/Project	184031542

City of Pomona
Pedley Spreading Grounds Pond Enhancement Project
Biological Resources Technical Report

Figure No.
3

Title
Historic Soils

Notes
1. Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
2. Data Sources: Stantec 2022. Soils from NRCS 2022.
3. Background: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

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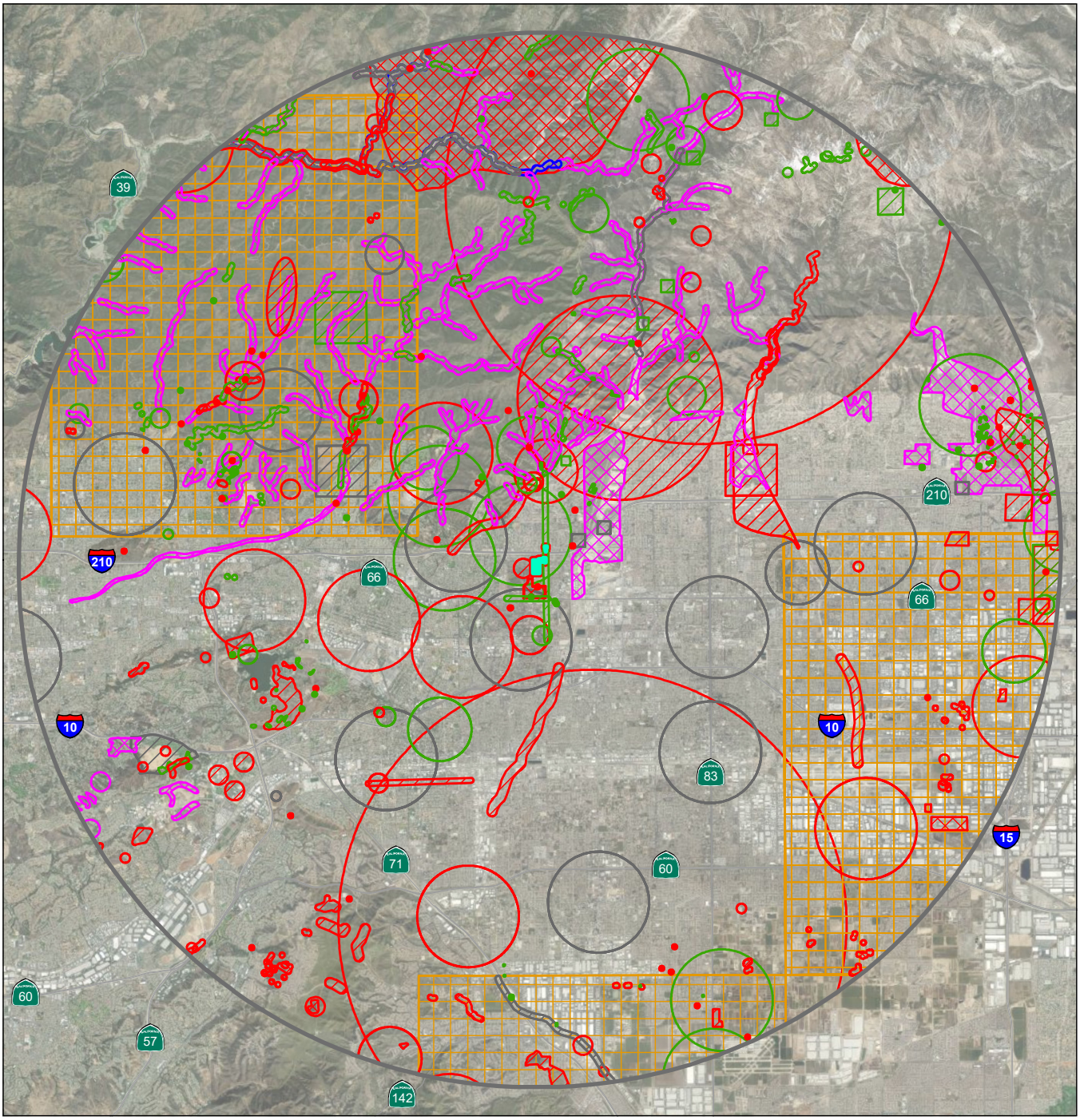

- Biological Survey Area
- Project Location
- 10 Mile Search Radius

CNDDB

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terrestrial Comm. (specific)
- Terrestrial Comm. (circular)
- Aquatic Comm. (specific)
- Multiple (specific)
- Multiple (non-specific)
- Multiple (circular)
- Sensitive EO's (Commercial only)

0 1.5 3 Miles

(At original document size of 8.5x11)
1:190,080

N

Notes

1. Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
2. Data Sources: Stantec 2022. CNDDB Data from CDFW 2022.
3. Background: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Stantec

Project Location
Claremont
Los Angeles County, California

Prepared by DL on 2022-06-27
TR by SET on 2022-06-27
IR by JV on 2022-06-27

Client/Project 184031542
City of Pomona
Pedley Spreading Grounds Pond Enhancement Project
Biological Resources Technical Report

Figure No.
4

Title
10 Mile CNDDB Results

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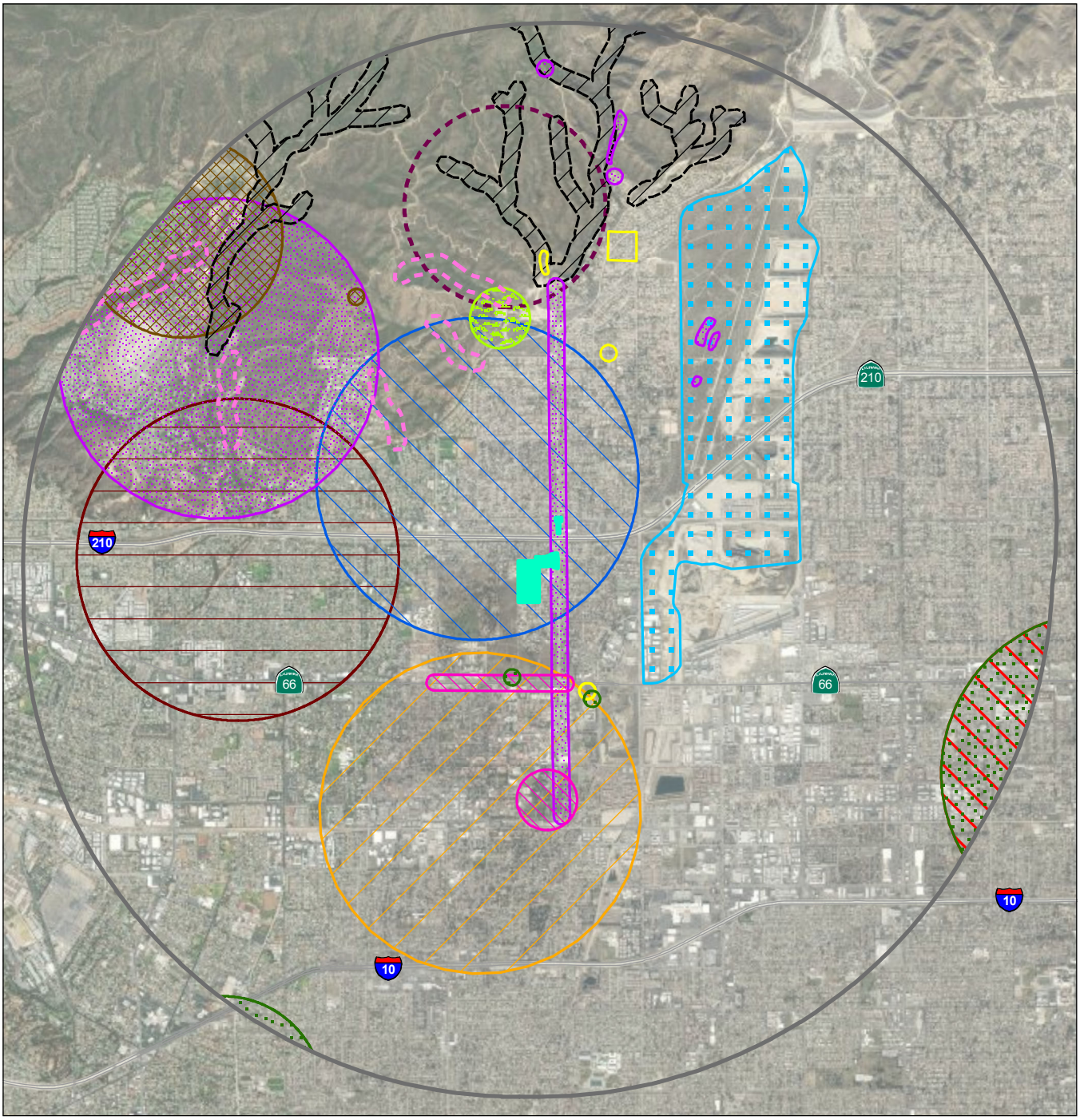

Project Location
3 Mile Search Radius

Plants

Robinson's pepper-grass
rigid fringepod
mesa horkelia
white rabbit-tobacco
slender mariposa-lily
Plummer's mariposa-lily
salt spring checkerbloom
Parry's spineflower
slender-horned spineflower
Nevin's barberry
many-stemmed dudleya

Terrestrial Communities

Southern Coast Live Oak Riparian Forest
Riversidian Alluvial Fan Sage Scrub
Southern Sycamore Alder Riparian Woodland

0 2,500 5,000 Feet

(At original document size of 8.5x11)
1:60,000

N

Stantec

Project Location
Claremont
Los Angeles County, California

Prepared by DL on 2022-06-27
TR by SET on 2022-06-27
IR by JV on 2022-06-27

Client/Project
184031542
City of Pomona
Pedley Spreading Grounds Pond Enhancement Project
Biological Resources Technical Report

Figure No.
5a

Title
3 Mile CNDDB Results - Plants and Terrestrial Communities

Notes
1. Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
2. Data Sources: Stantec 2022. CNDDB Data from CDFW 2022.
3. Background: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

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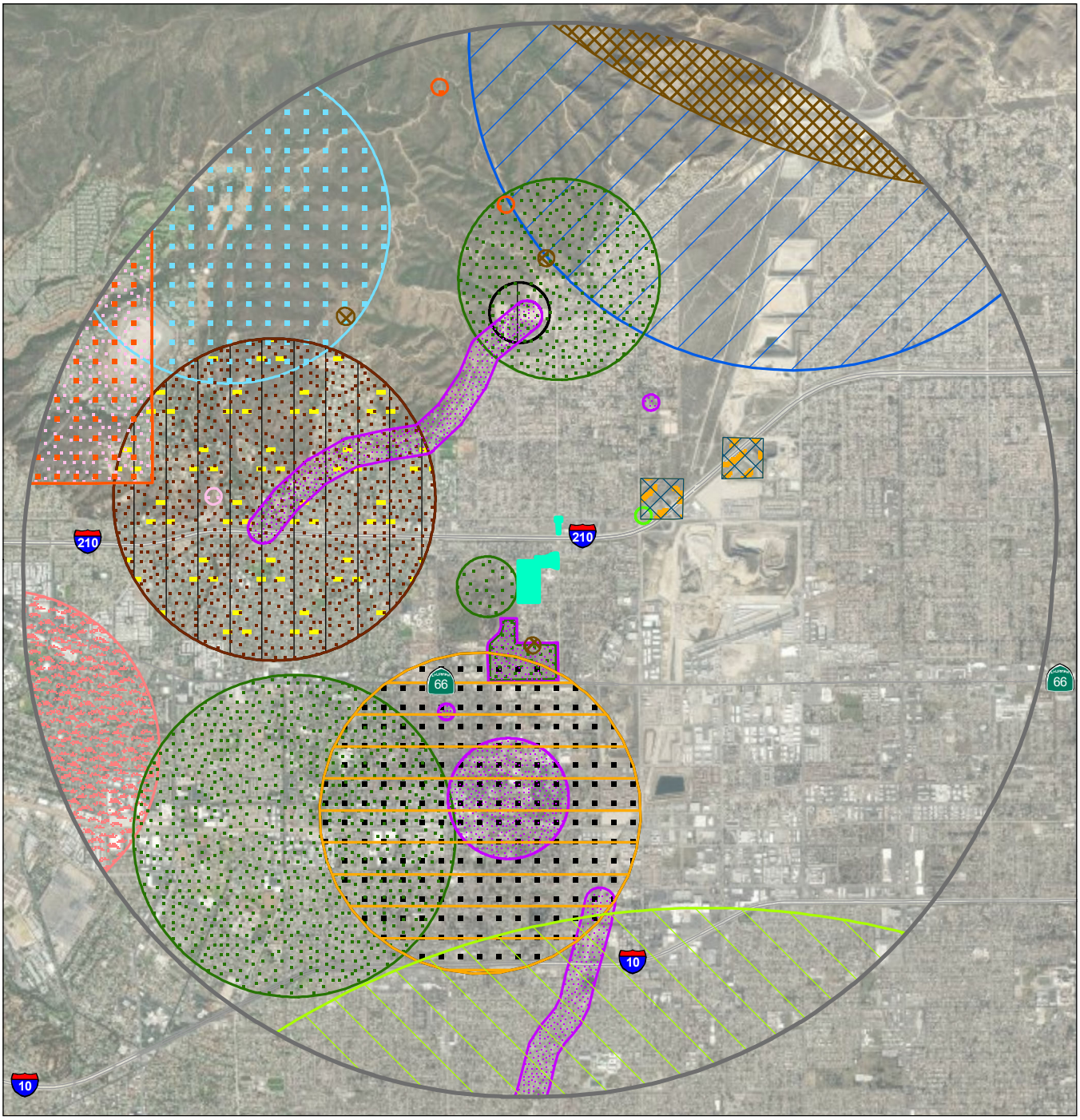

Project Location
3 Mile Search Radius

Wildlife

- California black rail
- California diplectronan caddisfly
- Coast Range newt
- foothill yellow-legged frog
- Crotch bumble bee
- San Bernardino kangaroo rat
- San Diego desert woodrat
- coast horned lizard
- Southern California legless lizard
- coastal California gnatcatcher
- California glossy snake
- hoary bat
- northwestern San Diego pocket mouse
- two-striped gartersnake
- western mastiff bat
- western spadefoot
- white cuckoo bee

0 2,500 5,000 Feet

(At original document size of 8.5x11)
1:60,000

N

Stantec

Project Location
Claremont
Los Angeles County, California

Prepared by DL on 2022-06-27
TR by SET on 2022-06-27
IR by JV on 2022-06-27

Client/Project
184031542
City of Pomona
Pedley Spreading Grounds Pond Enhancement Project
Biological Resources Technical Report

Figure No.
5b

Title
3 Mile CNDDB Results - Wildlife

Notes
1. Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
2. Data Sources: Stantec 2022. CNDDB Data from CDFW 2022.
3. Background: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

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Appendix B Photographic Log

Stantec

Photographic Log

Client:	**City of Pomona**	**Project:**	**Pedley Spreading Grounds Pond Enhancements**
Site Location:	**Claremont, CA**		

Photograph ID: 1 **Photo Location:** 34.117027°, -117.710329° **Direction:** East **Survey Date:** 5/2/2022 **Comments:** Common deerweed shrubland.	
Photograph ID: 2 **Photo Location:** 34.115774°, -117.709707° **Direction:** Northeast **Survey Date:** 5/2/2022 **Comments:** Mulefat thickets.	

Client:	**City of Pomona**	**Project:**	**Pedley Spreading Grounds Pond Enhancements**
Site Location:	**Claremont, CA**		

Photograph ID: 3 **Photo Location:** 34.116698°, -117.710125° **Direction:** South **Survey Date:** 5/2/2022 **Comments:** Retention pond.	
Photograph ID: 4 **Photo Location:** 34.116867°, -117.710506° **Direction:** Northwest **Survey Date:** 5/2/2022 **Comments:** Culvert draining to retention pond.	

Client:	**City of Pomona**	**Project:**	**Pedley Spreading Grounds Pond Enhancements**
Site Location:	**Claremont, CA**		

Photograph ID: 5 **Photo Location:** 34.116867°, -117.710506° **Direction:** Northwest **Survey Date:** 5/2/2022 **Comments:** Vegetated channel.	
Photograph ID: 6 **Photo Location:** 34.116813°, -117.710763° **Direction:** Southwest **Survey Date:** 5/2/2022 **Comments:** Additional culvert draining to retention pond.	

Client:	**City of Pomona**	**Project:**	**Pedley Spreading Grounds Pond Enhancements**
Site Location:	**Claremont, CA**		

Photograph ID: 7 **Photo Location:** 34.117182°, -117.710790° **Direction:** Southwest **Survey Date:** 5/2/2022 **Comments:** dried retention pond.	
Photograph ID: 8 **Photo Location:** 34.117200°, -117.711311° **Direction:** Northwest **Survey Date:** 5/2/2022 **Comments:** Vegetated channel leading to dried retention pond.	

Client:	**City of Pomona**	**Project:**	**Pedley Spreading Grounds Pond Enhancements**
Site Location:	**Claremont, CA**		

Photograph ID: 9 **Photo Location:** 34.117235°, -117.711445° **Direction:** West **Survey Date:** 5/2/2022 **Comments:** Culvert for dried retention pond.	
Photograph ID: 10 **Photo Location:** 34.117249°, -117.710688° **Direction:** Northeast **Survey Date:** 5/2/2022 **Comments:** Ruderal herbacious land cover.	

Client:	**City of Pomona**	**Project:**	**Pedley Spreading Grounds Pond Enhancements**
Site Location:	**Claremont, CA**		

Photograph ID: 11 **Photo Location:** 34.117297°, -117.711219° **Direction:** Northeast **Survey Date:** 5/2/2022 **Comments:** Common deerweed shrubland with mulefat thickets along pond edge.	
Photograph ID: 12 **Photo Location:** 34.116502°, -117.710678° **Direction:** East **Survey Date:** 5/2/2022 **Comments:** Variation in vegetation on site.	

Client:	**City of Pomona**	**Project:**	**Pedley Spreading Grounds Pond Enhancements**
Site Location:	**Claremont, CA**		

Photograph ID: 13 **Photo Location:** 34.115290°, -117.711294° **Direction:** North **Survey Date:** 5/2/2022 **Comments:** Variation in vegetation on site.	
Photograph ID: 14 **Photo Location:** 34.117169°, -117.709513° **Direction:** North **Survey Date:** 5/2/2022 **Comments:** Variation in vegetation on site.	

Client:	**City of Pomona**	**Project:**	**Pedley Spreading Grounds Pond Enhancements**
Site Location:	**Claremont, CA**		

Photograph ID: 15 **Photo Location:** 34.117368°, -117.709894° **Direction:** East **Survey Date:** 5/2/2022 **Comments:** Common deerweed shrubland.	
Photograph ID: 16 **Photo Location:** 34.120593°, -117.707362° **Direction:** North **Survey Date:** 5/2/2022 **Comments:** Residential landscape.	

CEQA Initial Study

Appendix C

Paleontological Resource Assessment

Pedley Spreading Grounds Pond Enhancements

Draft Paleontological Resource Assessment for the Pedley Spreading Grounds – Pond Enhancements Project, Los Angeles County, California

Results of an Analysis of Existing Data and Impacts Assessment

February 6, 2023

Prepared for:

The City of Pomona

Prepared by:

Alyssa Bell, Ph.D.
Principal Paleontologist
and
Ben Kerridge, M.A.
Paleontologist

Stantec Consulting Services Inc.
300 North Lake Avenue, Suite 400
Pasadena, California 91101

Stantec Project Number 184031542

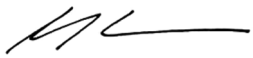
Revision	Description	Author		Quality Check		Independent Review	

The conclusions in the Report are Stantec's professional opinion, as of the time of the Report, and concerning the scope described in the Report. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. The Report relates solely to the specific project for which Stantec was retained and the stated purpose for which the Report was prepared. The Report is not to be used or relied on for any variation or extension of the project, or for any other project or purpose, and any unauthorized use or reliance is at the recipient's own risk.

Stantec has assumed all information received from the Client and third parties in the preparation of the Report to be correct. While Stantec has exercised a customary level of judgment or due diligence in the use of such information, Stantec assumes no responsibility for the consequences of any error or omission contained therein.

This Report is intended solely for use by the Client in accordance with Stantec's contract with the Client. While the Report may be provided to applicable authorities having jurisdiction and others for whom the Client is responsible, Stantec does not warrant the services to any third party. The report may not be relied upon by any other party without the express written consent of Stantec, which may be withheld at Stantec's discretion.

Prepared by  _____
(signature)
Alyssa Bell, Ph.D.; Principal Paleontologist

Reviewed by  _____
(signature)
Geraldine Aron, M.S.; Business Center Practice Lead

Approved by  _____
(signature)
Sarah Garber, M.S.; Senior Principal

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LIST OF FIGURES

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Executive Summary

Stantec Consulting Services Inc. (Stantec) conducted a paleontological resources assessment on behalf of the City of Pomona for the Pedley Spreading Grounds – Pond Enhancement Project (the Project) located at 1691 Longwood Avenue, within the City of Claremont, Los Angeles County, California. This paleontological study was conducted in support of the City of Pomona for the proposed reoperation of the 30-inch storm drain on Mills Avenue, regrading of the existing basins, and improvements to Chaparral Park.

The proposed Project is subject to compliance with the California Environmental Quality Act (CEQA) requirements regarding the Project's potential impacts on paleontological resources. As part of CEQA compliance, a paleontological resources assessment was conducted to assess potential impacts of the proposed Project on paleontological resources.

This paleontological resource investigation consisted of a museum records search from the Natural History Museum of Los Angeles County of the Project area and vicinity, as well as a review of the most recent geologic mapping, relevant scientific literature and reporting, and a search of online collections databases. This research was used to assign paleontological potential rankings of the Society of Vertebrate Paleontology (2010) to the geologic units present in the Project area, either at the surface or in the subsurface. The results of this assessment indicate that young alluvial fan deposits are mapped in the Project area, which have low-to-high paleontological potential, increasing with depth. These sediments are likely underlain by very old alluvial fan deposits in the subsurface, which are assessed as having high paleontological potential. Project plans for ground disturbance involve regrading of the existing pond basins and potholing to expose the existing utilities. Of these, the regrading of the existing basins may occur in geologic units with high paleontological potential and therefore may encounter paleontological resources. In order to avoid impacts to paleontological resources, Stantec recommends the following mitigation activities for the Project:

1. A paleontologist meeting professional standards as defined by Murphey et al. (2019) shall be retained as the Project Paleontologist to oversee all aspects of paleontological mitigation, including the development and implementation of a Paleontological Monitoring and Mitigation Plan (PMMP) tailored to the Project plans that provides for paleontological monitoring of earthwork and ground disturbing activities into undisturbed geologic units with high paleontological potential to be conducted by a paleontological monitor meeting industry standards (Murphey et al. 2019). A final monitoring report summarizing the results of the monitoring program should be prepared at the conclusion of Project ground disturbance.

2. The PMMP should include provisions for a Workers' Environmental Awareness Program training that communicates requirements and procedures for the inadvertent discovery of paleontological resources during construction, to be delivered by the paleontological monitor to the construction crew prior to the onset of ground disturbance.

3. The PMMP should provide for full time paleontological monitoring of grading in the existing basins at any depth, and of other ground disturbing activities that exceed 5 feet in depth below the natural ground surface in previously undisturbed sediments. The Project Paleontologist may reduce the frequency of monitoring or spot checks should subsurface conditions indicate low paleontological potential.

4. Should a potential paleontological resource be identified in the Project area, whether by the monitor or a member of the construction crew, work should halt in a safe radius around the find (usually 50 feet) until the Project Paleontologist can assess the find and, if significant, salvage the fossil for laboratory preparation and curation at the Natural History Museum of Los Angeles County.

Based on the findings in this study and the implementation of the above mitigation activities, the proposed Project should not cause an adverse impact to paleontological resources. Therefore, no additional paleontological resource studies are recommended or required at this time. Changes to the Project location or plans from those assessed in this study will require additional assessment for impacts to paleontological resources.

Abbreviations

Bgs	below ground surface
CEQA	California Environmental Quality Act
GIS	Geographic Information System
LACM	Natural History Museum of Los Angeles County
Ma	Million years ago
PSG	Pedley Spreading Grounds
Stantec	Stantec Consulting Services Inc.
SVP	Society of Vertebrate Paleontology
UCMP	University of California Museum of Paleontology

Glossary

Paleontological Monitor	A person meeting or exceeding the following qualifications: B.S. or B.A. degree in geology or paleontology and one year of experience monitoring in the state or geologic province of the specific project. An associate degree and/or demonstrated experience showing ability to recognize fossils in a biostratigraphic context and recover vertebrate fossils in the field may be substituted for a degree.
Paleontological Monitoring	Full-time observation of construction activities in high potential geologic units by a paleontological monitor, under supervision of the project paleontologist.
Paleontological Resource	Any fossilized remains, traces, or imprints of organisms, preserved in or on the earth's crust, that are of paleontological interest and that provide information about the history of life on earth, except that the term does not include— (A) any materials associated with an archaeological resource (as defined in section 3(1) of the Archaeological Resources Protection Act of 1979 (16 U.S.C. 470bb(1)); or (B) any cultural item (as defined in section 2 of the Native American Graves Protection and Repatriation Act (25 U.S.C. 3001)). [Paleontological Resources Preservation Act; Sec. 6301: Definitions]
Project Paleontologist	An individual who is recognized in the paleontological community as a professional and can demonstrate familiarity and proficiency with paleontology in a stratigraphic context, including fossil identification and recovery, with the equivalent of the following qualifications: a graduate degree in paleontology or geology, and/or a publication record in peer reviewed journals; demonstrated competence in field techniques, preparation, identification, curation, and reporting in the state or geologic province in which the project occurs; at least two full years professional experience as assistant to a Project Paleontologist with administration and project management experience; experience collecting vertebrate fossils in the field. [Society of Vertebrate Paleontology 2010]

Spot check	A short inspection of excavations and subsurface conditions conducted by the paleontological monitor in order to confirm excavations are impacting low potential geologic units.

1.0 INTRODUCTION

Stantec Consulting Services Inc. (Stantec) conducted a paleontological resources assessment on behalf of the City of Pomona for the Pedley Spreading Grounds (PSG) – Pond Enhancements Project (the Project) located at 1691 Longwood Avenue within the City of Claremont, Los Angeles County, California. This paleontological study was conducted in support of the City of Pomona for the proposed pond enhancement project.

The proposed Project is subject to compliance with the California Environmental Quality Act (CEQA) requirements regarding the Project's potential impacts on paleontological resources. As part of CEQA compliance, a paleontological resources assessment was conducted to assess potential impacts of the proposed Project on paleontological resources.

1.1 PROJECT DESCRIPTION

The City of Pomona proposes to capture, treat, and infiltrate local urban runoff into the existing PSG to increase water supply through stormwater recharge and to decrease impact of non-point source pollutants for receiving waters. The Project will reoperate the 30-inch storm drain on Mills Avenue by removing the weir at the existing junction structure at Baseline Road and Mills Avenue. The existing basins will be regraded to increase their capacity, and additional grading will occur to enhance access for maintenance. An additional feature of the Project will be updates to Chaparral Park, north of the PSG, through new park and educational features.

1.2 PROJECT LOCATION

The proposed Project is located at 1691 Longwood Avenue, within the City of Claremont, Los Angeles County (Figure 1). Specifically, the Project site is bound by an access road that encircles the PSG property. Residential development abuts the Project site on the northwest, north, south, and southeast, with the Claremont Colleges Campus immediately adjacent to the southwest, and Chaparral Elementary School and Chaparral Park to the northeast. The Project site is located on Los Angeles County Assessor Parcel Number 8306-007-270. Specifically, the Project area is located in the southeast quarter of the northwest quarter of Section 3, Township 1 South, Range 8 West, as depicted on the Ontario, California United States Geological Survey 7.5-minute series topographic quadrangle (Figure 2).

1.3 PALEONTOLOGICAL RESOURCES

Fossils are any evidence of ancient life. This includes the remains of the body of an organism, such as bones, skin impressions, shell, or leaves, as well as traces of an organism’s activity, such as footprints or burrows, called trace fossils. In addition to the fossils themselves, geologic context is an important

Introduction

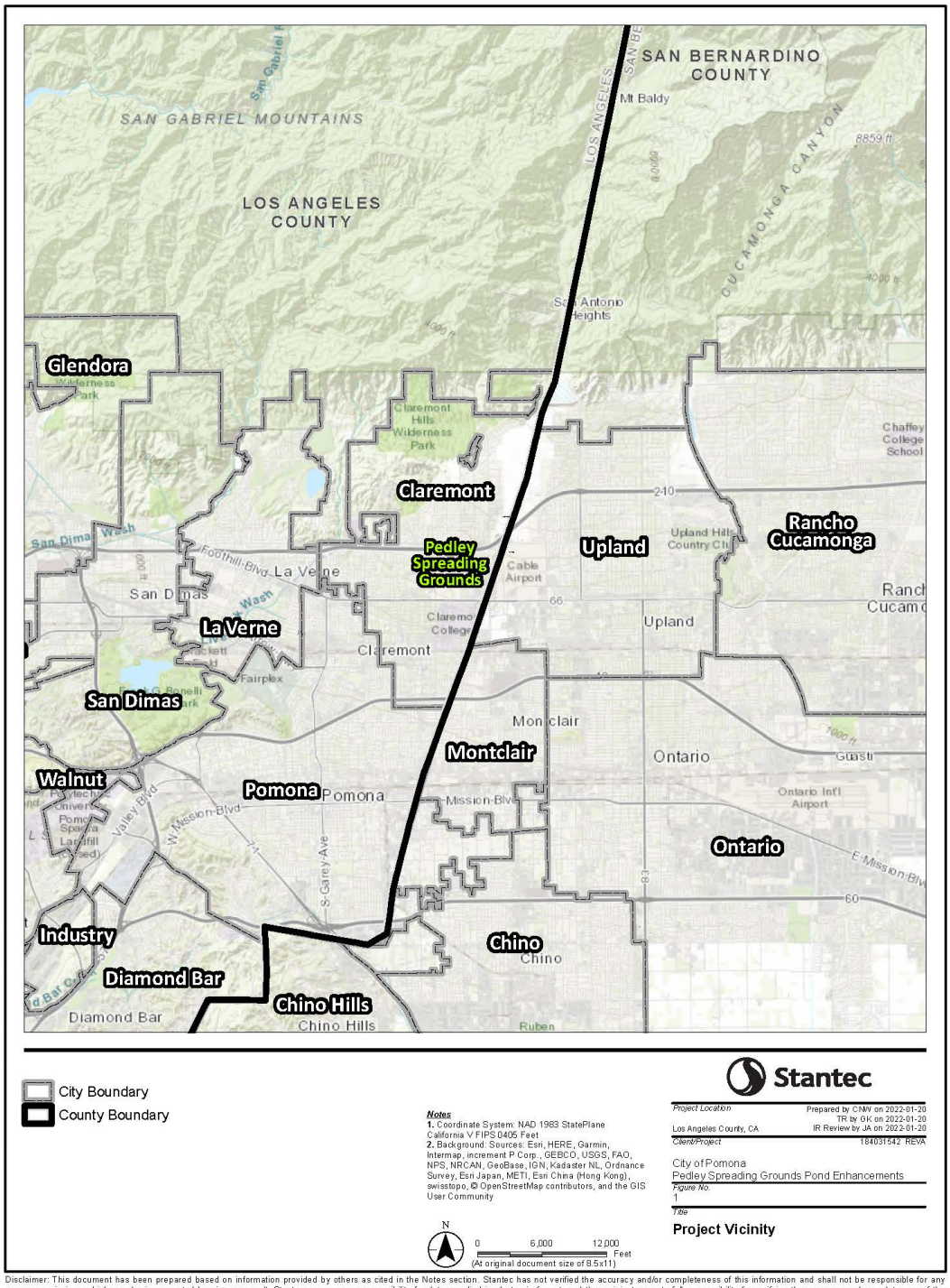

Figure 1. Project vicinity

Introduction

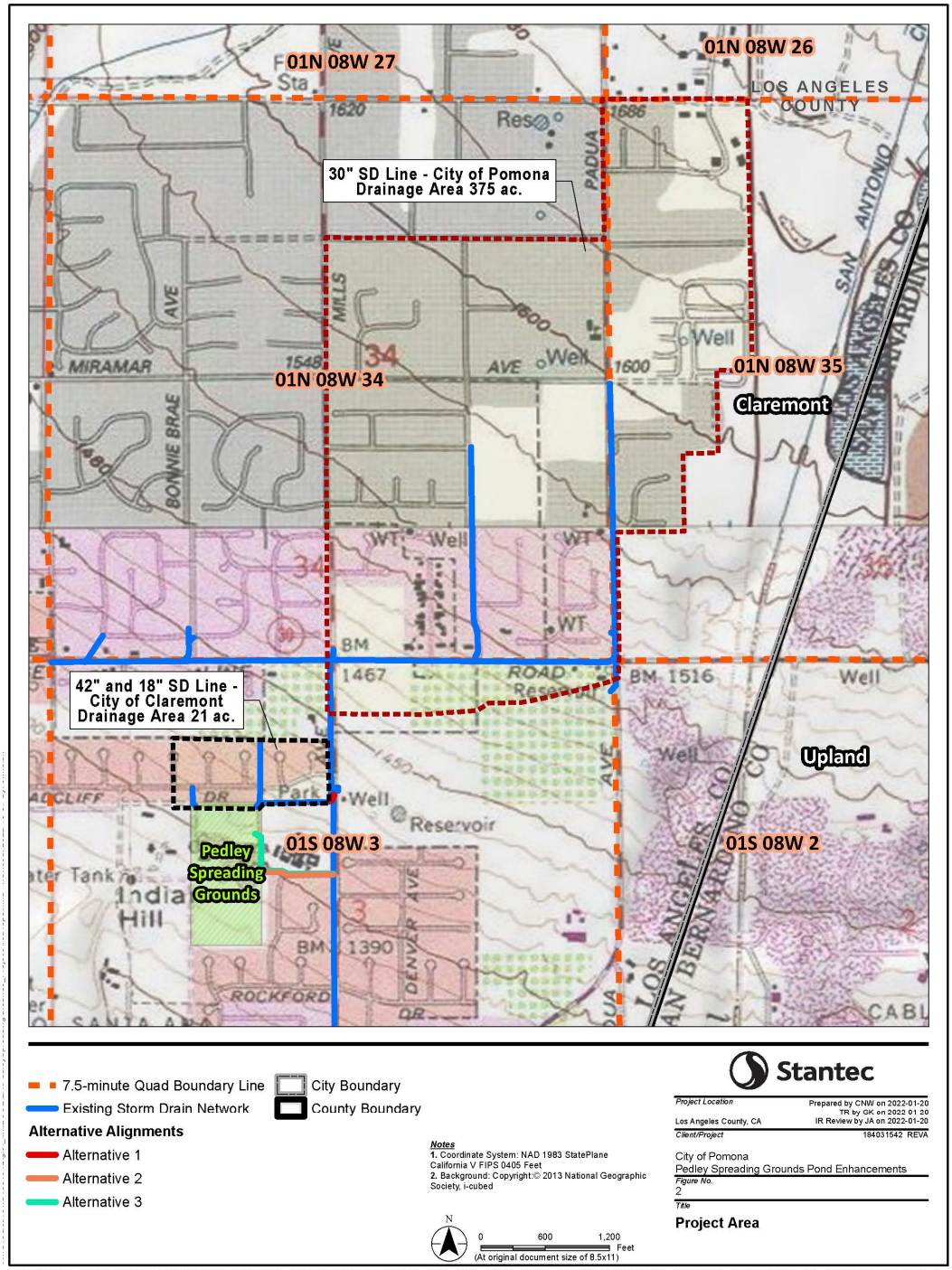

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Figure 2. Project area

component of paleontological resources and includes the stratigraphic placement of the fossil as well as the lithology of the rock in order to assess paleoecologic setting, depositional environment, and taphonomy. Fossils are protected by federal, state, and local regulations as nonrenewable natural resources.

While CEQA does not define a significance threshold for paleontological resources, the standards of the Society of Vertebrate Paleontology (SVP) are often used in the absence of a legal definition of significance. The SVP defines significant paleontological resources as:

> identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are considered to be older than recorded human history and/or older than middle Holocene (i. e., older than about 5,000 radiocarbon years). [SVP 2010: 11].

It should be noted that the threshold for significance varies factors including geologic unit, geographic area, and the current state of scientific research, and may also vary between different agencies (Murphey et al. 2019). Numerous paleontological studies have developed criteria for the assessment of significance for fossil discoveries (e.g., Eisentraut and Cooper 2002, Murphey et al. 2019, Murphey and Daitch 2007, Scott and Springer 2003). In general, these studies assess fossils as significant if one or more of the following criteria apply:

- The fossils provide information on the evolutionary relationships and developmental trends among organisms, living or extinct.
- The fossils provide data useful in determining the age(s) of the rock unit or sedimentary stratum, including data important in determining the depositional history of the region and the timing of geologic events, through biochronology or biostratigraphy and the correlation with isotopic dating.
- The fossils provide ecological data, such as the development of biological communities, the interaction between paleobotanical and paleozoological biotas, or the biogeography of lineages.
- The fossils demonstrate unusual or spectacular circumstances in the history of life.
- The fossils provide information on the preservational pathways of paleontological resources, including taphonomy, diagenesis, or preservational biases in the fossil record.
- The fossils are in short supply and/or in danger of being depleted or destroyed by the elements, vandalism, or commercial exploitation, and are not found in other geographic locations.
- The fossils inform our understanding of anthropogenic affects to global environments or climate.

A geologic unit known to contain paleontological resources is considered sensitive to adverse impacts if there is a high probability that earth-moving or ground-disturbing activities in that rock unit will either

disturb or destroy fossil remains directly or indirectly. This definition of sensitivity differs fundamentally from the definition for archaeological resources as follows:

> It is extremely important to distinguish between archaeological and paleontological (fossil) resource sites when defining the sensitivity of rock units. The boundaries of archaeological sites define the areal extent of the resource. Paleontological sites, however, indicate that the containing sedimentary rock unit or formation is fossiliferous. The limits of the entire rock formation, both areal and stratigraphic, therefore define the scope of the paleontological potential in each case. [SVP 2010: 2].

Many archaeological sites contain features that are visually detectable on the surface. In contrast, fossils are often contained within surficial sediments or bedrock and are therefore not observable or detectable unless exposed by erosion or human activity.

In summary, in the absence of observable fossil resources on the surface, paleontologists must assess the potential of geologic units as a whole to yield paleontological resources based on their known potential to produce significant fossils elsewhere. Monitoring by experienced paleontologists greatly increases the probability that fossils will be discovered during ground-disturbing activities and that, if these remains are significant, successful mitigation and salvage efforts may be undertaken to prevent adverse impacts to these resources.

2.0 REGULATORY FRAMEWORK

California and the City of Pomona have enacted multiple laws and regulations that provide for the protection of paleontological resources. This investigation was conducted to meet these requirements regarding paleontological resources on the lands proposed for development.

2.1 STATE OF CALIFORNIA

2.1.1 California Environmental Quality Act

CEQA (Public Resources Code Sections 21000 et seq) requires that before approving most discretionary projects, the Lead Agency must identify and examine any significant adverse environmental effects that may result from activities associated with such projects. As updated in 2016, CEQA separates the consideration of paleontological resources from cultural resources (Public Resources Code Section 21083.09). The Appendix G checklist (Title 14, Division 6, Chapter 3, California Code of Regulations 15000 et seq.) requires an answer to the question, “Will the proposed project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?” Under these requirements, Stantec has conducted a paleontological resources assessment to determine impacts of the proposed project on paleontological resources within the Project area.

Professional Standards

2.1.2 Public Resources Code

The California Public Resources Code (Chapter 1.7, Sections 5097 and 30244) includes additional state-level requirements for the assessment and management of paleontological resources. These statutes require reasonable mitigation of adverse impacts to paleontological resources resulting from development on state lands, define the removal of paleontological sites or features from state lands as a misdemeanor, and prohibit the removal of any paleontological site or feature from state land without permission of the applicable jurisdictional agency.

3.0 PROFESSIONAL STANDARDS

The SVP (2010), the Bureau of Land Management (2016) and a number of scientific studies (Eisentraut and Cooper 2002; Murphey et al. 2019; Scott and Springer 2003) have developed guidelines for professional qualifications, conducting paleontological assessments, and developing mitigation measures for the protection of paleontological resources. These guidelines are broadly similar, and include the use of museum records searches, scientific literature reviews, and, in some cases, field surveys to assess the potential of an area to preserve paleontological resources. Should that potential be high, accepted mitigation measures include paleontological monitoring, data recordation of all fossils encountered, collection and curation of significant fossils and associated data, and in some cases screening of sediment for microfossils.

This study has been conducted in accordance with these guidelines and the recommendations provided herein meet these standards.

4.0 GEOLOGIC SETTING

The Project area is located at the northern end of the Peninsular Ranges geomorphic province. The Peninsular Ranges formed as a volcanic island arc collided with the west coast of North America and was accreted onto the margin of the continent, resulting in the expansion of the continent westward. The Peninsular Ranges are part of a larger subduction zone that extends all along western North America, with this particular geomorphic province extending from the Los Angeles Basin in the north to Baja in the south, and extending to Santa Catalina, Santa Barbara, San Nicolas, and San Clemente Islands on the west and the Colorado Desert on the east (Norris and Webb 1990). The core of the Peninsular Ranges formed as the core of a magmatic arc in the Mesozoic that resulted from active subduction along the Pacific Plate boundary (Harden 2004).

Locally, the Project area is in the Los Angeles Basin, a structural depression approximately 50 miles long and 20 miles wide in the northernmost Peninsular Ranges Geomorphic Province (Ingersoll and Rumelhart 1999). The Los Angeles Basin developed as a result of tectonic forces and the San Andreas fault zone, with subsidence occurring 18 – 3 million years ago (Ma) (Critelli et al. 1995). While sediments dating back to the Cretaceous (66 Ma) are preserved in the basin, continuous sedimentation began in the middle

Miocene (around 13 Ma) and continues today, resulting in thousands of feet of accumulation (Yerkes et al. 1965). Most of these sediments are marine, until sea level dropped in the Pleistocene and deposition of the alluvial sediments that compose the uppermost units in the Los Angeles Basin began.

5.0 METHODOLOGY

The paleontological resource assessment reported herein consisted of a records search from the Natural History Museum of Los Angeles County (LACM) as well as a review of the relevant scientific literature, relevant environmental reporting, the most recent geologic mapping, and a review of the online database of the University of California Museum of Paleontology (UCMP). To assess if paleontological resources are likely to be encountered in any given area, the paleontological potential of the geologic units present in the area is assessed. Paleontological potential of a geologic unit consists of both (a) the potential for yielding abundant vertebrate fossils or for yielding significant fossils, large or small, vertebrate, invertebrate, plant, or trace fossils and (b) the importance of recovered evidence for new and significant taxonomic, phylogenetic, paleoecologic, taphonomic, biochronologic, or stratigraphic data (SVP 2010). Unlike archaeological resources that often have a limited aerial extent, paleontological resources may occur throughout a geologic unit, and so paleontological potential is assessed for the unit as a whole. Provided below is the methodology used during the current study to assess the potential of the Project to impact paleontological resources.

The paleontological assessment presented here was conducted by Stantec Principal Paleontologist Alyssa Bell, Ph.D. with the assistance of Paleontologist Ben Kerridge, M.A. Geographic Information System (GIS) maps and figures were drafted by GIS analyst Chisa Whelan, M.S. This report was authored by Dr. Bell and Mr. Kerridge and peer reviewed by Business Center Practice Lead Geraldine Aron, M.S. Stantec's work on this Project was managed by Senior Principal Sarah Garber, M.S., who coordinated all work and provided quality assurance and control.

5.1 ANALYSIS OF EXISTING DATA

In order to assess the paleontological potential of the Project area, Stantec conducted an analysis of existing data. A records search of the Project area and vicinity was requested from the LACM on October 28, 2022, with the results received from the LACM on October 30, 2022. The search returned the closest known paleontological localities of the LACM to the Project area from geologic units that are present at the Project area, either at the surface or in the subsurface.

The most recent geologic mapping was consulted to identify all geologic units present at the surface or likely present in the subsurface. The scientific literature was then consulted to determine the history of each of these units for preserving fossils. The online database of the UCMP was searched for any fossil localities from geologic units relevant to the Project in Los Angeles County or adjoining counties on November 10, 2022. The database of the UCMP does not include precise locality information, but often the general vicinity of the locality can be determined from the available data.

5.2 PALEONTOLOGICAL RESOURCES ASSESSMENT

The results of the analysis of existing data was used to assign the paleontological potential rankings of the SVP (2010) to the geologic units present in the Project area. These rankings are designed to inform the development of appropriate mitigation measures for the protection of paleontological resources and are widely accepted as industry standards in paleontological mitigation (Murphey et al. 2019; Scott and Springer 2003). These rankings are as follows:

> **High Potential.** Rock units from which vertebrate or significant invertebrate, plant, or trace fossils have been recovered are considered to have a high potential for containing additional significant paleontological resources. Rock units classified as having high potential for producing paleontological resources include, but are not limited to, sedimentary formations that are temporally or lithologically suitable for the preservation of fossils (e. g., middle Holocene and older, fine-grained fluvial sandstones, argillaceous and carbonate-rich paleosols, cross-bedded point bar sandstones, fine-grained marine sandstones, etc.), some volcaniclastic formations (e. g., ashes or tephras), and some low-grade metamorphic rocks.
>
> **Undetermined Potential**. Rock units for which little information is available in the literature or museum records concerning their paleontological content, geologic age, and depositional environment are considered to have undetermined potential. Further study and field work is necessary to determine if these rock units have high or low potential to contain significant paleontological resources.
>
> **Low Potential**. Rock units that are poorly represented by fossil specimens in institutional collections or, based on general scientific consensus, only preserve fossils in rare circumstances (e. g., basalt flows or Recent colluvium) have low paleontological potential.
>
> **No Potential**. Some rock units have no potential to contain significant paleontological resources, for instance high-grade metamorphic rocks (such as gneisses and schists) and plutonic igneous rocks (such as granites and diorites).

5.3 PALEONTOLOGICAL RESOURCES IMPACTS ASSESSMENT

Impacts to paleontological resources can be classified as direct, indirect, or cumulative. Impacts can also be considered as adverse impacts or as positive impacts. Direct adverse impacts on paleontological resources are the result of damage or destruction of these nonrenewable resources by surface disturbing actions including construction excavations. Therefore, in areas that contain paleontologically sensitive geologic units, ground disturbance has the potential to adversely impact paleontological resources, by damaging or destroying them and rendering them permanently unavailable to science and society. Positive direct impacts, however, may result when paleontological resources are identified during construction and the appropriately documented and salvaged, thus ensuring the specimens are protected for future study and education.

Indirect adverse impacts typically include those effects which result from the continuing implementation of management decisions and resulting activities, including normal ongoing operations of facilities constructed within a given project area. They also occur as the result of the construction of new roads and trails in areas that were previously less accessible. This increases public access and therefore increases the likelihood of the loss of paleontological resources through vandalism and unlawful collecting, thus constituting an adverse indirect impact. Human activities that increase erosion also cause indirect impacts to surface and subsurface fossils as the result of exposure, transport, weathering, and reburial.

Cumulative adverse impacts can result from incrementally minor but collectively significant actions taking place over time. The incremental loss of paleontological resources over time from construction-related surface disturbance or vandalism and unlawful collection would represent a significant cumulative adverse impact, because it would result in the destruction of non-renewable paleontological resources and the associated irretrievable loss of scientific information.

Positive impacts can result from the preservation of significant paleontological resources identified during construction, a direct impact, or following Project activities, an indirect impact. By successfully identifying, salvaging, and curating significant paleontological resources in a federally accredited repository, they are preserved in perpetuity and may contribute to scientific understanding and public education and awareness.

The impact assessment conducted here takes into consideration all planned project activities in terms of aerial and subsurface extents, including the possibility of subsurface geologic units having a different paleontological potential than surficial units. For example, younger surficial sediments (alluvium, lacustrine, eolian, etc.) have low potential to preserve fossil resources due to their age; yet sediments increase in age with depth and so these surficial deposits often overly older units that have high paleontological potential. In areas with this underlying geologic setting surficial work may be of low risk for impacting paleontological resources while activities that require excavations below the depth of the surficial deposits would be at greater risk of impacting paleontological resources. For this reason, the impact assessment takes into consideration both the surface and subsurface geology and is tailored to Project activities.

6.0 RESULTS

The results of the paleontological potential and impacts assessments are described below, with the results of the records search from the LACM summarized in Table 1 and the summary of the geology of the Project area in Table 2.

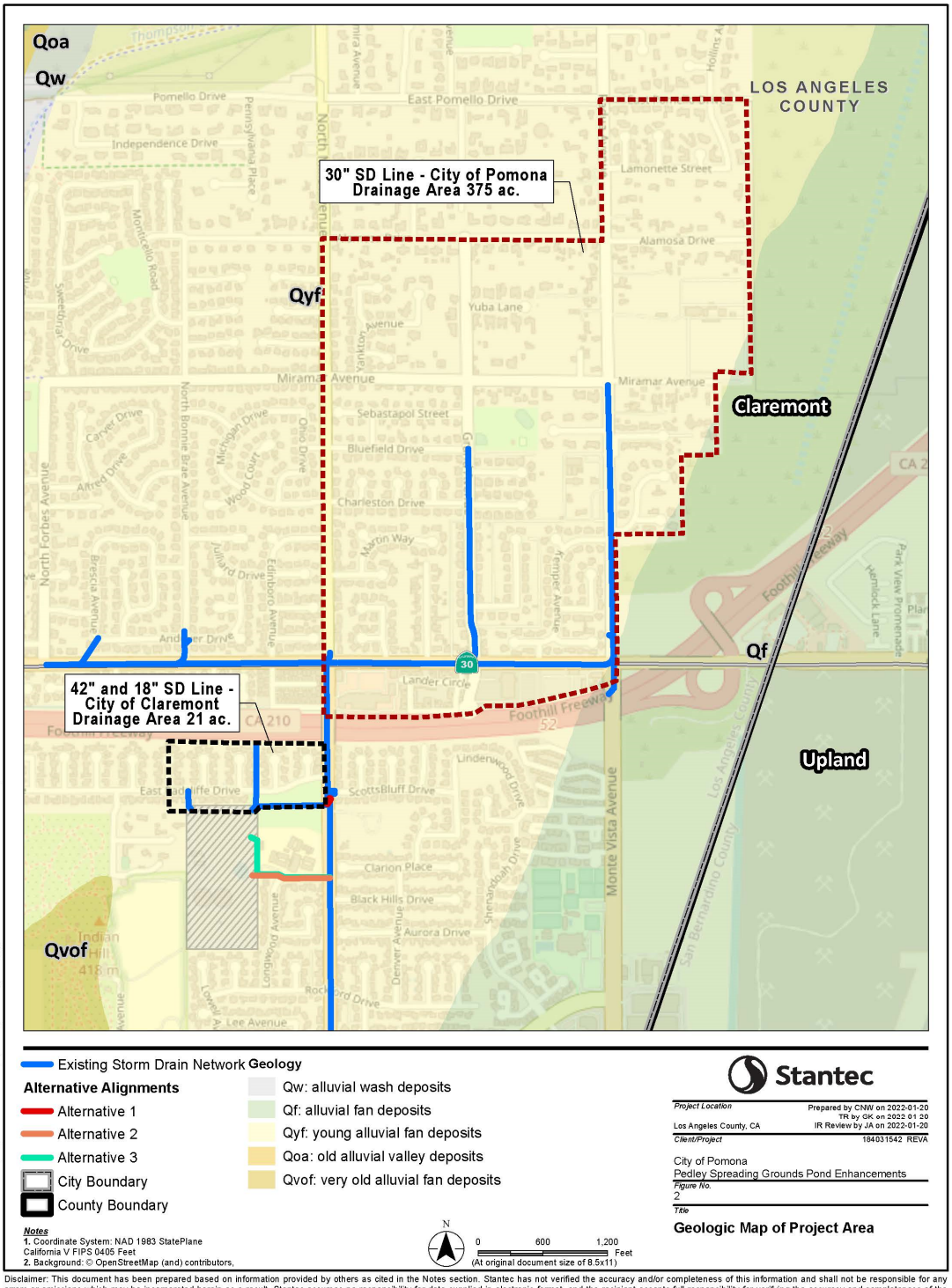
6.1 PROJECT AREA GEOLOGY

Geologic mapping by Morton and Miller (2006) indicates the surface of the Project area consists of young alluvial fan deposits, with very old alluvial fan deposits mapped at the surface approximately 0.1 miles

west of the Project area, and therefore likely present in the subsurface of the Project area (Figure 3). These geologic units range in age from the Holocene to the Pleistocene and are described below.

Young Alluvial Fan Deposits (Qyf in Figure 3). Young alluvial fan deposits are found across the entire Project area. These sediments consist of varying proportions of unconsolidated to slightly consolidated boulder, cobble, gravel, sand, and silt (Morton and Miller 2006). Alluvial sediments represent terrestrial deposition of water-transported sediments from the surrounding highlands. These sediments are relatively young in age, dating from the Holocene to the late Pleistocene, increasing with depth, and likely overlie very old alluvial fan deposits, described below. As defined by the SVP (2010), paleontological resources must be over 5,000 years in age, corresponding to the middle part of the Holocene. Therefore, young alluvial fan deposits are not old enough at the surface to preserve fossils, but as sediments increase in age with depth, older deeper layers of this unit are of an age to preserve fossils.

RESULTS



Disclaimer: This document has been prepared based on information provided by others as cited in the Notes section. Stantec has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result. Stantec assumes no responsibility for data supplied in electronic format, and the recipient accepts full responsibility for verifying the accuracy and completeness of the data.

Figure 3. Geologic map of the Project area

Very Old Alluvial Fan Deposits (Qvof in Figure 3). Give the proximity of surficial outcrops, very old alluvial fan deposits may occur at an undetermined depth in the subsurface of the Project area. Morton and Miller (2006) show these sediments on the surface approximately 0.1 miles to the southwest of the Project area at Indian Hill. These sediments are described as moderately to well-consolidated boulder, cobble, gravel, sand, and silt deposits issued from confined canyons or valleys (Morton and Miller 2006). They represent a similar depositional environment as described above for young alluvial fan deposits, but are older, dating from the middle to early Pleistocene (Morton and Miller 2006). While this is not a formal chronostratigraphic unit, these deposits are likely 120,000 to 2.58 Ma (International Commission on Stratigraphy 2022). As such, these sediments are of an age to preserve fossils.

6.2 PROJECT AREA PALEONTOLOGY

Early Holocene and Pleistocene-aged alluvial sediments such as those present in the subsurface of the Project area have a documented history of fossil preservation in the Los Angeles Basin and across Southern California.

The locality search from the LACM indicates there are several fossil localities known to the museum in the vicinity of the Project area from alluvial sediments similar to those that are present in the subsurface of the Project area (Table 1; Appendix A). The closest of these is from Chino, approximately 8.7 miles southwest of the Project area, where horse and camel fossils were found between 15 and 20 feet below ground surface (bgs) (LACM 2022). Three other localities are known in Chino Hills consisting of fossil remains of ground sloth, a member of the elephant family, camel, and horses (LACM 2022). Other localities are known from Eastvale, where a mammoth was preserved, and Corona, where a member of the cow family was preserved (LACM 2022). While the depths of many of these finds are unknown, others range from 9 fee to 100 feet bgs (LACM 2022). While precise lithologic and location data are not available in the UCMP database, a search indicates they do have localities likely from terrestrial sediments similar to those in the Project area, including horse specimens recovered from Athens on the Hill in southern Los Angeles, the Los Angeles Brickyard near downtown, pine fossils from Century City, a bison from Montebello, and others (UCMP 2022).

Additionally, a review of the scientific literature indicates that older alluvial sediments such as those likely present in the subsurface of the Project area are well known for the preservation of fossils representing a rich Ice Age fauna. These include animals still found in North America today, such as deer, bison, sheep, and horses; creatures no longer found in North America, such as camels, lions, cheetahs, and sloths; and extinct creatures such as mammoths, dire wolves, and saber-toothed cats (Jefferson 1991 a and b, Graham and Lundelius 1994, McDonald and Jefferson 2008, Miller 1971, Reynolds and Reynolds 1991). In addition to these iconic large animals, a wide variety of small animals can be preserved, including reptiles such as frogs, salamanders, snakes, and birds (Collins et al. 2018, Gilbert 1998, Jones et al. 2008, Miller 1941). These fossils are important for recreating the history of Southern California, in particular studying climate change (e.g., Roy et al. 1996), extinction (e.g., Barnosky et al. 2004, Jones et al. 2008, Sandom et al. 2014, Scott 2010), and paleoecology (e.g., Connin et al. 1998, Trayler et al. 2015).

RESULTS

Given the extensive record of significant fossils recovered from early Holocene and Pleistocene-aged terrestrial sediments, the alluvium in the Project area is here assessed as having low-to-high paleontological potential, increasing with depth. The exact depth at which this transition occurs cannot be determined precisely in the Project area; however, the records of the LACM and reports in the scientific literature (i.e., Jefferson 1991 a and b, Reynold and Reynolds 1991) indicate depths of as little as 5 feet to 10 feet bgs in the region may yield paleontological resources.

Table 1 Summary of the records search from the LACM

Locality Number	Age	Taxa	Approximate Location	Depth
LACM VP 4619	Pleistocene	Mammoth (*Mammuthus*)	Eastvale, CA; 13 miles southeast of Project area	100 feet bgs
LACM VP 7811	Pleistocene	Whip snake (*Masticophis*)	Chino Valley, CA; 8.7 miles south of Project area	9 to 11 feet bgs
LACM VP 1207	Pleistocene	Bovidae	Corona, CA; 17 miles southeast of Project area	Unknown
LACM VP 7268, 7271	Pleistocene	Horse (*Equus*)	Chino Hills, CA; 8 miles southwest of Project area	Unknown
LACM VP 7508	Pleistocene	Ground sloth (*Nothrotheriops*), elephant family (Proboscidea), horse (*Equus*)	Chino Hills, CA; 8 miles southwest of Project area	Unknown
LACM VP 1728	Pleistocene	Horse (*Equus*), camel (C*amelops*)	Chino, CA; 8.4 miles southwest of Project area	15 to 20 feet bgs

Table 2 Paleontological potential of geologic units within the Project area

Geologic Unit	Age	Occurrence within Project area	Paleontological Potential*
Young alluvial fan deposits	Holocene to late Pleistocene	Entire surface	Low-to-High, increasing with depth
Very old alluvial fan deposits	Middle to early Pleistocene	Likely in the subsurface at unknown depth	High

**ranking based on the SVP (2010) classifications*

6.3 PALEONTOLOGICAL RESOURCES IMPACTS ASSESSMENT

The paleontological potential assessment presented above indicates that the Project area includes young alluvial fan deposits mapped at the surface, which have low-to-high paleontological potential, increasing with depth, and very old alluvial fan deposits, which have high paleontological potential, likely present in the subsurface of the Project area at unknown depth. Should paleontological resources preserved in these units be impacted by Project activities it would constitute a direct adverse impact under CEQA. Therefore, an impacts assessment was conducted to evaluate planned Project activities and their likelihood to pose an adverse impact to paleontological resources.

recommendations and management considerations

The Project plans to regrade a series of existing pond basins, reoperate the 30-inch storm drain, and upgrades to Chaparral Park. This work will entail a variety of ground disturbing activities, the exact details of which are not finalized at present. Following construction, operations and maintenance activities are not anticipated to include ground disturbance in previously undisturbed areas.

Of these activities, those that require ground disturbance that will extend into geologic units with high paleontological potential are at risk of posing a direct adverse impact to paleontological resources. High potential sediments may be present as shallowly as 5 feet to 10 feet bgs in the Project area. The pond basins have already been excavated to depths of at least 20 feet bgs, and so any additional grading in these basins is anticipated to impact high potential sediments. Other ground disturbing activities such as potholing for utilities or to install culverts only risk impacting paleontological resources if they exceed 5 feet bgs in depth.

Because this Project has the potential to cause direct adverse impacts to paleontological resources, Stantec has developed recommendations for mitigating these impacts, presented below.

7.0 RECOMMENDATIONS AND MANAGEMENT CONSIDERATIONS

As part of the current paleontological assessment, a records search from the LACM and a review of geologic mapping and the scientific literature were conducted in order to assess the potential of the geologic units in the Project area to preserve paleontological resources. The results of this assessment show that the following geologic units are present in the project area:

- Young alluvial fan deposits: low-to-high paleontological potential, increasing with depth;
- Very old alluvial fan deposits: high paleontological potential.

Project activities may include grading to deepen and widen existing pond basins and other unspecified types of ground disturbance. This assessment indicates that geologic units with high paleontological potential are present in the subsurface at depths exceeding approximately 5 feet throughout the Project area. Should project-related activities encounter paleontological resources, the damage or destruction of those resources would constitute an adverse impact under CEQA. In order to adhere to State and City guidelines regarding paleontological resources, Stantec recommends the following:

1. A paleontologist meeting professional standards as defined by Murphey et al. (2019) shall be retained as the Project Paleontologist to oversee all aspects of paleontological mitigation, including the development and implementation of a Paleontological Monitoring and Mitigation Plan (PMMP) tailored to the Project plans that provides for paleontological monitoring of earthwork and ground disturbing activities into undisturbed geologic units with high paleontological potential to be conducted by a paleontological monitor meeting industry standards

(Murphey et al. 2019). A final monitoring report summarizing the results of the monitoring program should be prepared at the conclusion of Project ground disturbance.

2. The PMMP should include provisions for a Workers' Environmental Awareness Program training that communicates requirements and procedures for the inadvertent discovery of paleontological resources during construction, to be delivered by the paleontological monitor to the construction crew prior to the onset of ground disturbance.

3. The PMMP should provide for full time paleontological monitoring of grading in the existing basins at any depth, and of other ground disturbing activities that exceed 5 feet in depth below the natural ground surface in previously undisturbed sediments. The Project Paleontologist may reduce the frequency of monitoring or spot checks should subsurface conditions indicate low paleontological potential.

4. Should a potential paleontological resource be identified in the Project area, whether by the monitor or a member of the construction crew, work should halt in a safe radius around the find (usually 50 feet) until the Project Paleontologist can assess the find and, if significant, salvage the fossil for laboratory preparation and curation at the LACM.

These recommendations meet the standards of the SVP (2010) and conform to industry best practices (e.g., Murphey et al. 2019; Scott and Springer 2003) Based on the findings in this study the proposed Project will not cause an adverse impact to paleontological resources with the incorporation of the above mitigation recommendations. Therefore, no additional paleontological resources studies are recommended or required at this time. Should the Project location or plans change, this assessment will need to be revised to address those changes.

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APPENDIX A

Natural History Museum of Los Angeles County
Paleontological Records Search Results

DRAFT PALEONTOLOGICAL RESOURCE ASSESSMENT FOR THE PEDLEY SPREADING GROUNDS – POND ENHANCEMENTS PROJECT, LOS ANGELES COUNTY, CALIFORNIA

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