

**Initial Study and Mitigated Negative Declaration
Cottonwood Interim Basin Project
Project No. 4-0-00746**

October 2017

Lead Agency:



**City of Moreno Valley
14177 Frederick Street
Moreno Valley, CA 92552**

Prepared by:



ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

**215 N. Fifth Street
Redlands, CA 92374**

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**DRAFT MITIGATED NEGATIVE DECLARATION
COTTONWOOD INTERIM BASIN PROJECT**

Lead Agency: City of Moreno Valley

Project Proponent: City of Moreno Valley

Project Location: The project site is located in the City of Moreno Valley north of Cottonwood Avenue, east of Nason Street, and west of Martha Crawford Street. The project site is located approximately one mile south of State Route 60.

Project Description: The Cottonwood Interim Basin Project (Proposed Project) would construct a sedimentation basin to protect life and property by reducing downstream flooding due to sedimentation and debris build-up. The basin would measure approximately 130 feet by 270 feet and would generally have 3 to 1 slopes. The basin inlet would align with the existing channel on the north side of the basin and include rip rap to protect the basin from erosion during storm events. An outlet concrete structure would be built at the southern end of the basin and connect to the existing 36 CMP located beneath Cottonwood Avenue. An aggregate base access ramp would be built on the east side of the basin for maintenance access.

Public Review Period: October 6, 2017 to November 6, 2017

Mitigation Measures Incorporated into the Project to Avoid Significant Effects:

Biological Resources

BIO-1 Nesting Birds: To ensure compliance with the MBTA and Section 3503.5 of the California Fish and Game Code, and to avoid any potential impacts to special-status bird species that may occur in the project vicinity, construction activities shall be conducted outside the bird nesting bird season (March to August) to the extent possible to avoid any potential disturbance of avian breeding activities. If vegetation removal, clearing, and/or grading for the Proposed Project is conducted during the bird nesting season (March to August), then construction will be limited in the vicinity of any active nests per the recommendations of a qualified biologist. Three days prior to the onset of construction activities, a qualified biologist shall survey for the presence of any active bird nests within the limits of the project. If no active nests are found, no further mitigation would be required. However, any active nest found during survey efforts shall be mapped on the construction plans, and an appropriate buffer area (minimum 200 feet in every direction) shall be established around any active nest. This buffer shall be set at the discretion of the Project Biologist. Encroachment into the buffer area shall not be allowed until the nest is vacated. Construction within the buffer area may resume after a qualified biologist has determined that fledglings have left the nest.

BIO-2 Burrowing Owls: A focused pre-construction burrowing owl survey shall be conducted prior to construction in accordance with the Burrowing Owl Survey Instructions of the Western Riverside County MSHCP. This survey is to be conducted within 30 days prior to ground disturbance. After the pre-construction burrowing owl survey has been completed, a survey report will be prepared in accordance with the MSHCP 30-day Pre-construction Burrowing Owl Survey Report Format (August 7, 2006). If no burrowing owls are located, then construction may proceed. Construction activities must begin within 30 days after the

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survey, or another survey will need to be conducted. If an active burrowing owl burrow (with burrowing owls) is found during the pre-construction survey, the burrow must be avoided while it is occupied by owls or the owls must be relocated in consultation with the CDFW. Avoidance of the active burrow will entail establishment of a “no work” buffer around the active burrow(s). The buffer distance will be established at the discretion of the Project Biologist, according to the location of the burrow, topography, and other biological factors. Typically the buffer will be a minimum of 300 feet and no more than 500 feet. No construction activities shall be allowed within the buffer area until the nest is no longer active and all young owls have fledged. As an alternative to complete burrow avoidance, the City may contact CDFW regarding passive relocation of burrowing owls. Passive relocation generally entails CDFW approval of a relocation plan and the relocation must be conducted during the owl non-breeding season (September 1 through February 28).

BIO-3 Regulatory Permitting: Prior to the commencement of project construction activities that will impact the jurisdictional drainage on the project site, authorization for impacts shall be acquired through the permitting process from the USACE, RWQCB, and CDFW pursuant to the CWA Section 404 and 401 and California Fish and Game Code Section 1600, respectively. Project specific mitigation for impacts to features jurisdictional to state and federal agencies will be determined during the permitting process.

Cultural Resources and Tribal Cultural Resources

CR-1: Prior to the issuance of a grading permit, the City shall retain a professional archaeologist to conduct monitoring of all mass grading and trenching activities. The Project Archaeologist shall have the authority to temporarily redirect earthmoving activities in the event that suspected archaeological resources are unearthed during Project construction. The Project Archaeologist, in consultation with the Monitoring Tribe(s), the contractor, and the City, shall develop a Cultural Resources Monitoring Plan (CRMP) to address the details, timing and responsibility of all archaeological and cultural activities that will occur on the project site. Details in the Plan shall include:

- a. Project grading and development scheduling;
- b. The Project archeologist and the Monitoring Tribes(s) shall attend the pre-grading meeting with the City, the construction manager and any contractors and will conduct a mandatory Cultural Resources Worker Sensitivity Training to those in attendance. The Training will include a brief review of the cultural sensitivity of the Project and the surrounding area; what resources could potentially be identified during earthmoving activities; the requirements of the monitoring program; the protocols that apply in the event inadvertent discoveries of cultural resources are identified, including who to contact and appropriate avoidance measures until the find(s) can be properly evaluated; and any other appropriate protocols. All new construction personnel that will conduct earthwork or grading activities that begin work on the Project following the initial Training must take the Cultural Sensitivity Training prior to beginning work and the Project archaeologist and Monitoring Tribe(s) shall make themselves available to provide the training on an as-needed basis.
- c. The protocols and stipulations that the contractor, City, Monitoring Tribe(s) and Project archaeologist will follow in the event of inadvertent cultural resources discoveries, including any newly discovered cultural resource deposits that shall be subject to a cultural resources evaluation

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- CR-2:** Prior to the issuance of a grading permit, the City of Moreno Valley shall secure agreements with the Pechanga Band of Luiseño Indians and Soboba Band of Luiseño Indians for tribal monitoring. The City is also required to provide a minimum of 30 days advance notice to the tribes of all mass grading and trenching activities. The Native American Tribal Representatives shall have the authority to temporarily halt and redirect earth moving activities in the affected area in the event that suspected archaeological resources are unearthed. If the Native American Tribal Representatives suspect that an archaeological resource may have been unearthed, the Project Archaeologist or the Tribal Representatives shall immediately redirect grading operations in a 100-foot radius around the find to allow identification and evaluation of the suspected resource. In consultation with the Native American Tribal Representatives, the Project Archaeologist shall evaluate the suspected resource and make a determination of significance pursuant to California Public Resources Code Section 21083.2. If the resource is significant, Mitigation Measure CR-3 shall apply.
- CR-3:** If archaeological resource(s) is discovered on the property, a treatment plan shall be prepared by the Project Archaeologist and expeditiously reviewed by the interested Native American Tribal Representatives and the City Planning Division and implemented by the Project Archaeologist to protect the identified archaeological resource(s) from damage and destruction. If a significant archaeological resource(s) is discovered on the property, ground disturbing activities shall be temporarily suspended 100 feet around the resource(s) until a treatment plan is implemented. The Project Archaeologist, interested Native American Tribal Representatives, and the City Planning Division shall confer regarding mitigation of the discovered resource(s).
- CR-4:** In the event that Native American cultural resources are discovered during the course of grading, the following procedures shall be carried out for treatment and final disposition of the discoveries:
- a) The landowner(s) shall relinquish ownership of all cultural resources, including sacred items, burial goods, and all archaeological artifacts and non-human remains as part of the required mitigation for impacts to cultural resources. The artifacts shall be relinquished through one or more of the following methods and evidence of such shall be provided to the City of Moreno Valley Planning Department:
 - i. Accommodate the process for Preservation-In-Place/Onsite reburial of the discovered items with the consulting Native American tribes or bands, as detailed in the treatment plan prepared by the Project Archaeologist under Mitigation Measure CR-3. This shall include measures and provisions to protect the future reburial area from any future impacts. Reburial shall not occur until all cataloging and basic recordation have been completed;
 - ii. A curation agreement with an appropriate qualified repository within Riverside County that meets federal standards per 36 CFR Part 79; therefore, the resources would be professionally curated and made available to other archaeologists/researchers for further study. The collections and associated records shall be transferred, including title, to an appropriate curation facility within Riverside County, to be accompanied by payment of the fees necessary for permanent curation;

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- iii. For purposes of conflict resolution, if more than one Native American tribe or band is involved with the project and cannot come to an agreement as to the disposition of cultural materials, they shall be curated at the Western Science Center by default.

CR-5: The City shall verify that the following note is included on the Grading Plan:

"If any suspected archaeological resources are discovered during ground-disturbing activities and the Project Archaeologist or Native American Tribal Representatives are not present, the construction supervisor is obligated to halt work in a 100-foot radius around the find and call the Project Archaeologist and the Tribal Representatives to the site to assess the significance of the find."

CR-6: If potential historic or cultural resources are uncovered during excavation or construction activities at the project site, work in the affected area must cease immediately and a qualified person meeting the Secretary of the Interior's standards (36 CFR 61), Tribal Representatives, and all site monitors per the Mitigation Measures, shall be consulted by the City to evaluate the find, and as appropriate recommend alternative measures to avoid, minimize or mitigate negative effects on the historic, or prehistoric resource. Determinations and recommendations by the consultant shall be immediately submitted to the Planning Division for consideration, and implemented as deemed appropriate by the Community Development Director, in consultation with the State Historic Preservation Officer (SHPO) and any and all affected Native American Tribes before any further work commences in the affected area.

CR-7: If human remains are discovered, no further disturbance shall occur in the affected area until the County Coroner has made necessary findings as to origin. If the County Coroner determines that the remains are potentially Native American, the California Native American Heritage Commission shall be notified within 5-days of the published finding to be given a reasonable opportunity to identify the "most likely descendant". The "most likely descendant" shall then make recommendations, and engage in consultations concerning the treatment of the remains (California Public Resources Code 5097.98). (GP Objective 23.3, CEQA).

Paleontological Resources

PR-1: The City of Moreno Valley shall retain a qualified paleontologist to conduct monitoring of excavation activities and has the authority to halt and redirect earthmoving activities in the event that suspected paleontological resources are unearthed.

PR-2: The paleontological monitor shall conduct full-time monitoring during grading and excavation operations in undisturbed, very old alluvial fan sediments and shall be equipped to salvage fossils if they are unearthed to avoid construction delays and to remove samples of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates. The paleontological monitor shall be empowered to temporarily halt or divert equipment to allow of removal of abundant and large specimens in a timely manner. Monitoring may be reduced if the potentially fossiliferous units are not present in the subsurface, or if present, are determined upon exposure and examination by qualified paleontological personnel to have a low potential to contain or yield fossil resources.

PR-3: Recovered specimens shall be properly prepared to a point of identification and permanent preservation, including screen washing sediments to recover small invertebrates and

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vertebrates, if necessary. Identification and curation of specimens into a professional, accredited public museum repository with a commitment to archival conservation and permanent retrievable storage, such as the Western Science Museum in Hemet, California, is required for significant discoveries.

PR-4: A final monitoring and mitigation report of findings and significance shall be prepared, including lists of all fossils recovered, if any, and necessary maps and graphics to accurately record the original location of the specimens. The report shall be submitted to the City of Moreno Valley prior to building final.

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ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
APE	Area of Potential Effect
AQMP	Air Quality Management Plan
BMPs	Best Management Practices
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CH₄	Methane
CMP	Corrugated Metal Pipe
CO	Carbon Monoxide
CO₂	Carbon Dioxide
CO₂e	Carbon Dioxide Equivalent
CO Plan	Federal Attainment Plan for Carbon Monoxide
CRHR	California Register of Historic Places
CWA	California Water Act
DTSC	Department of Toxic Substances Control
EIC	Eastern Information Center
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
FEIR	Final Environmental Impact Report
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
GHGs	Greenhouse Gases
LSTs	Localized Significance Thresholds
MBTA	Migratory Bird Treaty Act
MLD	Most Likely Descendent
MMT	Million Metric Tons
MND	Mitigated Negative Declaration
MSHCP	Multiple Species Habitat Conservation Plan
MTCO₂eq	Metric Tons of Carbon Dioxide Equivalent
NAHC	Native American Heritage Commission
ND	Negative Declaration
NPDES	National Pollutant Discharge Elimination System
N₂O	Nitrous Oxide
NO_x	Nitrogen Oxides
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
OHV	Off-Highway Vehicle
OPR	California Office of Planning and Research
PM₁₀ and PM_{2.5}	Particulate Matter
RCPG	Regional Comprehensive Plan and Guide
ROG	Reactive Organic Gases
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
USACE	United States Army Corps of Engineers
SCAG	Southern California Association of Governments
SQAQMD	South Coast Air Quality Management District

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SCS	Sustainable Communities Strategy
SIP	State Implementation Plan
SP	Service Population
SoCAB	South Coast Air Basin
SR	State Route
SRA	Sensitive Receptor Area
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board

SECTION 1. BACKGROUND

1.1 Summary

Project Title: Cottonwood Interim Basin Project

Lead Agency Name and Address: City of Moreno Valley
14177 Frederick Street
Moreno Valley, CA 92552

Contact Person and Phone Number: Henry Ngo, P.E.
Capital Projects Division Manager
Public Works
(951) 413-3106

Project Location: The project site is located in the City of Moreno Valley north of Cottonwood Avenue, east of Nason Street, and west of Martha Crawford Street. The project area is approximately 0.81 acres, a portion of APN 488-180-025. The project site is located approximately one mile south of State Route (SR) 60.

General Plan Designation: Residential: Max. 2 du/ac

Zoning: RA2

1.2 Introduction

The City of Moreno Valley is the Lead Agency for this Initial Study. The Initial Study has been prepared to identify and assess the anticipated environmental impacts of the Cottonwood Interim Basin Project (Proposed Project). This document has been prepared to satisfy the California Environmental Quality Act (CEQA) (Pub. Res. Code, Section 21000 *et seq.*) and State CEQA Guidelines (14 CCR 15000 *et seq.*). CEQA requires that all state and local government agencies consider the environmental consequences of Projects over which they have discretionary authority before acting on those Projects. A CEQA Initial Study is generally used to determine which CEQA document is appropriate for a Project (Negative Declaration [ND], Mitigated Negative Declaration [MND], or Environmental Impact Report [EIR]).

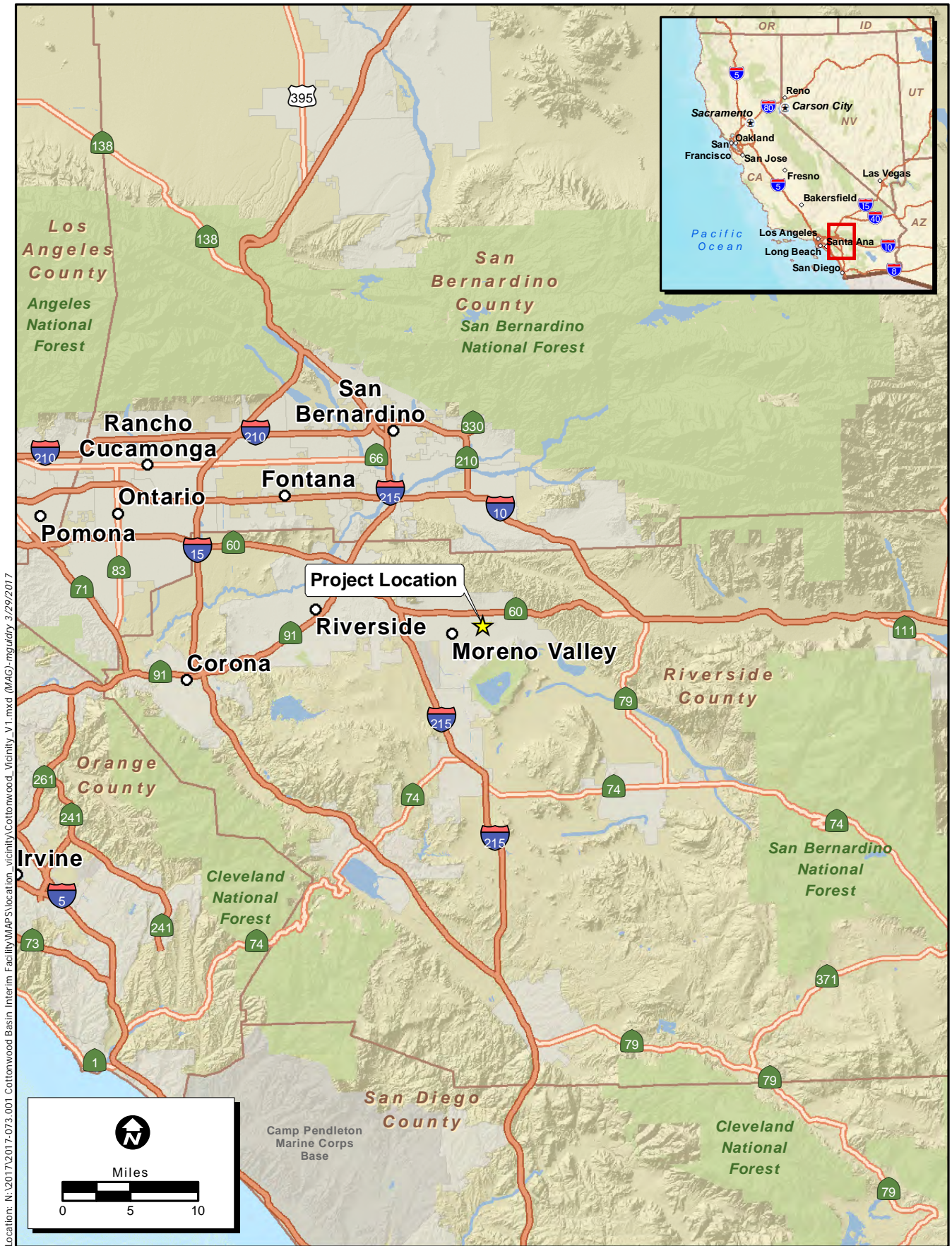
1.3 Surrounding Land Uses/Environmental Setting

The project site is located in the City of Moreno Valley north of Cottonwood Avenue, east of Nason Street, and west of Martha Crawford Street (Figure 1 and 2). The project site is located southwest of Moreno Peak, approximately one mile south of SR-60, and approximately 4.5 miles north of Lake Perris. The project site is located along an existing channel that flows south from Moreno Peak. Surrounding land uses are described in Table 1-1.

Table 1-1. Surrounding Land Uses

Title	Land Use
Project Site	Undeveloped
North	Undeveloped, Residential
East	Undeveloped
South	Residential
West	Undeveloped, Residential

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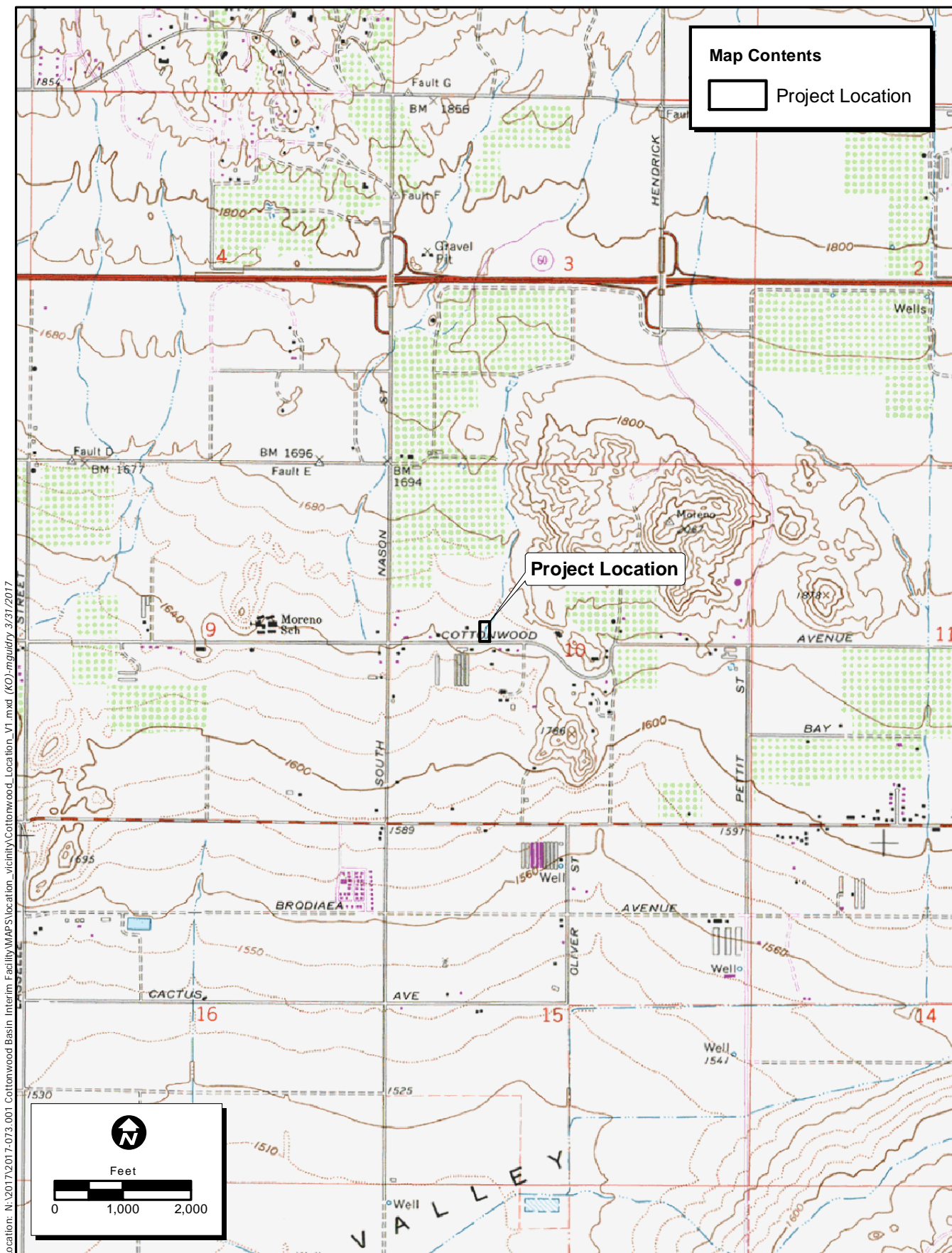
Location: N:\2017\2017-073.001 Cottonwood Basin Interim Facility\MAPS\location_vicinity_V1.mxd (MAG-nguidry_3/29/2017)

Map Date: 3/29/2017
 Service Layer Credits: Sources: USGS, ESRI, TANA, AND

Figure 1. Project Vicinity

2017-073.001 Cottonwood Basin Interim Facility

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Map Date: 3/30/2017
 USGS Topographic Quadrangle: Sunnymead (1980)

Figure 2. Project Location

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SECTION 2. PROJECT DESCRIPTION

2.1 Project Background

The project site is located along an existing channel southwest of Moreno Peak in the City of Moreno Valley. This channel was constructed in an upland area in the 1960s to support runoff of agricultural irrigation. The channel crosses vacant land (parcel APN 488-180-025) north of Cottonwood Avenue and conveys flows through a 36 inch corrugated metal pipe (CMP) to a downstream channel on the south side of Cottonwood Avenue and west of residential subdivision Tract 19879. This tract drains to the same channel as the 36 inch CMP via a single 24 inch concrete pipe at the end of Cedar Court. During storm events, sediment and debris flow down the channel and blocks the 24 inch concrete pipe that drains the residential development resulting in flooding.

During the flash flood event on July 19, 2015, heavy storm flows washed off erosion, dirt, and mud to the downstream channel blocking the outlet of the 24 inch concrete pipe; then consequently created flooding for Tract 19879.

In order to avoid the catastrophic flooding, protect life and property of Tract 19879, and prepare for the rainy season this year (2017), the City of Moreno Valley is proposing the construction of an emergency interim debris basin on the north side of Cottonwood Avenue. The purpose of the basin is to retain all silt, mud, and debris so only clean water runoff would flow through the pipe without blocking the downstream channel.

On September 21, 2015, City staff met with County Supervisor Ashley and Riverside County Flood Control and Water Conservation District (District) staff to discuss the flooding issues affecting the Tract 19879 subdivision and surrounding areas, even in less than heavy rainfall amounts. The District proposed the interim basin as an emergency, short term solution for the flooding issue.

2.2 Project Objectives

The objective of the Proposed Project is to protect life and property by reducing downstream flooding due to sedimentation and debris build-up.

2.3 Project Characteristics

The proposed sedimentation basin would measure approximately 130 feet by 270 feet and would generally have 3 to 1 slopes. The basin inlet would align with the existing channel on the north side of the basin and include rip rap to protect the basin from erosion during storm events. An outlet concrete structure would be built at the southern end of the basin and connect to the existing 36 inch CMP located beneath Cottonwood Avenue. An aggregate base access ramp would be built on the east side of the basin for maintenance access (Figure 3. Site Plan).

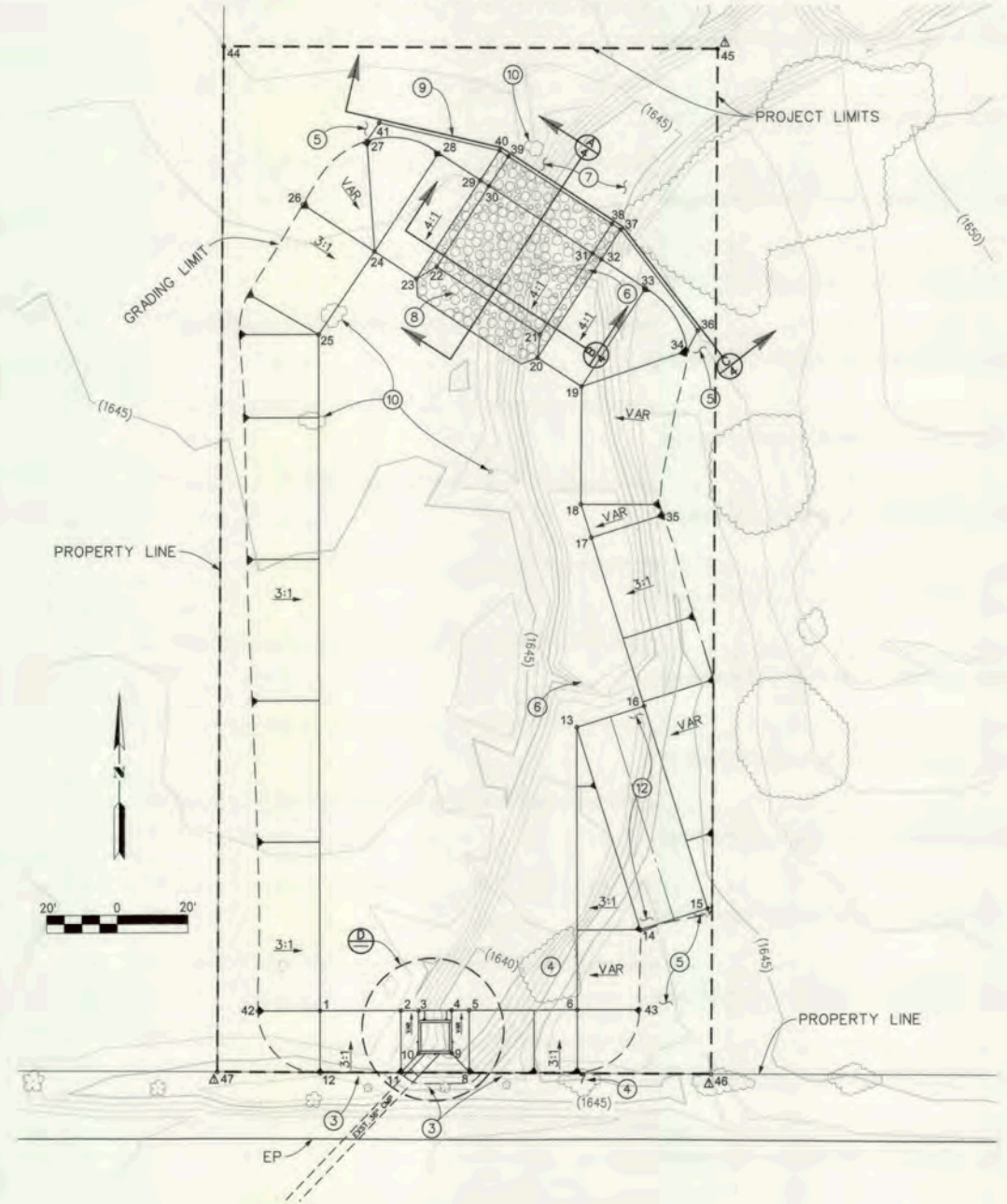
2.4 Project Timing

It is estimated that construction of the Proposed Project would take approximately two months and start in late 2017.

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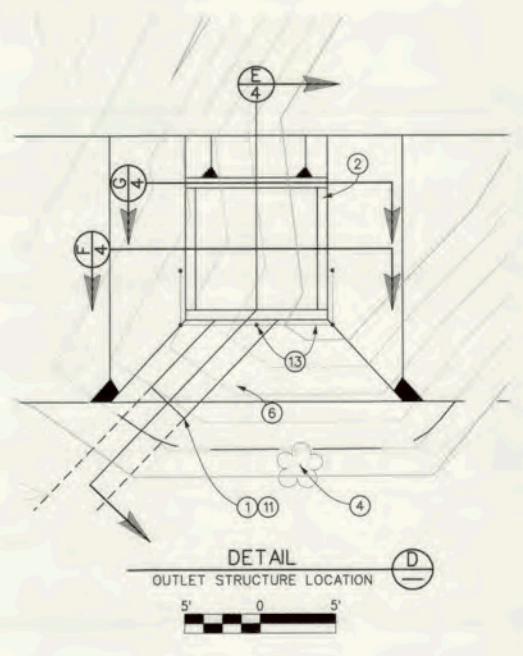
TO BE MAINTAINED BY THE CITY OF MORENO VALLEY



BASIN SURVEY CONTROL			
PT.#	NORTHING	EASTING	EL.
1	2281395.29	6277406.57	1638.2
2	2281395.29	6277429.47	1638.2
3	2281395.29	6277434.47	1638.2
4	2281395.29	6277443.87	1638.2
5	2281395.29	6277448.83	1638.2
6	2281395.29	6277479.52	1638.2
7	2281377.71	6277479.52	1644.0
8	2281377.71	6277448.87	1644.0
9	2281383.11	6277443.87	1644.0
10	2281383.11	6277434.47	1644.0
11	2281377.71	6277429.47	1644.0
12	2281377.71	6277406.57	1644.0
13	2281475.21	6277479.52	1638.2
14	2281417.93	6277497.37	1644.1
15	2281423.88	6277516.46	1644.1
16	2281481.17	6277498.61	1638.2
17	2281528.90	6277483.73	1638.2
18	2281538.31	6277480.80	1638.2
19	2281571.63	6277481.03	1638.2
20	2281579.78	6277468.56	1638.2
21	2281586.44	6277469.33	1638.2

BASIN SURVEY CONTROL			
PT.#	NORTHING	EASTING	EL.
22	2281605.60	6277440.04	1638.2
23	2281602.21	6277434.24	1638.2
24	2281609.94	6277422.42	1638.2
25	2281586.56	6277406.57	1638.2
26	2281623.25	6277402.15	1646.2
27	2281641.21	6277420.29	1646.5
28	2281637.73	6277440.59	1646.5
29	2281630.00	6277452.41	1646.5
30	2281628.36	6277454.92	1645.0
31	2281609.21	6277484.22	1645.0
32	2281607.57	6277486.73	1646.5
33	2281599.42	6277499.20	1646.5
34	2281581.62	6277510.94	1646.5
35	2281535.24	6277504.06	1645.2
36	2281587.38	6277514.02	1646.5
37	2281615.94	6277492.20	1646.5
38	2281617.58	6277489.69	1645.0
39	2281636.73	6277460.39	1645.0
40	2281638.37	6277457.88	1646.5
41	2281646.32	6277423.79	1646.5
42	2281395.29	6277388.99	1644.0
43	2281395.29	6277497.09	1644.0

PROJECT LIMITS		
PT.#	NORTHING	EASTING
44	2281668.11	6277379.73
Δ45	2281667.03	6277519.73
Δ46	2281377.04	6277517.38
Δ47	2281378.12	6277377.38



- NOTES**
- EXTEND EXISTING 36" CMP CULVERT AS SHOWN IN SECTION E ON SHEET 4.
 - CONSTRUCT OUTLET STRUCTURE AS SHOWN IN SECTIONS E, F, AND G, AND DETAILS ON SHEET 4. ALL WALLS AND SLAB SHALL BE 8" THICK. STRUCTURAL REBAR SHALL BE #4 BARS PLACED 10" ON CENTER EACH WAY ON ALL FACES.
 - GRADE AND MODIFY EXISTING BERM TO MATCH BASIN GRADING AS DIRECTED BY ENGINEER.
 - PROTECT EXISTING VEGETATION AS DIRECTED BY ENGINEER.
 - GRADE EXISTING GROUND TO MATCH BASIN GRADING AS DIRECTED BY THE ENGINEER.
 - REMOVE AND DISPOSE OF EXISTING RIPRAP AS DIRECTED BY ENGINEER.
 - GRADE EXISTING DITCH TO DRAIN AND MATCH TOP OF 3' CUTOFF WALL. FINISHED CUT/FILL SLOPES SHALL NOT EXCEED 2:1 (H:V).
 - PLACE LIGHT CLASS RIPRAP AS SHOWN IN SECTION A AND SECTION B ON SHEET 4.
 - CONSTRUCT 3' CUTOFF WALL AS SHOWN IN SECTION C ON SHEET 4.
 - REMOVE AND DISPOSE OF EXISTING VEGETATION.
 - REMOVE AND DISPOSE OF EXISTING SANDBAG HEADWALL AND EXPOSE 1 FT OF EXISTING 36" CMP CULVERT.
 - PLACE 3" OF CLASS 2 AGGREGATE BASE ON ACCESS RAMP BETWEEN THE PERIMETER FORMED BY POINTS 13, 14, 15, AND 16 SHOWN HEREON. POINT ELEVATIONS ARE FOR FINISHED GRADE AFTER PLACEMENT AND COMPACTION OF AGGREGATE BASE.
 - INSTALL CABLE RAILING PER CALTRANS STANDARD DRAWING NO. B11-47 AND DETAIL J ON SHEET 4.

<p>CALL THE FIRE 1-800-227-2600 2 Working Days Before You Dig</p>	<p>BASIS OF BEARINGS:</p>	<p>BENCH MARK:</p> <p>Z-13329 1 1/2" BRASS DISK STAMPED R.C.F.C. W.C. 59-00 N 2287239.30 E 6276902.45 EL. 1782.72'</p>	<p>Δ UPDATED R/W LIMITS: PTS 45, 46, AND 47 HAT <i>initials</i></p>	<p>CITY OF MORENO VALLEY APPROVALS</p>			<p>PREPARED UNDER SUPERVISION OF</p> <p><i>Signature</i> 11/16/2016 NAME: HELIO K. TAKANO RCE: 76563</p>	<p>FLOOD CONTROL</p> <p>MORENO - COTTONWOOD INTERIM BASIN</p> <p>SITE PLAN AND SURVEY CONTROL</p>	<p>DWG NO. 4-1087</p> <p>SHEET 3A OF 4</p> <p>PROJECT NO. 4-0-00746</p>
	<p>APPROVED BY: _____ DATE: _____ BY: _____</p> <p>CITY TRAFFIC ENGINEER</p> <p>MAINTENANCE AND OPERATIONS MANAGER</p> <p>TRAFFIC OPERATIONS SUPERVISOR</p> <p>DESIGNED BY: D.J.C. DRAWN BY: D.J.C. CHECKED BY: J.L.K.</p>	<p>RECOMMENDED: _____ DATE: 11-22-16</p> <p>INTERIM CITY PROJECTS MANAGER/ASSISTANT CITY ENGINEER</p> <p>R.C.E. 43028</p> <p>APPROVED: _____ DATE: 11/23/16</p> <p>PAK AHMAD R. JANSARI PUBLIC WORKS DIRECTOR/CITY ENGINEER R.C.E. 51318</p>	<p>1985 MARKET ST. RIVERSIDE CA, 92501</p>						

Map Date: 6/28/2017
Source: City of Moreno Valley 2017



Figure 3. Site Plan
2017-073_002 Cottonwood Interim Basin

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2.5 Regulatory Requirements, Permits, and Approvals

The following approvals and regulatory permits would be required for implementation of the Proposed Project:

- USACE – Clean Water Act Section 404 Permit;
- RWQCB, Santa Ana Region – Clean Water Act Section 401 Permit; and
- CDFW – Streambed Alteration Agreement.

2.6 Consultation With California Native American Tribe(s)

The following California Native American tribes traditionally and culturally affiliated with the project area have been notified of the project: Agua Caliente Band of Cahuilla Indians, Morongo Band of Mission Indians, Pechanga Temecula Band of Luiseño Mission Indians, San Manuel Band of Mission Indians, Soboba Band of Luiseño Indians, Torres Martinez Desert Cahuilla Indians, and Rincon Band of Luiseño Indians. The Agua Caliente Band of Cahuilla Indians, Rincon Band of Luiseño Indians, and Pechanga Temecula Band of Luiseño Indians requested consultation pursuant to Public Resources Code section 21080.3.1. A summary of the consultation process is provided in Section 4.18 of this Initial Study.

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SECTION 3. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED AND DETERMINATION

Environmental Factors Potentially Affected

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

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

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 project proponent. 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

Henry Ngo, P.E.

Printed Name

9/27/17

Date

City of Moreno Valley

Agency

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SECTION 4. ENVIRONMENTAL CHECKLIST AND DISCUSSION

4.1 Aesthetics

4.1.1 Environmental Setting

Regional Setting

The City of Moreno Valley (City) lies on a relatively flat valley floor surrounded by rugged hills and mountains. The major scenic resources within the City are visible from State Route (SR) 60, the major transportation route in the area. Upon entering the City from the west, the dominant view is of the Box Springs Mountains to the immediate north and the Mount Russell foothills to the south. Moreno Peak is part of a prominent landform located south of SR-60 along Moreno Beach Drive. This landform only rises a few hundred feet above the valley floor but has a unique location near the center of the valley (City of Moreno Valley 2006b).

State Scenic Highways

The California Scenic Highway Program protects and enhances the scenic beauty of California's highways and adjacent corridors. A highway can be designated as scenic based on how much natural beauty can be seen by users of the highway, the quality of the scenic landscape, and if development impacts the enjoyment of the view (Caltrans 2017). The project site is not located along an officially designated highway.

Visual Setting

The project site is located north of Cottonwood Avenue, east of Nason Street, and west of Martha Crawford Street. The project site is located southwest of Moreno Peak, approximately one mile south of SR-60, and approximately 4.5 miles north of Lake Perris. This area is predominantly developed with residential land uses. There are several undeveloped properties immediately adjacent to the project site.

Visual Character of the Project Site

The project site is located along an existing channel north of Cottonwood Avenue. The project site contains sparsely vegetated areas of native and nonnative plant communities. The project site contains evidence of frequent human use including off-highway vehicle (OHV) tracks and illegal trash dumping to the east.

4.1.2 Aesthetics (I.) Environmental Checklist and Discussion

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

The project site is immediately surrounded by undeveloped land to the west, north, and east. Beyond the undeveloped land there are residential land uses in proximity to the west, north, and east, and located immediately south across Cottonwood Avenue. Scenic vistas in the project area

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include views of Moreno Peak to the northeast of the project site. The Proposed Project would build a detention basin just north of Cottonwood Avenue. The detention basin's final finish grade would be similar to the existing grade; therefore, scenic vistas of Moreno Peak would not be affected by the Proposed Project. No impact would occur.

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

The Proposed Project is not located along a state scenic highway (Caltrans 2017). No impact would occur.

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

Northerly of Cottonwood Avenue, the project site is immediately surrounded by undeveloped land that appears to have been previously used for agricultural purposes. Beyond the undeveloped land, there are residential land uses to the west and north with scattered residential to the east. Moreno Peak is located to the northeast of the project site. Residential land uses are located immediately south of Cottonwood Avenue. The construction of the debris basin, just north of Cottonwood Avenue, would not change the rural residential character of the project area. Impacts would be less than significant.

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

The proposed detention basin would not require lighting or includes sources of glare. As such, no impact would occur.

Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.2 Agriculture and Forestry Resources

4.2.1 Agriculture and Forestry Resources (II.) Environmental Checklist and Discussion

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

The project site is not located on Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (California Department of Conservation 2014). No impact would occur.

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

The project site has a General Plan land use designation of Residential 2 and a zoning designation of RA2 (City of Moreno Valley 2017), which allows a maximum residential density of 2 dwelling units per acre. No land within the City of Moreno Valley is currently under a Williamson Act contract (City of Moreno Valley 2006b). The Proposed Project is the construction of a detention basin for the management of stormwater and prevention of flooding downstream. The proposed use of the project site would be compatible with the project site's zoning. No impact would occur.

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

The project site is zoned RA2 (City of Moreno Valley 2017). The project site is not zoned forest land or timberland. No impact would occur.

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

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The project site is not zoned for forest land, timberland, or timberland production (City of Moreno Valley 2017). The project site is currently developed and does not contain forestland or timberland. Surrounding areas are developed with residential land uses. No impact would occur.

e)	Would the project involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project site has a General Plan land use designation of Residential 2 and a zoning designation of RA2; however, the site is not currently being used for agricultural production. The project site is undeveloped. Adjacent parcels are also undeveloped. There is an existing channel that bisects the project site from north to south. The channel was constructed in the 1960s to support runoff of agricultural irrigation. The Proposed Project would construct a detention basin in alignment with this existing channel and would be compatible with the site's RA2 zoning. There are no forest lands near the project site. No impact would occur.

Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.3 Air Quality

4.3.1 Environmental Setting

Both the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) have established ambient air quality standards for common pollutants. These ambient air quality standards are levels of contaminants representing safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called criteria pollutants because the health and other effects of each pollutant are described in criteria documents. Areas that meet ambient air quality standards are classified as attainment areas, while areas that do not meet these standards are classified as nonattainment areas.

CARB divides the state into air basins that share similar meteorological and topographical features. Moreno Valley lies in the South Coast Air Basin (SoCAB), which includes the non-desert portions of Los Angeles, Riverside, and San Bernardino counties and all of Orange County. The air quality in the SoCAB is regulated by the South Coast Air Quality Management District (SCAQMD). The air basin is on a coastal plain with connecting broad valleys and low hills and is bounded by the Pacific Ocean on the southwest, with high mountains forming the remainder of the perimeter (SCAQMD 1993). The Riverside County portion of the SoCAB is designated as a nonattainment area for the federal ozone and fine particulate matter (PM_{2.5}) standards and is also a nonattainment area for the state standards for ozone, coarse particulate matter (PM₁₀), and PM_{2.5} standards (CARB 2016).

4.3.2 Air Quality (III.) Environmental Checklist and Discussion

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

As part of its enforcement responsibilities, the EPA requires each state with nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the federal standards. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. Similarly, under state law, the California Clean Air Act requires an air quality attainment plan to be prepared for areas designated as nonattainment with regard to the federal and state ambient air quality standards. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

In order to reduce emissions for which the SoCAB is in nonattainment, the SCAQMD has adopted the 2016 Air Quality Management Plan (AQMP), which establishes a program of rules and regulations directed at reducing air pollutant emissions and achieving state (California) and national ambient air quality standards. The 2016 AQMP is a regional and multi-agency effort including the SCAQMD, CARB, the Southern California Association of Governments (SCAG), and the EPA. The 2016 AQMP pollutant control strategies are based on the latest scientific and technical information and planning assumptions, including the 2016 Regional Transportation Plan/Sustainable Communities Strategy, updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts. SCAG's latest growth forecasts were defined in consultation with local governments and with reference to local general plans. The Proposed Project is subject to the SCAQMD's Air Quality Management Plan.

According to the *CEQA Air Quality Handbook*, in order to determine consistency with the SCAQMD AQMP, two main criteria must be addressed.

Criterion 1:

With respect to the first criterion, SCAQMD methodologies require that an air quality analysis for a project include forecasts of project emissions in relation to contributing to air quality violations and delay of attainment.

a) Would the project result in an increase in the frequency or severity of existing air quality violations?

Because the consistency criteria identified under the first criterion pertain to pollutant concentrations, rather than to total regional emissions, an analysis of the project's pollutant emissions relative to localized pollutant concentrations is used as the basis for evaluating project consistency. As discussed in Response 4.3(d), below, localized concentrations of carbon monoxide (CO), nitrogen oxides (NO_x), and particulate matter (PM₁₀ and PM_{2.5}) would be less than significant. Therefore, the Proposed Project would not result in an increase in the frequency or severity of existing air quality violations. Because reactive organic gasses (ROG) are not a criteria pollutant, there is no ambient standard or localized threshold for ROGs. Due to the role ROG plays in ozone

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formation, it is classified as a precursor pollutant and only a regional emissions threshold has been established.

b) Would the project cause or contribute to new air quality violations?

As discussed in Response 4.3(b), the Proposed Project would result in emissions that would be below the SCAQMD thresholds. Therefore, the Proposed Project would not have the potential to cause or affect a violation of the ambient air quality standards.

c) Would the project delay timely attainment of air quality standards or the interim emissions reductions specified in the AQMP?

The Proposed Project would result in less than significant impacts with regard to localized concentrations during project construction. As such, the Proposed Project would not delay the timely attainment of air quality standards or AQMP emissions reductions.

Criterion 2:

With respect to the second criterion for determining consistency with SCAQMD and SCAG air quality policies, it is important to recognize that air quality planning within the SoCAB focuses on attainment of ambient air quality standards at the earliest feasible date. Projections for achieving air quality goals are based on assumptions regarding population, housing, and growth trends. Thus, the SCAQMD's second criterion for determining project consistency focuses on whether or not the Proposed Project exceeds the assumptions utilized in preparing the forecasts presented in the AQMP. Determining whether or not a project exceeds the assumptions reflected in the AQMP involves the evaluation of the three criteria outlined below. The following discussion provides an analysis of each of these criteria.

a) Would the project be consistent with the population, housing, and employment growth projections utilized in the preparation of the AQMP?

A project is consistent with the AQMP in part if it is consistent with the population, housing, and employment assumptions that were used in the development of the AQMP. In the case of the *2016 Air Quality Management Plan (2016 AQMP)*, three sources of data form the basis for the projections of air pollutant emissions: the *City of Moreno Valley General Plan (General Plan)*, SCAG's *Growth Management Chapter of the Regional Comprehensive Plan and Guide (RCPG)*, and SCAG's *2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)*. The RTP/SCS also provides socioeconomic forecast projections of regional population growth. The Proposed Project involves the improvement of stormwater management through the implementation of a sedimentation/debris basin which is not a trip generating land use. Rather, the Proposed Project would address existing stormwater management deficiencies and implement improvements consistent with the General Plan to protect life and property by reducing downstream flooding due to sedimentation and debris build-up. Therefore, the Proposed Project would be considered consistent with the General Plan. Furthermore, the Proposed Project does not involve any uses that would increase population beyond what is considered in the General Plan and, therefore, would not affect City-wide plans for population growth. Thus, the Proposed Project is consistent with the types, intensity, and patterns of land use envisioned for the City in the RCPG. The population, housing, and employment forecasts, which are adopted by SCAG's Regional Council, are based on the local plans and policies applicable to the City; these are used by SCAG in all phases of implementation and review. Additionally, as the SCAQMD has incorporated these same projections

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into the 2016 AQMP, it can be concluded that the Proposed Project would be consistent with the projections.

b) Would the project implement all feasible air quality mitigation measures?

The Proposed Project would result in less than significant air quality impacts. Compliance with emission reduction measures identified by the SCAQMD would be required as identified in Response 4.3(b). As such, the Proposed Project meets this AQMP consistency criterion.

c) Would the project be consistent with the land use planning strategies set forth in the AQMP?

The Proposed Project would serve to implement City of Moreno Valley goals to manage stormwater in the area. The Proposed Project is located within a developed portion of the City that has been subjected to a flash flood event. On September 21, 2015, City staff met with County Supervisor Ashley and staff from the District to discuss the flooding issues affecting the surrounding areas, even in less than heavy rainfall amounts. The District proposed the interim basin as an emergency, short term solution for the flooding issue. Therefore, the City of Moreno Valley is proposing the construction of the emergency interim debris basin on the north side of Cottonwood Avenue.

In conclusion, the determination of AQMP consistency is primarily concerned with the long-term influence of a project on air quality in the SoCAB. The Proposed Project would not result in a long-term impact on the region's ability to meet State and Federal air quality standards. As discussed above, the Proposed Project's long-term influence would also be consistent with the goals and policies of the AQMP and is, therefore, considered consistent with the SCAQMD's 2016 AQMP.

b) Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The Proposed Project would introduce additional construction source emissions, which would adversely affect regional air quality. Short -term operational emissions associated with the Proposed Project were quantified using the California Emissions Estimator Model (CalEEMod) land use emissions model (see Appendix A for model data outputs). These quantified emissions projections were then compared with the significance thresholds established by the SCAQMD.

Construction Impacts

Construction activities would primarily involve earthwork. Construction of the Proposed Project is anticipated to commence in November 2017 and be completed within 2 months. Construction activities would require the export of approximately 2,400 cubic yards of soil.

Table 4.3-1 depicts the construction emissions associated with the project. Emitted pollutants would include ROG, CO, NO_x, PM₁₀, and PM_{2.5}. PM₁₀ and PM_{2.5} Emissions would occur from fugitive dust (due to earthwork and excavation) and from construction equipment exhaust. The majority of PM₁₀ and PM_{2.5} emissions would be generated by fugitive dust from earthwork activities. Exhaust emissions from construction activities include emissions associated with the transport of machinery

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and supplies to and from the project site, emissions produced on-site as the equipment is used, and emissions from trucks transporting materials to and from the site.

As depicted in Table 4.3-1, construction-related emissions would not exceed the established SCAQMD thresholds for criteria pollutants. Therefore, construction-generated emissions would be less than significant.

Table 4.3-1. Construction-Generated Air Pollutant Emissions

Source	Pollutant (pounds/day)				
	ROG	NO _x	CO	PM ₁₀	PM _{2.5}
Construction Activities	0.87	17.00	11.5	3.09	1.77
<i>SCAQMD Thresholds</i>	75	100	550	150	150
<i>Threshold Exceeded?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

Source: Emissions were calculated by ECORP Consulting using the California Emissions Estimator Model, as recommended by the SCAQMD.

Notes: ROG = reactive organic gases; NO_x = nitrogen oxides; CO = carbon monoxide; PM₁₀ = particulate matter up to 10 microns; PM_{2.5} = particulate matter up to 2.5 microns

Long-Term Operational Impacts

The Proposed Project would not include the provision of new permanent stationary or mobile sources of emissions, and therefore, by its very nature, would not generate quantifiable criteria emissions from project operations. The Proposed Project does not propose any buildings and therefore no permanent source or stationary source emissions. Once the Proposed Project is completed, there would be no resultant increase in automobile trips to the area because the improved facilities would not require daily visits. While it is anticipated that the Proposed Project would require intermittent maintenance to be conducted by City staff, such maintenance would be minimal requiring a negligible amount of traffic trips on an annual basis. Impacts in this regard would be less than significant.

<p>c) Would the project 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?</p>	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Cumulative Construction Impacts

With respect to the Proposed Project's construction-period air quality emissions and cumulative SoCAB-wide conditions, the SCAQMD has developed strategies to reduce criteria pollutant emissions outlined in the 2016 AQMP pursuant to Federal Clean Air Act mandates. As such, the Proposed Project would comply with SCAQMD Rule 403 requirements. Rule 403 requires that fugitive dust be controlled with the best available control measures in order to reduce dust so that it does not remain visible in the atmosphere beyond the property line of the Proposed Project. In addition, the Proposed Project would comply with adopted 2016 AQMP emissions control measures. Per SCAQMD rules and mandates, as well as the CEQA requirement that significant impacts be mitigated to the

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extent feasible, these same requirements (i.e., Rule 403 compliance, the implementation of all feasible mitigation measures, and compliance with adopted AQMP emissions control measures) would also be imposed on construction projects throughout the SoCAB, which would include related projects.

The Proposed Project would comply with SCAQMD rules and regulations and the Proposed Project's construction-related impacts would be less than significant level. Thus, it can be reasonably inferred that the Proposed Project-related construction emissions, in combination with those from other projects in the area, would not substantially deteriorate the local air quality. Thus, a less than significant impact would occur.

Cumulative Long-Term Impacts

As discussed previously, the Proposed Project would not result in long-term air quality impacts, since it is not considered a trip generating land use. Additionally, adherence to SCAQMD rules and regulations would alleviate potential impacts related to cumulative conditions on a project-by-project basis. Emission reduction technology, strategies, and plans are constantly being developed. As a result, the Proposed Project would not contribute a cumulatively considerable net increase of any nonattainment criteria pollutant. Therefore, cumulative operational impacts associated with implementation of the Proposed Project would be less than significant.

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

Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. The California Air Resources Board (CARB) has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis.

Sensitive receptors closest to the project site include residents to the south across Cottonwood Avenue. In order to identify impacts to sensitive receptors, the SCAQMD recommends addressing localized significance thresholds for construction and operations impacts (area sources only).

Localized Significance Thresholds (LST)

Localized Significance Thresholds (LSTs) were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The SCAQMD provided the *Final Localized Significance Threshold Methodology* (dated June 2003 [revised 2008]) for guidance. The LST methodology assists lead agencies in analyzing localized impacts associated with project-specific level Proposed Projects. The SCAQMD provides the LST lookup tables for one, two, and five acre projects emitting CO, NO_x, PM_{2.5}, or PM₁₀. The LST methodology and associated mass rates are not designed to evaluate localized impacts from mobile sources traveling over the roadways. The project is located within Sensitive Receptor Area (SRA) 24, Perris Valley.

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The Proposed Project would disturb approximately 0.81 acres; therefore, the LST threshold value for a one acre construction were sourced from the LST lookup tables. It is noted that an operational LST analysis was not prepared, as the Proposed Project would not result in operational emissions. The closest sensitive receptors to the project site are residential uses (front yards) south of the project site, across Cottonwood Avenue at approximately 60 feet distance (18 meters). These sensitive land uses may be potentially affected by air pollutant emissions generated during on-site construction activities. LST thresholds are provided for distances to sensitive receptors of 25, 50, 100, 200, and 500 meters. Notwithstanding, the SCAQMD Methodology explicitly states: "It is possible that a project may have receptors closer than 25 meters. Projects with boundaries located closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters." Therefore, LSTs for receptors located at 25 meters were utilized in this analysis.

Table 4.3-2 shows the construction-related emissions for NO_x, CO, PM₁₀, and PM_{2.5} compared to the LSTs for SRA 24, Perris Valley. As shown in Table 4.3-2, construction emissions would not exceed the LSTs for SRA 24. Therefore, localized impacts from construction would be less than significant.

Table 4.3-2. Localized Significance Emissions

Source	Pollutant (pounds/day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Construction Activities	9.05	10.29	2.54	1.59
<i>SCAQMD Localized Significance Thresholds</i>	147	602	4	3
<i>Threshold Exceeded?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

Source: Emissions were calculated by ECORP Consulting using the California Emissions Estimator Model, as recommended by the SCAQMD.

Notes: The Localized Significance Threshold was determined using Appendix C of the SCAQMD Final Localized Significant Threshold Methodology guidance document for pollutants NO_x, CO, PM₁₀, and PM_{2.5}. The Localized Significance Threshold was based on the size of the construction site, the distance to sensitive receptors, and the source receptor area (SRA 24).

NO_x = nitrogen oxides; CO = carbon monoxide; PM₁₀ = particulate matter up to 10 microns; PM_{2.5} = particulate matter up to 2.5 microns

Carbon Monoxide Hotspots

CO emissions are a function of vehicle idling time, meteorological conditions, and traffic flow. Under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthful levels (i.e., adversely affecting residents, school children, hospital patients, the elderly, etc.).

The SoCAB is designated as an attainment/maintenance area for the Federal CO standards and an attainment area for State standards. There has been a decline in CO emissions even though vehicle miles traveled on U.S. urban and rural roads have increased. On-road mobile source CO emissions have declined 24 percent between 1989 and 1998, despite a 23 percent rise in motor vehicle miles traveled over the same 10 years. California trends have been consistent with national trends; CO emissions declined 20 percent in California from 1985 through 1997 while vehicle miles traveled increased 18 percent in the 1990s. Three major control programs have contributed to the reduced per-vehicle CO emissions: exhaust standards, cleaner burning fuels, and motor vehicle inspection/maintenance programs.

A detailed CO analysis was conducted in the *Federal Attainment Plan for Carbon Monoxide (CO Plan)* for the SCAQMD's *2003 Air Quality Management Plan*. The locations selected for microscale modeling in the CO Plan are worst-case intersections in the Basin, and would likely experience the highest CO concentrations. Thus, CO analysis within the CO Plan is utilized in a comparison to the

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Proposed Project, since it represents a worst-case scenario with heavy traffic volumes within the SoCAB.

Of these locations, the Wilshire Boulevard/Veteran Avenue intersection in Los Angeles experienced the highest CO concentration (4.6 parts per million [ppm]), which is well below the 35-ppm 1-hr CO Federal standard. The Wilshire Boulevard/Veteran Avenue intersection is one of the most congested intersections in Southern California with an average daily traffic (ADT) volume of approximately 100,000 vehicles per day. As the CO hotspots were not experienced at the Wilshire Boulevard/Veteran Avenue intersection, it can be reasonably inferred that CO hotspots would not be experienced at any intersections within the City of Moreno Valley near the project site due to the lower volume of traffic experienced in Moreno Valley. Additionally, the Proposed Project would not generate any new traffic trips and average daily trips would be the same with and without project implementation.

For the reasons described, impacts would be less than significant in this regard.

e) Would the project create objectionable odors affecting a substantial number of people?	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporated <input type="checkbox"/>	Less than Significant Impact <input type="checkbox"/>	No Impact <input checked="" type="checkbox"/>
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According to the SCAQMD CEQA Air Quality Handbook, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The Proposed Project does not include any uses identified by the SCAQMD as being associated with odors.

Construction activities associated with the Proposed Project may generate detectable odors from heavy-duty equipment exhaust. Construction-related odors would be short-term in nature and cease upon project completion. Any impacts to existing adjacent land uses would be short-term and are less than significant.

Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.4 Biological Resources

A Biological Resources Survey, Jurisdictional Delineation, Burrowing Owl Habitat Assessment, and Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Consistency Analysis Report was completed for the Proposed Project (ECORP 2017a). The results of this report are summarized below.

4.4.1 Environmental Setting

The project site contains sparsely vegetated areas of native and nonnative plant communities. The project site contained evidence of frequent human use including: OHV tracks spurring off of the dirt roads running through the project site, and trash dumping to the east. Overall, the project site is moderately disturbed.

Vegetation Communities

Two vegetation communities or land cover types were identified on the project site: fiddleneck fields (*Amsinckia menziesii* Herbaceous Alliance) and cheatgrass grassland (*Bromus tectorum* Semi-Natural Herbaceous Stands). A drainage channel is also present on the project site crossing it from north to south. The drainage channel itself is classified as disturbed/developed. Additionally, north of the project site (offsite) are stands of black willow thickets (*Salix gooddingii* Woodland Alliance).

Wildlife

Wildlife observed during the field survey was typical for the habitat present and the time of the year that the survey was conducted. Species observed included California towhee (*Pipilo crissalis*), common raven (*Corvus corax*), white-crowned sparrow (*Zonotrichia leucophrys*), Anna's hummingbird (*Calypte anna*), and American crow (*Corvus brachyrhynchos*). Other species expected to occur include western fence lizard (*Sceloporus occidentalis*), gopher snake (*Pituophis catenifer*), California ground squirrel (*Otospermophilus beecheyi*), and deer mouse (*Peromyscus maniculatus*).

Soils

Soils on the project site were determined to be made of a single map unit, Hanford coarse sandy loam, two to eight percent slopes. Hanford soil series drains well and is not considered to be a hydric soil (ECORP 2017a).

Potential Waters of the U.S.

As previously mentioned a drainage channel crosses the project site north to south. The channel is connected to the storm drain system south of Cottonwood Avenue. The storm drain system ultimately connects to various channels and to the San Jacinto River, which flows to Lake Elsinore.

Special-Status Plants

No special-status plant species were observed on the project site or in the vicinity (ECORP 2017a). Special-status plant species are not expected to occur on site due to the amount of disturbance present.

Special-Status Wildlife

No special-status wildlife species were observed on the project site (ECORP 2017a). Although several special-status species have the potential to occur on site, most of these species are covered under the MSHCP and require no further action. The exceptions to this include nesting bird species and the burrowing owl, discussed below.

4.4.2 Biological Resources (IV.) Environmental Checklist and Discussion

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

No special-status wildlife or plant species were observed on the project site during the field survey (ECORP 2017a). The project site contains habitat for nesting birds and burrowing owls, and surveys for these species are required in accordance with the MSHCP.

Nesting Birds. Vegetation on the project site and in adjacent areas provide habitat for nesting birds. Nesting birds are protected under both the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code (Sections 3503, 3503.5, 3513, and 3800) and cannot be subjected to take (as defined in California Fish and Game Code) during the bird breeding season, which typically runs from March through August. If construction of the Proposed Project occurs during the bird breeding season, ground-disturbing construction activities could directly affect native and nongame birds and their nests through direct removal of nests and indirectly through increased noise disturbances. Impacts would be less than significant with the implementation of Mitigation Measure BIO-1.

Burrowing Owls. The project site is located within a MSHCP survey area for burrowing owl. The project site contains suitable burrowing owl habitat (open, flat, and sparsely vegetated areas). No burrows suitable in size or shape and no evidence of either burrowing owls or burrowing owl sign (pellets, whitewash, bones of prey items feathers, carcasses) were observed during the field survey (ECORP 2017a). However, because suitable burrowing owl habitat is present there is a possibility for burrowing owls to inhabit the project site prior to construction. If owls are present on the project site, ground disturbing activities can result in significant impacts from the accidental take of owls. With the implementation of Mitigation Measure BIO-2 impacts would be less than significant.

Mitigation Measures

BIO-1: Nesting Birds: To ensure compliance with the MBTA and Section 3503.5 of the California Fish and Game Code, and to avoid any potential impacts to special-status bird species that may occur in the project vicinity, construction activities shall be conducted outside the bird nesting bird season (March to August) to the extent possible to avoid any potential disturbance of avian breeding activities. If vegetation removal, clearing, and/or grading for the Proposed Project is conducted during the bird nesting season (March to August), then construction will be limited in the vicinity of any active nests per the recommendations of a qualified biologist. Three days prior to the onset of construction activities, a qualified biologist shall survey for the presence of any active bird nests within the limits of the project. If no active nests are found, no further mitigation would be required. However, any active nest found during survey efforts shall be mapped on the construction plans, and an appropriate buffer area (minimum 200 feet in every direction) shall be established around any active nest. This buffer shall be set at the discretion of the Project Biologist. Encroachment into the buffer area shall not be allowed until the nest is vacated.

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Construction within the buffer area may resume after a qualified biologist has determined that fledglings have left the nest.

BIO-2: Burrowing Owls: A focused pre-construction burrowing owl survey shall be conducted prior to construction in accordance with the Burrowing Owl Survey Instructions of the Western Riverside County MSHCP. This survey is to be conducted within 30 days prior to ground disturbance. After the pre-construction burrowing owl survey has been completed, a survey report will be prepared in accordance with the MSHCP 30-day Pre-construction Burrowing Owl Survey Report Format (August 7, 2006). If no burrowing owls are located, then construction may proceed. Construction activities must begin within 30 days after the survey, or another survey will need to be conducted. If an active burrowing owl burrow (with burrowing owls) is found during the pre-construction survey, the burrow must be avoided while it is occupied by owls or the owls must be relocated in consultation with the CDFW. Avoidance of the active burrow will entail establishment of a “no work” buffer around the active burrow(s). The buffer distance will be established at the discretion of the Project Biologist, according to the location of the burrow, topography, and other biological factors. Typically the buffer will be a minimum of 300 feet and no more than 500 feet. No construction activities shall be allowed within the buffer area until the nest is no longer active and all young owls have fledged. As an alternative to complete burrow avoidance, the City may contact CDFW regarding passive relocation of burrowing owls. Passive relocation generally entails CDFW approval of a relocation plan and the relocation must be conducted during the owl non-breeding season (September 1 through February 28).

b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project site does not contain any riparian areas, vernal pool habitats, or suitable habitat for fairy shrimp. The project site does not support wetland soils or vegetation. No other sensitive natural communities were identified on the project site (ECORP 2017a). No impact would occur.

c) Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

As previously stated no riparian, wetlands, or vernal pool habitats were identified on the project site. One unvegetated channel was recorded on the project site. The channel crosses the project site north to south and is connected to the storm drain system south of Cottonwood Avenue. The storm drain system ultimately connects to various channels and to the San Jacinto River, which flows to Lake Elsinore.

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The United States Army Corps of Engineers (USACE) maintains jurisdiction over Lake Elsinore. Therefore, the drainage feature within the project site is potentially jurisdictional to the USACE as a water of the U.S., because of its connectivity downstream. Because this drainage feature is potentially under the jurisdiction of the USACE, it is also jurisdictional to the Santa Ana Regional Water Quality Control Board (RWQCB) pursuant to the CWA Section 401. The total acreage and linear feet of this feature that is jurisdictional to the USACE and RWQCB is 0.18 acre and 310 linear feet.

According to the California Fish and Game Code, Section 1600, the feature mentioned above is considered CDFW jurisdictional (non-vegetated streambed). The total acreage and linear feet of this feature that is jurisdictional to the CDFW is 0.18 acre and 310 linear feet.

The proposed basin would align with the channel on the project site. Therefore, ground disturbing activities (excavation, grading) during construction would impact this jurisdictional feature. With the implementation of Mitigation Measure BIO-3 impacts would be less than significant.

Mitigation Measures

BIO-3: Regulatory Permitting: Prior to the commencement of project construction activities that will impact the jurisdictional drainage on the project site, authorization for impacts shall be acquired through the permitting process from the USACE, RWQCB, and CDFW pursuant to the CWA Section 404 and 401 and California Fish and Game Code Section 1600, respectively. Project specific mitigation for impacts to features jurisdictional to state and federal agencies will be determined during the permitting process.

d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

A wildlife corridor is defined as a linear landscape element which serves as a linkage between historically connected habitats/natural areas, and is meant to facilitate movement between these natural areas. The site is located along a natural wildlife corridor, a stream channel. However, the Proposed Project involves temporary construction activities. A less than significant impact would occur.

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

The Proposed Project has been designed to minimize tree removals. The City of Moreno Valley Municipal Code Section 9.17.040 (Street Trees) list approved species of trees for major streets and specifies where streets shall be planted. The Proposed Project would not conflict with Municipal Code Section 9.17.040 because no street trees would be removed or installed as part of the Proposed Project. No impact would occur.

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f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The project site was reviewed to determine consistency with the MSHCP. The Riverside County Integrated Project (RCIP) Conservation Summary Report Generator was queried to determine habitat assessment, potential survey requirements, and whether any additional species requirements exist for the project site. The project site was located within the study area for the Western Riverside MSHCP, within the Reche Canyon/Badlands Area Plan, but outside of any Criteria Cells or Subunit designations.

Section 6.1.2 Riparian/Riverine, Vernal Pool, and Fairy Shrimp

Every biological assessment of lands within the MSHCP must also comply with requirements to assess the potential for riparian/riverine areas, vernal pool habitats, and fairy shrimp. The project site does not contain any riparian areas, vernal pool habitats, or suitable habitat for fairy shrimp. There were no features that met the MSHCP definition for vernal pools and the site does not support wetland soils or vegetation. No riparian, vernal pool, and fairy shrimp impacts would occur.

Section 6.1.3 Narrow Endemic Plant Species

The project site is not located within any of the MSHCP Narrow Endemic Plant Species Survey Areas.

Section 6.3.2 Criteria Area Species

The project site was within only one Criteria Area Species Survey Area under the MSHCP - burrowing owl. The project site was found to contain suitable burrowing owl habitat during the habitat assessment; however, no potential burrowing owl burrows were observed. Impacts to burrowing owls are discussed in question a) of this section. With the implementation of Mitigation Measure B-2 impacts to burrowing owls would be less than significant.

Section 6.1.4 Urban/Wildlands Interface Guidelines

The requirements for Urban/Wildlands Interface do not apply to this project site because it is not located adjacent to any MSHCP Conservation Areas. The project site is relatively isolated from larger, contiguous blocks of native habitat and completely surrounded by residential development and other anthropogenic land use; therefore, net long-term increase of edge impacts are not expected as a result of this project. No impacts related to urban/wildlands interface would occur.

4.5 Cultural Resources

A Cultural Resources Assessment was prepared by ECORP Consulting, Inc. for the Proposed Project to determine if cultural resources were present in or adjacent to the project area and assess the sensitivity of the project area for undiscovered or buried cultural resources (ECORP 2017b). The Cultural Resources Assessment consisted of a cultural resources records search, Native American Heritage Commission (NAHC) Sacred Lands File search, and field survey of the one-acre Proposed Project's Area of Potential Effect (APE).

4.5.1 Cultural Resources (V.) Environmental Checklist and Discussion

a) Would the project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	Potentially Significant Impact <input type="checkbox"/>	Less than Significant with Mitigation Incorporated <input checked="" type="checkbox"/>	Less than Significant Impact <input type="checkbox"/>	No Impact <input type="checkbox"/>
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A cultural resources records search was conducted at the Eastern Information Center (EIC), University of California Riverside in June 2017, using the California Historical Resources Information System. The records search results indicated that 47 cultural resources have been documented within a one-mile radius of the APE. No previously recorded resources were located within the APE. While there have been 25 cultural investigations previously conducted within a one-mile radius of the APE between 1976 and 2014; no previous cultural resources surveys took place within the project area. An intensive systematic pedestrian survey of the one-acre APE was conducted on June 14, 2017. This survey consisted of walking east-west transects with 15-meter intervals between each transect across the entire APE. As a result of the intensive pedestrian survey, no cultural resources were identified within the APE. Although no cultural resources were identified in the APE as a result of the records search and field survey, there always remains the potential for ground-disturbing activities to expose previously unrecorded cultural resources, which may include tribal cultural resources (TCRs). In order to reduce the potential impact of the Proposed Project on unanticipated cultural resources found during project construction, mitigation measures CR-1 through CR-6 have been developed to reduce the potential impacts of the Proposed Project to a less than significant level.

Mitigation Measures

CR-1: Prior to the issuance of a grading permit, the City shall retain a professional archaeologist to conduct monitoring of all mass grading and trenching activities. The Project Archaeologist shall have the authority to temporarily redirect earthmoving activities in the event that suspected archaeological resources are unearthed during Project construction. The Project Archaeologist, in consultation with the Monitoring Tribe(s), the contractor, and the City, shall develop a Cultural Resources Monitoring Plan (CRMP) to address the details, timing and responsibility of all archaeological and cultural activities that will occur on the project site. Details in the Plan shall include:

- d. Project grading and development scheduling;
- e. The Project archeologist and the Monitoring Tribes(s) shall attend the pre-grading meeting with the City, the construction manager and any contractors and will conduct a mandatory Cultural Resources Worker Sensitivity Training to those in attendance. The Training will include a brief review of the cultural sensitivity of the Project and the surrounding area; what resources could potentially be identified during earthmoving activities; the requirements of the monitoring program; the protocols that apply in the event inadvertent discoveries of cultural resources are identified, including who to contact and appropriate avoidance measures until the find(s) can be properly evaluated; and any other appropriate protocols. All new construction personnel that will conduct earthwork or grading activities that begin work on the Project following the initial Training must take the Cultural Sensitivity Training prior to beginning work and the Project archaeologist and Monitoring Tribe(s) shall make themselves available to provide the training on an as-needed basis.

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- f. The protocols and stipulations that the contractor, City, Monitoring Tribe(s) and Project archaeologist will follow in the event of inadvertent cultural resources discoveries, including any newly discovered cultural resource deposits that shall be subject to a cultural resources evaluation

CR-2: Prior to the issuance of a grading permit, the City of Moreno Valley shall secure agreements with the Pechanga Band of Luiseño Indians and Soboba Band of Luiseño Indians for tribal monitoring. The City is also required to provide a minimum of 30 days advance notice to the tribes of all mass grading and trenching activities. The Native American Tribal Representatives shall have the authority to temporarily halt and redirect earth moving activities in the affected area in the event that suspected archaeological resources are unearthed. If the Native American Tribal Representatives suspect that an archaeological resource may have been unearthed, the Project Archaeologist or the Tribal Representatives shall immediately redirect grading operations in a 100-foot radius around the find to allow identification and evaluation of the suspected resource. In consultation with the Native American Tribal Representatives, the Project Archaeologist shall evaluate the suspected resource and make a determination of significance pursuant to California Public Resources Code Section 21083.2. If the resource is significant, Mitigation Measure CR-3 shall apply.

CR-3: If archaeological resource(s) is discovered on the property, a treatment plan shall be prepared by the Project Archaeologist and expeditiously reviewed by the interested Native American Tribal Representatives and the City Planning Division and implemented by the Project Archaeologist to protect the identified archaeological resource(s) from damage and destruction. If a significant archaeological resource(s) is discovered on the property, ground disturbing activities shall be temporarily suspended 100 feet around the resource(s) until a treatment plan is implemented. The Project Archaeologist, interested Native American Tribal Representatives, and the City Planning Division shall confer regarding mitigation of the discovered resource(s).

CR-4: In the event that Native American cultural resources are discovered during the course of grading, the following procedures shall be carried out for treatment and final disposition of the discoveries:

- a) The landowner(s) shall relinquish ownership of all cultural resources, including sacred items, burial goods, and all archaeological artifacts and non-human remains as part of the required mitigation for impacts to cultural resources. The artifacts shall be relinquished through one or more of the following methods and evidence of such shall be provided to the City of Moreno Valley Planning Department:
 - i. Accommodate the process for Preservation-In-Place/Onsite reburial of the discovered items with the consulting Native American tribes or bands, as detailed in the treatment plan prepared by the Project Archaeologist under Mitigation Measure CR-3. This shall include measures and provisions to protect the future reburial area from any future impacts. Reburial shall not occur until all cataloging and basic recordation have been completed;

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- ii. A curation agreement with an appropriate qualified repository within Riverside County that meets federal standards per 36 CFR Part 79; therefore, the resources would be professionally curated and made available to other archaeologists/researchers for further study. The collections and associated records shall be transferred, including title, to an appropriate curation facility within Riverside County, to be accompanied by payment of the fees necessary for permanent curation;
- iii. For purposes of conflict resolution, if more than one Native American tribe or band is involved with the project and cannot come to an agreement as to the disposition of cultural materials, they shall be curated at the Western Science Center by default.

CR-5: The City shall verify that the following note is included on the Grading Plan:

"If any suspected archaeological resources are discovered during ground-disturbing activities and the Project Archaeologist or Native American Tribal Representatives are not present, the construction supervisor is obligated to halt work in a 100-foot radius around the find and call the Project Archaeologist and the Tribal Representatives to the site to assess the significance of the find."

CR-6: If potential historic or cultural resources are uncovered during excavation or construction activities at the project site, work in the affected area must cease immediately and a qualified person meeting the Secretary of the Interior's standards (36CFR61), Tribal Representatives, and all site monitors per the Mitigation Measures, shall be consulted by the City to evaluate the find, and as appropriate recommend alternative measures to avoid, minimize or mitigate negative effects on the historic, or prehistoric resource. Determinations and recommendations by the consultant shall be immediately submitted to the Planning Division for consideration, and implemented as deemed appropriate by the Community Development Director, in consultation with the State Historic Preservation Officer (SHPO) and any and all affected Native American Tribes before any further work commences in the affected area.

b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

No archaeological resources have been previously recorded on the site and none were recorded during the field survey (ECORP 2017b). However, there remains the possibility that the Proposed Project may impact unknown buried archaeological resources as a result of ground disturbing construction activities. With the implementation of Mitigation Measures CR-1 to CR-5 impacts would be less than significant.

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

No formal cemeteries are located in or near the project area. Most Native American human remains are found in prehistoric archaeological sites. No prehistoric archaeological sites have been recorded within the project area. No impacts to human remains are anticipated; however, if any are encountered during grading activities, impacts would be significant. Implementation of Mitigation Measure CR-7 below would reduce potential impacts to a less than significant level.

Mitigation Measures

CR-7: If human remains are discovered, no further disturbance shall occur in the affected area until the County Coroner has made necessary findings as to origin. If the County Coroner determines that the remains are potentially Native American, the California Native American Heritage Commission shall be notified within 5-days of the published finding to be given a reasonable opportunity to identify the “most likely descendant”. The “most likely descendant” shall then make recommendations, and engage in consultations concerning the treatment of the remains (California Public Resources Code 5097.98). (GP Objective 23.3, CEQA).

4.6 Geology and Soils

4.6.1 Environmental Setting

Geomorphic Setting

The City of Moreno Valley is situated along a valley floor bounded by the hills and mountains of the Badlands to the east, SR-215 to the west, Box Springs Mountains to the north, and the mountains of the Lake Perris State Recreation Area to the south. The City lies primarily on bedrock known as the Perris Block. The Perris Block is a large mass of granitic rock generally bounded by the San Jacinto Fault, the Elsinore Fault, the Santa Ana River and a non-defined southeast boundary (City of Moreno Valley 2006b)

Regional Seismicity and Fault Zones

An active fault, according to California Department of Conservation, Division of Mines and Geology, is a fault that has indicated surface displacement within the last 11,000 years. A fault that has not shown geologic evidence of surface displacement in the last 11,000 years is considered inactive.

The San Jacinto fault passes through the eastern portion of the City. The San Jacinto fault is considered to be the most active fault in Southern California. An Alquist-Priolo Special Fault Zone has been established for the San Jacinto fault. The Casa Loma fault (a fault strand of the San Jacinto fault) lies 1.5 miles southwest of the San Jacinto fault in the southeast corner of the City (City of Moreno Valley 2006b).

Soils

The project site is primarily underlain by Hanford coarse sandy loam (2 to 8 percent slopes) soils (NRCS 2017). Soils within the Hanford-Tujunga-Greenfield association have poor to fair soil stability properties and are considered to be potentially expansive (City of Moreno Valley 2006b).

4.6.2 Geology and Soils (VI.) Environmental Checklist and Discussion

a)	Would the project expose people or structures to 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.	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii)	Strong seismic ground shaking?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii)	Seismic-related ground failure, including liquefaction?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv)	Landslides?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

i and ii) There are no known earthquake faults that traverse the project site or earthquake fault zones that include the project site (City of Moreno Valley 2006b). The closest fault to the project site is the San Jacinto Fault located approximately 3.5 miles northeast of the project site. Just like most of southern California, in the event of an earthquake strong ground shaking is expected to occur on the project site. No habitable structures would be constructed for the Proposed Project. Design and construction of the basin would comply with current codes and standards which would reduce the risk of loss, injury, or death resulting from strong ground-shaking. Impacts would be less than significant.

iii) Liquefaction is a phenomenon where water-saturated granular soil loses shear strength during strong ground shaking produced by earthquakes. The loss of soil strength occurs when cyclic pore water pressure increases below the groundwater surface. Potential hazards due to liquefaction include the loss of bearing strength beneath structures, possibly causing foundation failure and/or significant settlements. The project site is not located with a liquefaction potential zone (City of Moreno Valley 2006b). No impact would occur.

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iv) Hills associated with Moreno Peak are located over 800 feet to the northeast of the project site. The project site is located in a relatively flat area and would not be subject to landslides. No impact would occur.

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

Best Management Practices (BMPs) are included as part of the Storm Water Pollution Prevention Plan (SWPPP) prepared for the Proposed Project and would be implemented to manage erosion and the loss of topsoil during construction-related activities (see Hydrology and Water Quality (IX.) Environmental Checklist and Discussion). Soil erosion impacts would be reduced to a less than significant impact.

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

Refer to the responses to Questions 4.6.2 a) i) through iv) above. Impacts would be less than significant.

d) Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The project site is primarily underlain by Hanford coarse sandy loam (2 to 8 percent slopes) soils (NRCS 2017). Soils within the Hanford-Tujunga-Greenfield association have poor to fair soil stability properties and are considered to be potentially expansive (City of Moreno Valley 2006b). The Proposed Project would be designed by a registered civil engineer taking into account soil properties of the site ensuring the basin meets building codes. Impacts to life or property due to expansive soils would be less than significant.

e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Proposed Project is the construction of a basin to manage stormwater. The Proposed Project does not include the use of septic tanks or alternative waste water disposal systems. No impact would occur.

Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.7 Greenhouse Gas Emissions

4.7.1 Environmental Setting

Greenhouse gases (GHGs) are released as byproducts of fossil fuel combustion, waste disposal, energy use, land use changes, and other human activities. This release of gases, such as carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O), creates a blanket around the earth that allows light to pass through but traps heat at the surface, preventing its escape into space.

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. For instance, per the CalEEMod v. 2016.3.1 emissions modeling software, methane traps over 25 times more heat per molecule than CO₂, and N₂O absorbs 298 times more heat per molecule than CO₂. Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO₂e), which weigh each gas by its global warming potential. Expressing GHG emissions in CO₂e takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO₂ were being emitted.

Regulations and Significance Criteria

The Intergovernmental Panel on Climate Change (IPCC) constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. It concluded that a stabilization of GHGs at 400 to 450 ppm carbon dioxide equivalent (CO₂eq)¹ concentration is required to keep global mean warming below 2 degrees Celsius (°C), which in turn is assumed to be necessary to avoid dangerous climate change.

Executive Order S-3-05 was issued in June 2005, which established the following GHG emission reduction targets:

- 2010: Reduce GHG emissions to 2000 levels;
- 2020: Reduce GHG emissions to 1990 levels; and
- 2050: Reduce GHG emissions to 80 percent below 1990 levels.

Assembly Bill (AB) 32 requires that CARB determine what the statewide GHG emissions level was in 1990, and approve a statewide GHG emissions limit that is equivalent to that level, to be achieved by 2020. CARB has approved a 2020 emissions limit of 427 million metric tons (MMT) of CO₂eq.

¹ Carbon Dioxide Equivalent (CO₂eq) – A metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential.

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Due to the nature of global climate change, it is not anticipated that any single development project would have a substantial effect on global climate change. In actuality, GHG emissions from the Proposed Project would combine with emissions emitted across California, the United States, and the world to cumulatively contribute to global climate change.

In June 2008, the California Governor's Office of Planning and Research (OPR) published a Technical Advisory, which provides informal guidance for public agencies as they address the issue of climate change in CEQA documents.² This is assessed by determining whether a Proposed Project is consistent with or obstructs the 39 Recommended Actions identified by CARB in its Climate Change Scoping Plan which includes nine Early Action Measures (qualitative approach). The Attorney General's Mitigation Measures identify areas where GHG emissions reductions can be achieved in order to achieve the goals of AB 32. As set forth in the OPR Technical Advisory and in the proposed amendments to the CEQA Guidelines Section 15064.4, this analysis examines whether the project's GHG emissions are significant based on a qualitative and performance based standard (Proposed CEQA Guidelines Section 15064.4(a)(1) and (2)).

SCAQMD Thresholds

The SCAQMD has formed a GHG CEQA Significance Threshold Working Group (Working Group) to provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents. As of the last Working Group meeting (Meeting No. 15) held in September 2010, the SCAQMD is proposing to adopt a tiered approach for evaluating GHG emissions for development projects where SCAQMD is not the lead agency.³

With the tiered approach, the project is compared with the requirements of each tier sequentially and would not result in a significant impact if it complies with any tier. Tier 1 excludes projects that are specifically exempt from Senate Bill (SB) 97 from resulting in a significant impact. Tier 2 excludes projects that are consistent with a GHG reduction plan that has a certified final CEQA document and complies with AB 32 GHG reduction goals. Tier 3 excludes projects with annual emissions lower than a screening threshold. For all non-industrial projects, the SCAQMD is proposing a screening threshold of 3,000 metric tons of carbon dioxide equivalent (MT CO_{2eq}) per year. SCAQMD concluded that projects with emissions less than the screening threshold would not result in a significant cumulative impact.

Tier 4 consists of three decision tree options. Under the Tier 4 first option, the project would be excluded if design features and/or mitigation measures resulted in emissions 30 percent lower than business as usual emissions. Under the Tier 4 second option the project would be excluded if it had early compliance with AB 32 through early implementation of CARB's Scoping Plan measures. Under the Tier 4 third option, the project would be excluded if it was below an efficiency-based threshold of 4.8 MT CO_{2eq} per service population (SP) per year.⁴ Tier 5 would exclude projects that implement

² Governor's Office of Planning and Research, *CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review*, 2008.

³ The most recent SCAQMD GHG CEQA Significance Threshold Working Group meeting was held on September 2010.

⁴ The project-level efficiency-based threshold of 4.8 MTCO_{2eq} per SP per year is relative to the 2020 target date. The SCAQMD has also proposed efficiency-based thresholds relative to the 2035 target date to be consistent with the GHG reduction target date of SB 375. GHG reductions by the SB 375 target date of 2035 would be approximately 40 percent. Applying this 40 percent reduction to the 2020 targets results in an efficiency threshold for plans of 4.1 MTCO_{2eq} per SP per year and an efficiency threshold at the project level of 3.0 MTCO_{2eq}/year.

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offsite mitigation (GHG reduction projects) or purchase offsets to reduce GHG emission impacts to less than the proposed screening level.

GHG efficiency metrics are utilized as thresholds to assess the GHG efficiency of a project on a per capita basis or on a “service population” basis (the sum of the number of jobs and the number of residents provided by a project) such that the project would allow for consistency with the goals of AB 32 (i.e., 1990 GHG emissions levels by 2020 and 2035). GHG efficiency thresholds can be determined by dividing the GHG emissions inventory goal of the State, by the estimated 2035 population and employment. This method allows highly efficient projects with higher mass emissions to meet the overall reduction goals of AB 32, and is appropriate, because the threshold can be applied evenly to all project types (residential or commercial/retail only and mixed use).

For the Proposed Project, the 3,000 MT CO₂eq per year non-industrial screening threshold is used as the significance threshold, in addition to the qualitative thresholds of significance set forth below from Section VII of Appendix G to the CEQA Guidelines.

4.7.2 Greenhouse Gas Emissions (VII.) Environmental Checklist and Discussion

a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Project-related GHG emissions would include emissions from construction activities. Construction of the project would result in direct emissions of CO₂, N₂O, and CH₄ from the operation of construction equipment. Transport of materials and construction workers to and from the project site would also result in GHG emissions. Construction activities would be short-term in duration and would cease upon project completion. Construction-generated GHG emissions were calculated using the California Emissions Estimator Model, which estimates a total of 28 MT CO₂eq generated during construction of the Proposed Project.

In terms of operational GHG emissions, the Proposed Project involves stormwater management improvements and does not propose a trip-generated land use. The Proposed Project would not include the provision of new permanent stationary or mobile sources of emissions, and therefore, by its very nature, would not generate quantifiable GHG emissions from project operations. The project does not propose any buildings and therefore no permanent source or stationary source emissions. Once the project is completed, there would be no resultant increase in automobile trips to the area because the improved facilities would not require daily visits. While it is anticipated that the project would require intermittent maintenance to be conducted by City public works staff, such maintenance would be minimal requiring a negligible amount of traffic trips on an annual basis.

The project would result in the generation of 28 MT CO₂eq during construction, and as just described the project would not generate quantifiable GHG emissions from project operations. Therefore, neither construction nor operation of the project would generate GHG emissions in excess of the SCAQMD screening threshold of 3,000 MTCO₂eq per year and impacts. The project would relieve congestion and improve roadway operations, and would not directly generate new trips or GHG emissions. GHG impacts would be less than significant.

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b) Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The City of Moreno Valley has an Energy Efficiency and Climate Action Strategy document (City of Moreno Valley 2012). The Energy Efficiency and Climate Action Strategy is a policy document which identifies ways that the City can reduce energy and water consumption and GHG emissions as an organization (its employees and the operation of its facilities) and outlines the actions that the City can encourage and community members can employ to reduce their own energy and water consumption and GHG emissions. GHG reduction policies included in this document include: reducing land use based trips by encouraging transit priority projects; employment based trip reductions by requiring a transportation demand management (TDM) program for new development; residential and commercial energy efficiency requirements; facilitating residential renewable energy and energy efficient development; facilitating renewable energy deployment; heat island planning; water use reduction, water efficiency training, and education; and waste diversion program. The Proposed Project is the construction of a detention basin which does not fall under the scope of these policies. Therefore, the Proposed Project would not conflict with the Energy Efficiency and Climate Action Strategy document.

Moreno Valley is a member city of the Southern California Association of Governments' (SCAG). SCAG's 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), adopted April 7, 2016, is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. The RTP/SCS embodies a collective vision for the region's future and is developed with input from local governments, county transportation commissions, tribal governments, nonprofit organizations, businesses, and local stakeholders in Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties. The RTP/SCS establishes GHG emissions goals for automobiles and light-duty trucks for 2020 and 2035, and establishes an overall GHG target for the region consistent with both the statewide GHG-reduction targets for 2020 and the post-2020 statewide GHG reduction goals. The 2016 RTP/SCS contains over 4,000 transportation projects, including highway improvements, railroad grade separations, bicycle lanes, new transit hubs, and replacement bridges. These future investments were included in county plans developed by the six-county transportation commissions and seek to reduce traffic bottlenecks, improve the efficiency of the region's network, and expand mobility choices. The RTP/SCS is an important planning document for the region, allowing project sponsors to qualify for federal funding. In addition, the RTP/SCS is supported by a combination of transportation and land use strategies that help the region achieve state GHG emission reduction goals and federal Clean Air Act requirements, preserve open space areas, improve public health and roadway safety, support the vital goods movement industry, and use resources more efficiently.

The Proposed Project would in no way conflict with the RTP/SCS. Therefore, it can be assumed that regional mobile emissions would decrease in line with the goals of the RTP/SCS. Implementing SCAG's RTP/SCS would greatly reduce the regional GHG emissions from transportation, helping to achieve statewide emission reduction targets.

Therefore, the Proposed Project would not conflict with an adopted plan, policy, or regulation pertaining to GHGs. Also, the Proposed Project would result in minimal construction- and operation-related GHG emissions. Thus, a less than significant impact would occur in this regard.

Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.8 Hazards and Hazardous Materials

4.8.1 Hazards and Hazardous Materials (VIII.) Environmental Checklist and Discussion

a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

During the Proposed Project’s construction period, hazardous substances used to maintain and operate construction equipment (such as fuel, lubricants, adhesives, and solvents) would be present. The use/generation of such construction-related hazardous materials could potentially result in significant impacts through accidental discharge associated with their use. The transport, use, and disposal of hazardous materials would, however, be conducted in accordance with applicable federal and state laws. In addition, conformance with National Pollutant Discharge Elimination System (NPDES) General Construction Activity Permit requirements would reduce the potential impact on site during construction. No hazardous materials would be associated with operation of the basin. Impacts from the use of hazardous substances would be less than significant.

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

The potential release of hazardous materials associated with the Proposed Project is limited to construction activities, as described above in response to Question 4.8.1 a). As noted, potential impacts associated with construction-related hazardous materials would be reduced to below a level of significance through conformance with the NPDES Construction Permit. On-site storage and/or use of large quantities of hazardous materials during project operation are not proposed. Impacts would be less than significant.

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

The closest schools to the project site are Valley View High School and Mountain View Middle School located approximately 0.5 miles to the northeast of the project site and Moreno Elementary School

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located approximately 0.5 miles to the west of the project site. There are no schools within one-quarter mile of the project site. No impact would occur.

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

A search of the Department of Toxic Substances Control's (DTSC) Hazardous Waste and Substances Site List (Cortese List) and EnviroStor online database and the State Water Resources Control Board (SWRCB) GeoTracker online database was conducted for the project area (DTSC 2017a and 2017b; SWRCB 2017). The searches revealed no known hazardous materials sites within or in the vicinity of the project site. No impact would occur.

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

A joint civilian and military airport (March Air Reserve Base) is located at the southwestern boundary of the City approximately 4.5 miles southeast of the project site. The project site is not located within an aircraft hazard zone (City of Moreno Valley 2006b). No impact would occur.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

There are no private airstrips in the vicinity of the project site. No impact would occur.

g) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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The Proposed Project would not impair or physically interfere with an adopted emergency response or evacuation plan. The Proposed Project would be limited to the construction of a detention basin. Construction and operation of the Proposed Project would be limited to the project site, and would not include blocking any roadways. No impact would occur.

<p>h) Would the project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?</p>	<p>Potentially Significant Impact</p>	<p>Less than Significant with Mitigation Incorporated</p>	<p>Less than Significant Impact</p>	<p>No Impact</p>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Even though the project site is located adjacent to an undeveloped parcel north of Cottonwood generally the project area is developed with residential land uses. Furthermore, the project site is not located within a fire hazard area as identified in the City of Moreno General Plan Final Program EIR (City of Moreno Valley 2006b). No impact would occur.

Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.9 Hydrology and Water Quality

4.9.1 Environmental Setting

Regional Hydrology

Most of the City of Moreno Valley drains into the San Jacinto River. The northwest portion of the City drains to the west into a tributary of the Santa Ana River. The project area ultimately drains to the San Jacinto River, which flows to Lake Elsinore.

Site Hydrology and On-Site Drainage

The project site is relatively flat and generally slopes from north to south. An existing channel crosses the project site from north to south. This channel was constructed in an upland area in the 1960s to support runoff of agricultural irrigation. The channel crosses vacant land (parcel APN 488-180-025) north of Cottonwood Avenue and conveys flows through a 36 inch corrugated metal pipe (CMP) to a downstream channel on the south side of Cottonwood Avenue and west of residential subdivision Tract 19879. This tract drains to the same channel as the 36 inch CMP via a single 24 inch concrete pipe at the end of Cedar Court. The storm drain system ultimately connects to various channels and to the San Jacinto River.

4.9.2 Hydrology and Water Quality (IX.) Environmental Checklist and Discussion

a) Would the project violate any water quality standards or waste discharge requirements?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Potential water quality impacts associated with the Proposed Project include short-term construction-related erosion/sedimentation and construction-related hazardous material discharge. Short-term water quality impacts related to erosion/sedimentation would be less than significant based on conformance with existing regulatory requirements (i.e., acquisition of a National Pollutant Discharge Elimination System [NPDES] General Construction Activity Storm Water Permit). In addition, a Storm Water Pollution Prevention Plan (SWPPP) would be created for the Proposed Project. During grading and construction activities, graded areas and temporary soil stockpiles would be stabilized to minimize erosion. Impacts associated with construction-related hazardous materials would be avoided or reduced to a level below significance through implementation of standard construction operating procedures. The Proposed Project would result in beneficial operational impacts to water quality because the Proposed Project is the construction of a detention basin with the purpose of reducing sediment and debris flow downstream.

b) Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Proposed Project would not require the construction of wells; therefore, the Proposed Project would not result in the withdrawal of groundwater. The Proposed Project is the construction of a detention basin that would allow some groundwater recharge to occur. However, the primary purpose of the basin is to reduce sediment and debris flow downstream; therefore, groundwater recharge would be minimal due to the purpose and size of the proposed basin. No impacts from the depletion of groundwater or interference with groundwater recharge would occur.

c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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The Proposed Project is the construction of a basin that is in alignment with an existing channel for the purpose of retaining all silt, mud, and debris. The Proposed Project would result in reduces erosion and siltation off-site by only allowing water free of sediment and debris to flow downstream. As such, a beneficial impact would occur.

d) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Please see the response to question c) above. The Proposed Project would reduce the possibility of flooding downstream by reducing sediment and debris flowing downstream and potentially blocking drain pipes and the stormwater channel which would result in flooding. A such, a beneficial impact would occur.

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

The Proposed Project is the construction of a detention basin for the purpose of reducing sediment and debris from flowing downstream. The proposed basin would discharge to an existing 36 inch CMP below Cottonwood Avenue. The Proposed Project would not generate runoff beyond existing conditions. As such, no impact would occur.

f) Would the project otherwise substantially degrade water quality?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Proposed Project is the construction of a detention basin for the purpose of reducing sediment and debris from flowing downstream; thereby, improving the water quality of downstream flows. The Proposed Project would result in a beneficial impact to water quality.

g) Would the project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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According to the Flood Insurance Rate Map (FIRM) for the project site (Map No. 06065C0770G), the project area is located within Flood Zone X. Flood Zone X is described as areas of minimal flood hazard (Federal Emergency Management Agency [FEMA] 2008). The Proposed Project does not include housing. The Proposed Project would alleviate the flooding potential in residential areas caused by sediment and debris flow. Therefore, the Proposed Project would result in a beneficial impact.

h) Would the project place within a 100-year flood hazard area structures that would impede or redirect flood flows?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Please see the response to question g) above. A beneficial impact would occur.

i) Would the project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Please see the response to question g) above. A beneficial impact would occur.

j) Would the project be subject to inundation by seiche, tsunami, or mudflow?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project area is relatively flat, therefore, it is not in an area subject to mudflows. The project site is not located to adjacent or near a large body of water; therefore, the project site would not be subject to inundation from seiches. Tsunami is not a hazard for Moreno Valley. No impact would occur.

Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.10 Land Use and Planning

4.10.1 Land Use and Planning (X.) Environmental Checklist and Discussion

a) Would the project physically divide an established community?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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The Proposed Project would be located north of Cottonwood Avenue on an undeveloped parcel that is bisected by an existing channel. The Proposed Project would construct a detention basin in alignment of the existing channel for the management of stormwater and prevention of flooding downstream. The Proposed Project would not physically divide an established community. No impact would occur.

b) Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project site has a General Plan land use designation of Residential Agriculture 2 and a zoning designation of RA2 (City of Moreno Valley 2017). The Proposed Project is the construction of a detention basin for the management of stormwater and prevention of flooding downstream. The proposed use of the project site would be compatible with the project site's land use and zoning designations. No impact would occur.

c) Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The project site was reviewed to determine consistency with the MSHCP (ECORP 2017a). A summary of the consistency analysis is included below.

Section 6.1.2 Riparian/Riverine, Vernal Pool, and Fairy Shrimp

The project site does not contain any riparian areas, vernal pool habitats, or suitable habitat for fairy shrimp. There were no features that met the MSHCP definition for vernal pools and the site does not support wetland soils or vegetation. No riparian/riverine, vernal pool, and fairy shrimp impacts would occur.

Section 6.1.3 Narrow Endemic Plant Species

The project site is not located within any of the MSHCP Narrow Endemic Plant Species Survey Areas (NEPSSA). No NEPSSA impacts would occur.

Section 6.3.2 Criteria Area Species

The project site was within only one survey area under the MSHCP - burrowing owl. The project site was found to contain suitable burrowing owl habitat during the habitat assessment; however, no potential burrowing owl burrows were observed. Impacts to burrowing owls are discussed in question a) of Section 4.4 of this Initial Study. With the implementation of Mitigation Measure B-2 impacts to burrowing owls would be less than significant.

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Section 6.1.4 Urban/Wildlands Interface Guidelines

The requirements for Urban/Wildlands Interface do not apply to this project site because it is not located adjacent to any MSHCP Conservation Areas. The project site is relatively isolated from larger, contiguous blocks of native habitat and completely surrounded by residential development and other anthropogenic land use; therefore, net long-term increase of edge impacts are not expected as a result of this project. No impacts related to urban/wildlands interface would occur.

Mitigation Measures

Mitigation Measure B-2 is included in Section 4.4 Biological Resources of this Initial Study.

4.11 Mineral Resources

4.11.1 Mineral Resources (XI.) Environmental Checklist and Discussion

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

No regionally or statewide significant mineral resources are located within the City of Moreno Valley (City of Moreno Valley 2006b). No impact would occur.

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

No locally-important mineral resources have been delineated on the project site (City of Moreno Valley 2006b). No impact would occur.

Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.12 Noise

4.12.1 Noise (XII.) Environmental Checklist and Discussion

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

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Noise generated by the construction of the Proposed Project would be temporary and no permanent noise sources would be created. Construction activities would comply with the Moreno Valley General Plan Final Environmental Impact Report (FEIR) Mitigation Measure N10. Mitigation Measure N10 prohibits building construction between 8 p.m. and 6 a.m. during the week and 8 p.m. and 7 a.m. weekends and holidays (City of Moreno Valley 2006b). The Proposed Project would not generate noise during operation. Impacts would be less than significant.

b) Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The Proposed Project would introduce temporary ground-borne vibrations and noise levels in the project vicinity related to the use of heavy construction equipment. No sources of severe vibration, such as pile driving or blasting, are proposed. The potential impacts would diminish with distance. The closest sensitive receptor is a residence located approximately 100 feet south of the project site across Cottonwood Avenue. The maximum vibration source amplitudes from heavy construction equipment is estimated to be a maximum of 0.089 peak particle velocity (PPV) for a large bulldozer. A threshold for damage for older residential structures is generally considered to be 0.25 PPV (Caltrans 2013). Given that the nearest structures are approximately 100 feet from the site, and that the vibration amplitudes at 25 feet from the site would be below the threshold, it is not anticipated that significant impacts from vibration would occur. Additionally, the vibration from the use of heavy equipment would end at the completion of the construction activities. A less than significant impact would occur.

c) Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Due to the temporary nature of construction activities, no permanent increases in ambient noise levels in the project vicinity are expected. The Proposed Project would require intermittent maintenance to be conducted by City public works staff, such maintenance would result in noise from the use of construction equipment and power tools. However, maintenance activities would be minimal and occur during the day. Impacts would be less than significant.

d) Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Temporary or periodic increases in ambient noise levels would occur during construction of the Proposed Project. Ambient noise levels would vary depending upon the specific activities and equipment used. The potential noise related impacts would end at the completion of construction activities. As previously stated, operation noise would be intermittent (only when maintenance

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activities are required) and minimal. Operational ambient noise levels are anticipated to be similar to existing conditions. A less than significant impact would occur.

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 expose people residing or working in the project area to excessive noise levels?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

A joint civilian and military airport (March Air Reserve Base) is located at the southwestern boundary of the City approximately 4.5 miles southeast of the project site. The project site is not located within the March Air Reserve Base noise impact area (City of Moreno Valley 2006b). No impact would occur.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

There are no private airstrips within the vicinity of the project site. Therefore, no impact would occur.

Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.13 Paleontological Resources

4.13.1 Paleontological Resources (XIII.) Environmental Checklist and Discussion

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

A paleontological records search was completed by the Vertebrate Paleontology Section of the Los Angeles County Museum of Natural History. The records search and literature review found that the Proposed Project area is located entirely on surface deposits of younger Quaternary Alluvium. These younger Quaternary deposits typically do not contain significant vertebrate fossils, at least in the uppermost layers, but may be underlain by older Quaternary deposits that do contain significant vertebrate fossils. The results of the records search found that no previously recorded paleontological resource localities are known from within the boundaries of the project site. The closest vertebrate fossil locality from similar deposits is located in the gravel pits just west of Jack Rabbit Trail east-southeast of the Proposed Project Area (Natural History Museum of Los Angeles

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County 2017). If construction results in deep excavations into the older Quaternary deposits, the project could result in significant impacts to buried and unknown paleontological resources. Implementation of Mitigation Measure PR-1 to PR-4 below would reduce potential impacts to a less than significant level.

Mitigation Measure

PR-1: The City of Moreno Valley shall retain a qualified paleontologist to conduct monitoring of excavation activities and has the authority to halt and redirect earthmoving activities in the event that suspected paleontological resources are unearthed.

PR-2: The paleontological monitor shall conduct full-time monitoring during grading and excavation operations in undisturbed, very old alluvial fan sediments and shall be equipped to salvage fossils if they are unearthed to avoid construction delays and to remove samples of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates. The paleontological monitor shall be empowered to temporarily halt or divert equipment to allow of removal of abundant and large specimens in a timely manner. Monitoring may be reduced if the potentially fossiliferous units are not present in the subsurface, or if present, are determined upon exposure and examination by qualified paleontological personnel to have a low potential to contain or yield fossil resources.

PR-3: Recovered specimens shall be properly prepared to a point of identification and permanent preservation, including screen washing sediments to recover small invertebrates and vertebrates, if necessary. Identification and curation of specimens into a professional, accredited public museum repository with a commitment to archival conservation and permanent retrievable storage, such as the Western Science Museum in Hemet, California, is required for significant discoveries.

PR-4: A final monitoring and mitigation report of findings and significance shall be prepared, including lists of all fossils recovered, if any, and necessary maps and graphics to accurately record the original location of the specimens. The report shall be submitted to the City of Moreno Valley prior to building final.

4.14 Population and Housing

4.14.1 Population and Housing (XIV.) Environmental Checklist and Discussion

<p>a) Would the project induce substantial 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)?</p>	<p>Potentially Significant Impact</p>	<p>Less than Significant with Mitigation Incorporated</p>	<p>Less than Significant Impact</p>	<p>No Impact</p>
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The Proposed Project is the construction of a detention basin for the management of stormwater and prevention of flooding downstream. The Proposed Project does not propose the construction of new housing or businesses and therefore is not anticipated to directly or indirectly induce population growth in the area. The Proposed Project is not expected to generate a substantial permanent increase in employment opportunities in the area capable of inducing population growth. A less than significant impact would occur.

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b) Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Proposed Project would be located on an undeveloped parcel along an existing drainage channel. The Proposed Project would not displace housing. No impact would occur.

c) Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Proposed Project is the construction of a detention basin for the management of stormwater and prevention of flooding downstream. The Proposed Project does not include the removal of housing; therefore, it would not displace people. No impact would occur.

Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.15 Public Services

4.15.1 Public Services (XV.) Environmental Checklist and Discussion

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:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<ul style="list-style-type: none"> • Fire Protection? • Police Protection? • Schools? • Parks? • Other Public Facilities? 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Proposed Project is the construction of a detention basin for the management of stormwater and prevention of flooding downstream. The Proposed Project would not create a substantial new fire or public safety hazard or result in population growth that would increase the use of schools, parks, or other public facilities. No impact would occur.

Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.16 Recreation

4.16.1 Recreation (XV.) Environmental Checklist and Discussion

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Proposed Project is the construction of a detention basin for the management of stormwater and prevention of flooding downstream. The Proposed Project does not include residential uses and would not cause a direct increase in population of the project area; therefore, no increase in the use of existing neighborhood or regional parks is anticipated. No impact would occur.

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

The Proposed Project would not include recreational facilities nor require the construction or expansion of recreational facilities that might have an adverse effect on the environment. No impact would occur.

Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.17 Transportation/Traffic

4.17.1 Transportation/Traffic (XVII.) Environmental Checklist and Discussion

a) Would the project conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways, and freeways, pedestrian and bicycle paths, and mass transit?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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Construction Impacts

The Proposed Project would generate short-term construction related vehicle trips. However, traffic generated by construction of the Proposed Project would be temporary and would not conflict with the City of Moreno Valley's Circulation Element. Impacts would be less than significant.

Operational Impacts

Once the construction of the Proposed Project is completed, there would be no increase in automobile trips to the area because the improved facilities would not require daily visits. While it is anticipated that the Proposed Project would require intermittent maintenance to be conducted by City public works staff, such maintenance would be minimal requiring a negligible amount of traffic trips on an annual basis. Operational impacts would be less than significant.

b) Would the project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

As stated in the response to question 4.17.1 a), operational traffic that would be generated by the Proposed Project would be minimal. As such, the Proposed Project is not anticipated to conflict with the applicable congestion management program. No impact would occur.

c) Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

A joint civilian and military airport (March Air Reserve Base) is located at the southwestern boundary of the City approximately 4.5 miles southeast of the project site. The project site is not located within an aircraft hazard zone (City of Moreno Valley 2006b). The Proposed Project would not include structures or operational conditions that would require a change of air traffic patterns or increase traffic levels or a change in location that would result in substantial safety risks. No impact would occur.

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

The Proposed Project is the construction of a detention basin north of Cottonwood Avenue. The Proposed Project would not alter Cottonwood Avenue. No impact would occur.

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

Construction activities would occur north of Cottonwood Avenue and would not interfere with emergency access in the project area. No impact would occur.

f) Would the project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities or otherwise decrease the performance or safety of such facilities?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Proposed Project is the construction of a detention basin north of Cottonwood Avenue. The Proposed Project does not affect public transit, bicycle or pedestrian facilities or otherwise decrease the performance of such facilities because no modifications to such facilities are proposed. No impact would occur.

Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.18 Tribal Cultural Resources

4.18.1 Environmental Setting

Ethnohistoric Context

The Project area is located within the ancestral use areas of the Serrano and Luiseño. The following ethnohistory information is summarized from ECORP 2017b.

Serrano

The Serrano occupied an area in and around the San Bernardino Mountains between approximately 1500 and 11,000 feet above mean sea level. Their territory extended west into the Cajon Pass, east as far as Twentynine Palms, north to Victorville, and south to the Yucaipa Valley. The Serrano were mainly hunters and gatherers who occasionally fished. Game that was hunted included mountain sheep, deer, antelope, rabbits, small rodents, and various birds, particularly quail. Vegetable staples consisted of acorns, piñon nuts, bulbs and tubers, shoots and roots, berries, mesquite, barrel cacti, and Joshua tree. A variety of materials were used for hunting, gathering, and processing food, as well as for shelter, clothing, and luxury items. Shells, wood, bone, stone, plant materials, and animal skins and feathers were used for making baskets, pottery, blankets, mats, nets, bags and pouches, cordage, awls, bows, arrows, drills, stone pipes, musical instruments, and clothing.

Settlement locations were determined by water availability, and most Serranos lived in small villages near water sources. Houses and ramadas were round and constructed of poles covered with bark

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and tule mats. Most Serrano villages also had a ceremonial house used as a religious center. Other structures within the village might include granaries and sweathouses.

The Serrano were loosely organized along patrilineal lines and associated themselves with either the Tukum (wildcat) or the Wahilyam (coyote) moiety. Organization of individual bands of Serrano was considered to be similar to political groups. Tribes, as opposed to bands, were larger in numbers, and were distinguished from each other by having distinct dialects. Unlike bands, tribes often had names that were more than merely a designation for the place where they lived.

Partly due to their mountainous inland territory, contact between Serrano and European-Americans was minimal prior to the early 1800s. In 1819, a Capilla (chapel) was established near present-day Redlands and was used to help relocate many Serrano to Mission San Gabriel. However, small groups of Serrano remained in the area northeast of the San Gorgonio Pass and were able to preserve some of their native culture. Today, most Serrano live either on the Morongo or San Manuel reservations.

Luisseño

The project area lies within the traditional use area of the Luisseño, a Takic-speaking people. The term Luisseño was given by the Spanish to the native groups who were living in the area under influence of Mission San Luis Rey.

The Luisseño lived in sedentary and autonomous village groups, each with specific subsistence territories encompassing hunting, collecting, and fishing areas. Villages were typically located in valley bottoms, along streams, or along coastal strands near mountain ranges where water was available and village defense was possible. Inland populations had access to fishing and gathering sites on the coast, which they used during the winter months.

Luisseño subsistence was centered around the gathering of acorns, seeds, greens, bulbs, roots, berries, and other vegetal foods. This was supplemented with hunting mammals such as deer, antelope, rabbit, woodrat, ground squirrels, and mice, as well as quail, doves, ducks, and other birds. Bands along the coast also exploited marine resources, such as sea mammals, fish, crustaceans, and mollusks. Inland, trout and other fish were taken from mountain streams.

Hunting was done both individually and by organized groups. Tool technology for food acquisition, storage, and preparation reflects the size and quantity of items procured. Small game was hunted with the use of curved throwing sticks, nets, slings, or traps. Bows and arrows were used for hunting larger game. Dugout canoes, basketry fish traps, and shell hooks were used for near-shore ocean fishing. Coiled and twined baskets were made for food gathering, preparation, storing, and serving. Other items used for food processing included large shallow trays for winnowing chaff from grain, ceramic and basketry storage containers, manos and metates for grinding seeds, and ceramic jars for cooking.

Villages had hereditary chiefs who controlled religious, economic, and territorial activities. An advisory council of ritual specialists and shamans was consulted for environmental and other knowledge. Large villages located along the coast or in inland valleys may have had more complex social and political structures than settlements controlling smaller territories.

Most Luisseño villages contained a ceremonial structure enclosed by circular fencing located near the center of the village. Houses were semisubterranean and thatched with locally available brush, bark,

or reeds. Earth-covered semisubterranean sweathouses were also common and were used for purification and curing rituals.

The Luiseño first came into contact with Europeans in 1769 when the expedition led by Gaspar de Portolá arrived in their territory. That same year, the San Diego Mission was established just to the south, followed by the San Juan Capistrano Mission in 1776 and the San Luis Rey Mission in 1798. Poor living conditions at the missions and introduced European diseases led to a rapid decline of the Luiseño population. Following the Mission Period (1769-1834), Luiseño Indians scattered throughout southern California. Some became serfs on the Mexican ranchos, others moved to newly founded pueblos established for them, some sought refuge among inland groups, and a few managed to acquire land grants. Later, many moved to or were forced onto reservations. Although many of their cultural traditions had been suppressed during the Mission Period, the Luiseño were successful at retaining their language and certain rituals and ceremonies. Starting in the 1970s, there was a revival of interest in the Luiseño language and classes were organized. Since then, traditional games, songs, and dances have been performed, traditional foods have been gathered and prepared, and traditional medicines and curing procedures have been.

Regulatory Setting

Assembly Bill 52

Effective July 1, 2015, Assembly Bill 52 (AB 52) amended CEQA to require that: 1) a lead agency provide notice to those California Native American tribes that requested notice of projects proposed by the lead agency; and 2) for any tribe that responded to the notice within 30 days of receipt with a request for consultation, the lead agency must consult with the tribe. Topics that may be addressed during consultation include TCRs, the potential significance of project impacts, type of environmental document that should be prepared, and possible mitigation measures and project alternatives.

Pursuant to AB 52, Section 21073 of the Public Resources Code defines California Native American tribes as “a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of the Statutes of 2004.” This includes both federally and non-federally recognized tribes.

Section 21074(a) of the Public Resource Code defines TCRs for the purpose of CEQA as:

- 1) Sites, features, places, cultural landscapes (geographically defined in terms of the size and scope), sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
 - a. included or determined to be eligible for inclusion in the California Register of Historical Resources; and/or
 - b. included in a local register of historical resources as defined in subdivision (k) of Section 5020.1; and/or
 - c. 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 Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

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Because criteria a and b also meet the definition of a historical resource under CEQA, a TCR may also require additional consideration as a historical resource. TCRs may or may not exhibit archaeological, cultural, or physical indicators.

Recognizing that California tribes are experts in their tribal cultural resources and heritage, AB 52 requires that CEQA lead agencies provide tribes that requested notification an opportunity to consult at the commencement of the CEQA process to identify TCRs. Furthermore, because a significant effect on a TCR is considered a significant impact on the environment under CEQA, consultation is used to develop appropriate avoidance, impact minimization, and mitigation measures.

Summary of AB 52 Consultation

On June 1, 2017, the City initiated environmental review under CEQA for the Proposed Project. On June 5, 2017, the City sent project notification letters to the following California Native American tribes, which had previously submitted general consultation request letters pursuant to 21080.3.1(d) of the Public Resources Code:

- Agua Caliente Band of Cahuilla Indians
- Morongo Band of Mission Indians
- Pechanga Temecula Band of Luiseño Mission Indians
- San Manuel Band of Mission Indians
- Soboba Band of Luiseño Indians
- Torres Martinez Desert Cahuilla Indians
- Rincon Band of Luiseño Indians

Each recipient was provided a brief description of the project and its location, the lead agency contact information, and a notification that the tribe has 30 days to request consultation. The 30-day response period concluded on July 8, 2017.

As a result of the initial notification letters, the City received the following responses:

- Agua Caliente Band of Cahuilla Indians – responded by letter on June 22, 2017 to accept consultation invitation;
- Rincon Band of Luiseño Indians – responded by letter on June 12, 2017 to accept consultation invitation;
- Pechanga Temecula Band of Luiseño Indians - responded by letter on June 15, 2017 to accept consultation invitation;
- Morongo Band of Mission Indian – responded by email on June 20, 2017 to accept consultation invitation;
- Soboba Band of Luiseño Indians – responded by email on July 06, 2017 to accept consultation invitation; and
- San Manuel Band of Mission Indians – responded by email on July 3, 2017 to request a copy of the Cultural Resources Survey Report.

On June 27, 2017, the City initiated consultation via a letter with the Agua Caliente Band of Cahuilla Indians, Rincon Band of Luiseño Indians, and Pechanga Temecula Band of Luiseño Indians. The City initiated consultation with the Morongo tribe on June 28th via a letter. Consultation with the Soboba Band of Luiseño Indians was initiated on July 6, 2017 via email, and via a letter dated July 12, 2017.

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On July 7, 2017, the Morongo Band of Mission Indians submitted a letter requesting review of the cultural study and requesting a records search to be included as part of the study. Cultural monitoring by the tribe was not requested. The cultural study with the requested information had already been sent by certified mail to the Morongo tribe on June 28th. No further correspondence from the Morongo Band of Mission Indians was received.

On July 14, 2017 the Agua Caliente Band of Cahuilla Indians provided a letter to the City requesting that mitigation measures be added to the CEQA document that addresses the methods to be used if human remains are inadvertently discovered during the course of the Project. On July 14, 2017, the Agua Caliente Band of Cahuilla Indians sent a follow-up email confirming that the above letter concluded AB 52 consultation.

On July 26th, the City held a teleconference with the Rincon Band of Luiseno Indians. As a result, their representative requested that the tribe be informed of contact with other Bands to make sure that at least one tribal band would be monitoring during construction.

On August 4, 2017 the City held a teleconference with the Pechanga Temecula Band of Luiseño Mission Indians. As a result, the Pechanga Temecula Band of Luiseño Mission Indians sent the City a follow up email stating that the project area is considered sensitive based on the number and vicinity of cultural resources in the surrounding area. They requested archaeological and tribal monitoring be implemented as mitigation and requested the inclusion of measures to use if human remains are inadvertently discovered during the course of the Proposed Project.

On August 22, 2017, the San Manuel Band of Mission Indians deferred consultation to Tribes closer to the project area. The San Manuel Band of Mission Indians did, however, request that several mitigation measures be included in the CEQA document and requested to see the final conditions and mitigation measures.

On August 23, 2017, the City held a meeting with Soboba Band of Luiseño Indians. As a result, the Soboba Band of Luiseño Indians requested to review the draft mitigation measures for cultural resources and TCRs. After reviewing the proposed mitigation measures, the Tribe requested that the measures include an agreement with the Tribes prior to the issuance of the grading permit.

The Pechanga Temecula Band of Luiseño Mission Indians identified the project area as being sensitive for potential TCRs. Therefore, the City consulted with the tribe on potential impacts to the TCRs, and appropriate mitigation measures CR-1 to CR-7, as described in Section 4.5 Cultural Resources of this Initial Study were developed for the Proposed Project.

On September 25, 2017, City staff forwarded the final draft mitigation measures which address the comments of all tribes. An email requesting consultation closure was sent to representatives of the Soboba, Pechanga, San Manuel, Morongo, and Rincon Bands. The consultation was terminated , after the parties agreed to appropriate mitigation measures, as specified in Section 4.5 of this Initial Study.

4.18.2 Tribal Cultural Resources (XVIII.) Environmental Checklist and Discussion

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

No TCRs were identified within the project area during the AB 52 consultation. The Proposed Project would not result in significant impacts to known TCRs. However, as a result of the AB 52 consultation the project area was identified as being sensitive and has the potential to contain unknown TCRs. Significant impacts may occur from the discovery of unknown TCRs during ground disturbing activities from project construction. Impacts to unknown TCRs would be less than significant with the implementation of Mitigation Measures CR-1 to CR-7 (see Section 4.5, Cultural Resources).

Mitigation Measures

Mitigation Measures CR-1 to CR-7 are listed in Section 4.5 Cultural Resources of this Initial Study.

4.19 Utilities and Service Systems

4.19.1 Utilities and Service Systems (XIX.) Environmental Checklist and Discussion

a) Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Proposed Project is the construction of a detention basin for the management of stormwater and prevention of flooding downstream. The Proposed Project would not generate wastewater; therefore, no impact would occur.

b) Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Proposed Project is the construction of a detention basin for the management of stormwater and prevention of flooding downstream. The Proposed Project would require or result in the construction of new water or wastewater treatment facilities; therefore, no impact would occur.

c) Would the project require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The Proposed Project is the construction of a detention basin for the management of stormwater and prevention of flooding downstream. The impacts to the environment are discussed throughout this Initial Study. Mitigation Measures have been included to reduce significant impacts to a less than significant level.

d) Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The Proposed Project would require water temporarily during construction; however, the Proposed Project would not require water during operation. As such, sufficient water supplies would be available to serve the Proposed Project. Impacts would be less than significant.

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

The Proposed Project is the construction of a detention basin for the management of stormwater and prevention of flooding downstream. The Proposed Project would not generate wastewater. No impact would occur.

f) Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Construction waste would be disposed of at the Badlands Sanitary Landfill. The minimal increase in waste would not be expected to affect the permitted capacity of this landfill. The Proposed Project would not generate solid waste during operation. A less than significant impact would occur.

g) Would the project comply with federal, state, and local statutes and regulations related to solid waste?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Waste generated by the Proposed Project would comply with solid waste statues and regulations. No impact would occur.

Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.20 Mandatory Findings of Significance

4.20.1 Mandatory Findings of Significance (XVIII.) Environmental Checklist and Discussion

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

Impacts to biological and cultural resources are discussed in the respective sections of this Initial Study. Impacts would be less than significant with Mitigation Measures BIO-1 to BIO-3, CR-1 to CR-7, and PR-1 to PR-4.

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

Impacts from the Proposed Project would not be cumulatively considerable with the implementation of the Mitigation Measures listed in this Initial Study.

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

Direct and indirect impacts to human beings would be less than significant with the implementation of mitigation measures listed in this Initial Study.

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SECTION 5. LIST OF PREPARERS

City of Moreno Valley

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SECTION 7. LIST OF APPENDICES

Appendix A – Air Quality/Climate Change Model Data Outputs

Initial Study and Draft Mitigated Negative Declaration
Cottonwood Interim Basin Project

APPENDIX A

Air Quality/Climate Change Model Data Outputs

Moreno Valley - Cottonwood Interim Basin Project - Riverside-South Coast County, Winter

Moreno Valley - Cottonwood Interim Basin Project
Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	45.10	1000sqft	1.04	45,100.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	702.44	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Moreno Valley - Cottonwood Interim Basin Project - Riverside-South Coast County, Winter

Project Characteristics -

Land Use - Cottonwood Interim Basin = 35,100 square feet. An additional 10,000 square feet is assessed to account for the full area of impact

Construction Phase - Construction phase duration per City of Moreno Valley

Off-road Equipment -

Off-road Equipment - Equipment list per City

Off-road Equipment - Equipment list per City

Off-road Equipment - Equipment list per City

Grading -

Trips and VMT - Hauling distance per City

Construction Off-road Equipment Mitigation - SCAQMD Rule 403. Construction site road to be paved. All construction equipment has a model year of 2012 or newer.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	200.00	20.00
tblConstructionPhase	NumDays	4.00	2.00
tblConstructionPhase	NumDays	2.00	10.00
tblConstructionPhase	PhaseEndDate	4/26/2018	12/19/2017
tblConstructionPhase	PhaseEndDate	7/20/2017	11/21/2017
tblConstructionPhase	PhaseEndDate	7/14/2017	11/17/2017
tblConstructionPhase	PhaseStartDate	7/21/2017	11/22/2017
tblConstructionPhase	PhaseStartDate	7/15/2017	11/18/2017

Moreno Valley - Cottonwood Interim Basin Project - Riverside-South Coast County, Winter

tblConstructionPhase	PhaseStartDate	7/13/2017	11/6/2017
tblGrading	MaterialExported	0.00	2,400.00
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.41	0.41
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblProjectCharacteristics	OperationalYear	2018	2019
tblTripsAndVMT	HaulingTripLength	20.00	16.00

2.0 Emissions Summary

Moreno Valley - Cottonwood Interim Basin Project - Riverside-South Coast County, Winter

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0199	4.0000e-005	4.6500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.8700e-003	9.8700e-003	3.0000e-005		0.0105
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
Total	0.0199	4.0000e-005	4.6500e-003	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	2.0000e-005	2.0000e-005		9.8700e-003	9.8700e-003	3.0000e-005	0.0000	0.0105

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	0.0199	4.0000e-005	4.6500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.8700e-003	9.8700e-003	3.0000e-005		0.0105
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
Total	0.0199	4.0000e-005	4.6500e-003	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	2.0000e-005	2.0000e-005		9.8700e-003	9.8700e-003	3.0000e-005	0.0000	0.0105

Moreno Valley - Cottonwood Interim Basin Project - Riverside-South Coast County, Winter

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	11/6/2017	11/17/2017	5	10	
2	Grading	Grading	11/18/2017	11/21/2017	5	2	
3	Building Construction	Building Construction	11/22/2017	12/19/2017	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0.75

Acres of Paving: 1.04

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

OffRoad Equipment

Moreno Valley - Cottonwood Interim Basin Project - Riverside-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Excavators	1	8.00	158	0.38
Building Construction	Graders	1	8.00	187	0.41
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Cranes	0	6.00	231	0.29
Building Construction	Forklifts	0	6.00	89	0.20
Site Preparation	Graders	0	8.00	187	0.41
Grading	Rubber Tired Dozers	0	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Building Construction	Welders	0	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	1	19.00	7.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	300.00	14.70	6.90	16.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Moreno Valley - Cottonwood Interim Basin Project - Riverside-South Coast County, Winter

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.2997	0.0000	5.2997	2.9011	0.0000	2.9011			0.0000			0.0000
Off-Road	1.7491	18.6769	9.7954	0.0158		0.9951	0.9951		0.9155	0.9155		1,613.5197	1,613.5197	0.4944		1,625.8792
Total	1.7491	18.6769	9.7954	0.0158	5.2997	0.9951	6.2949	2.9011	0.9155	3.8166		1,613.5197	1,613.5197	0.4944		1,625.8792

Moreno Valley - Cottonwood Interim Basin Project - Riverside-South Coast County, Winter

3.2 Site Preparation - 2017

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	0.1916	7.9140	1.0953	0.0191	0.4201	0.0396	0.4597	0.1152	0.0379	0.1530		2,023.789 1	2,023.789 1	0.1707		2,028.057 4
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0522	0.0364	0.3662	8.7000e-004	0.0894	5.7000e-004	0.0900	0.0237	5.3000e-004	0.0242		86.6913	86.6913	2.8400e-003		86.7622
Total	0.2438	7.9504	1.4615	0.0200	0.5095	0.0401	0.5497	0.1389	0.0384	0.1773		2,110.480 4	2,110.480 4	0.1736		2,114.819 6

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.0669	0.0000	2.0669	1.1314	0.0000	1.1314			0.0000			0.0000
Off-Road	0.6275	9.0502	10.2957	0.0158		0.4823	0.4823		0.4640	0.4640	0.0000	1,613.519 7	1,613.519 7	0.4944		1,625.879 2
Total	0.6275	9.0502	10.2957	0.0158	2.0669	0.4823	2.5492	1.1314	0.4640	1.5954	0.0000	1,613.519 7	1,613.519 7	0.4944		1,625.879 2

Moreno Valley - Cottonwood Interim Basin Project - Riverside-South Coast County, Winter

3.2 Site Preparation - 2017

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	0.1916	7.9140	1.0953	0.0191	0.4201	0.0396	0.4597	0.1152	0.0379	0.1530		2,023.789 1	2,023.789 1	0.1707		2,028.057 4
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0522	0.0364	0.3662	8.7000e-004	0.0894	5.7000e-004	0.0900	0.0237	5.3000e-004	0.0242		86.6913	86.6913	2.8400e-003		86.7622
Total	0.2438	7.9504	1.4615	0.0200	0.5095	0.0401	0.5497	0.1389	0.0384	0.1773		2,110.480 4	2,110.480 4	0.1736		2,114.819 6

3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3977	0.0000	0.3977	0.0429	0.0000	0.0429			0.0000			0.0000
Off-Road	0.4017	5.6032	1.4696	5.0000e-003		0.1827	0.1827		0.1681	0.1681		510.9414	510.9414	0.1566		514.8552
Total	0.4017	5.6032	1.4696	5.0000e-003	0.3977	0.1827	0.5804	0.0429	0.1681	0.2111		510.9414	510.9414	0.1566		514.8552

Moreno Valley - Cottonwood Interim Basin Project - Riverside-South Coast County, Winter

3.3 Grading - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0196	0.0137	0.1373	3.3000e-004	0.0335	2.1000e-004	0.0338	8.8900e-003	2.0000e-004	9.0900e-003		32.5092	32.5092	1.0600e-003		32.5358
Total	0.0196	0.0137	0.1373	3.3000e-004	0.0335	2.1000e-004	0.0338	8.8900e-003	2.0000e-004	9.0900e-003		32.5092	32.5092	1.0600e-003		32.5358

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1551	0.0000	0.1551	0.0168	0.0000	0.0168			0.0000			0.0000
Off-Road	0.1217	2.3529	2.6368	5.0000e-003		0.0893	0.0893		0.0893	0.0893	0.0000	510.9414	510.9414	0.1566		514.8552
Total	0.1217	2.3529	2.6368	5.0000e-003	0.1551	0.0893	0.2444	0.0168	0.0893	0.1060	0.0000	510.9414	510.9414	0.1566		514.8552

Moreno Valley - Cottonwood Interim Basin Project - Riverside-South Coast County, Winter

3.3 Grading - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0196	0.0137	0.1373	3.3000e-004	0.0335	2.1000e-004	0.0338	8.8900e-003	2.0000e-004	9.0900e-003		32.5092	32.5092	1.0600e-003		32.5358
Total	0.0196	0.0137	0.1373	3.3000e-004	0.0335	2.1000e-004	0.0338	8.8900e-003	2.0000e-004	9.0900e-003		32.5092	32.5092	1.0600e-003		32.5358

3.4 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5339	7.4472	1.9532	6.6400e-003		0.2429	0.2429		0.2234	0.2234		679.0951	679.0951	0.2081		684.2969
Total	0.5339	7.4472	1.9532	6.6400e-003		0.2429	0.2429		0.2234	0.2234		679.0951	679.0951	0.2081		684.2969

Moreno Valley - Cottonwood Interim Basin Project - Riverside-South Coast County, Winter

3.4 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0308	0.9119	0.2119	1.7900e-003	0.0448	9.0000e-003	0.0538	0.0129	8.6100e-003	0.0215		188.5698	188.5698	0.0190		189.0458
Worker	0.1239	0.0864	0.8697	2.0700e-003	0.2124	1.3600e-003	0.2137	0.0563	1.2600e-003	0.0576		205.8918	205.8918	6.7400e-003		206.0603
Total	0.1547	0.9983	1.0816	3.8600e-003	0.2572	0.0104	0.2676	0.0692	9.8700e-003	0.0791		394.4616	394.4616	0.0258		395.1061

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1618	3.1272	3.5046	6.6400e-003		0.1186	0.1186		0.1186	0.1186	0.0000	679.0951	679.0951	0.2081		684.2969
Total	0.1618	3.1272	3.5046	6.6400e-003		0.1186	0.1186		0.1186	0.1186	0.0000	679.0951	679.0951	0.2081		684.2969

Moreno Valley - Cottonwood Interim Basin Project - Riverside-South Coast County, Winter

3.4 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0308	0.9119	0.2119	1.7900e-003	0.0448	9.0000e-003	0.0538	0.0129	8.6100e-003	0.0215		188.5698	188.5698	0.0190		189.0458
Worker	0.1239	0.0864	0.8697	2.0700e-003	0.2124	1.3600e-003	0.2137	0.0563	1.2600e-003	0.0576		205.8918	205.8918	6.7400e-003		206.0603
Total	0.1547	0.9983	1.0816	3.8600e-003	0.2572	0.0104	0.2676	0.0692	9.8700e-003	0.0791		394.4616	394.4616	0.0258		395.1061

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Moreno Valley - Cottonwood Interim Basin Project - Riverside-South Coast County, Winter

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

4.2 Trip Summary Information

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

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	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 Non-Asphalt Surfaces	0.533383	0.039495	0.183627	0.126156	0.018688	0.005561	0.017029	0.066607	0.001345	0.001247	0.004677	0.000974	0.001211

5.0 Energy Detail

Historical Energy Use: N

Moreno Valley - Cottonwood Interim Basin Project - Riverside-South Coast County, Winter

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Moreno Valley - Cottonwood Interim Basin Project - Riverside-South Coast County, Winter

5.2 Energy by Land Use - Natural Gas

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0199	4.0000e-005	4.6500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.8700e-003	9.8700e-003	3.0000e-005		0.0105
Unmitigated	0.0199	4.0000e-005	4.6500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.8700e-003	9.8700e-003	3.0000e-005		0.0105

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6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.4400e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0160					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.4000e-004	4.0000e-005	4.6500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.8700e-003	9.8700e-003	3.0000e-005		0.0105
Total	0.0199	4.0000e-005	4.6500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.8700e-003	9.8700e-003	3.0000e-005		0.0105

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	3.4400e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0160					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.4000e-004	4.0000e-005	4.6500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.8700e-003	9.8700e-003	3.0000e-005		0.0105
Total	0.0199	4.0000e-005	4.6500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.8700e-003	9.8700e-003	3.0000e-005		0.0105

7.0 Water Detail

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

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

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

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

Equipment Type	Number
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11.0 Vegetation

Moreno Valley - Cottonwood Interim Basin Project - Riverside-South Coast County, Annual

Moreno Valley - Cottonwood Interim Basin Project
Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	45.10	1000sqft	1.04	45,100.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	702.44	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

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Project Characteristics -

Land Use - Cottonwood Interim Basin = 35,100 square feet. An additional 10,000 square feet is assessed to account for the full area of impact

Construction Phase - Construction phase duration per City of Moreno Valley

Off-road Equipment -

Off-road Equipment - Equipment list per City

Off-road Equipment - Equipment list per City

Off-road Equipment - Equipment list per City

Grading -

Trips and VMT - Hauling distance per City

Construction Off-road Equipment Mitigation - SCAQMD Rule 403. Construction site road to be paved. All construction equipment has a model year of 2012 or newer.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	200.00	20.00
tblConstructionPhase	NumDays	4.00	2.00
tblConstructionPhase	NumDays	2.00	10.00
tblConstructionPhase	PhaseEndDate	4/26/2018	12/19/2017
tblConstructionPhase	PhaseEndDate	7/20/2017	11/21/2017
tblConstructionPhase	PhaseEndDate	7/14/2017	11/17/2017
tblConstructionPhase	PhaseStartDate	7/21/2017	11/22/2017
tblConstructionPhase	PhaseStartDate	7/15/2017	11/18/2017

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tblConstructionPhase	PhaseStartDate	7/13/2017	11/6/2017
tblGrading	MaterialExported	0.00	2,400.00
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.41	0.41
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblProjectCharacteristics	OperationalYear	2018	2019
tblTripsAndVMT	HaulingTripLength	20.00	16.00

2.0 Emissions Summary

Moreno Valley - Cottonwood Interim Basin Project - Riverside-South Coast County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

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	3.6000e-003	1.0000e-005	5.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1200e-003	1.1200e-003	0.0000	0.0000	1.2000e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	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	3.6000e-003	1.0000e-005	5.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.1200e-003	1.1200e-003	0.0000	0.0000	1.2000e-003

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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	3.6000e-003	1.0000e-005	5.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1200e-003	1.1200e-003	0.0000	0.0000	1.2000e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	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	3.6000e-003	1.0000e-005	5.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.1200e-003	1.1200e-003	0.0000	0.0000	1.2000e-003

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	11/6/2017	11/17/2017	5	10	
2	Grading	Grading	11/18/2017	11/21/2017	5	2	
3	Building Construction	Building Construction	11/22/2017	12/19/2017	5	20	

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Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0.75

Acres of Paving: 1.04

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	Excavators	1	8.00	158	0.38
Building Construction	Graders	1	8.00	187	0.41
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Cranes	0	6.00	231	0.29
Building Construction	Forklifts	0	6.00	89	0.20
Site Preparation	Graders	0	8.00	187	0.41
Grading	Rubber Tired Dozers	0	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Building Construction	Welders	0	8.00	46	0.45

Trips and VMT

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Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	1	19.00	7.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	300.00	14.70	6.90	16.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2017

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					0.0265	0.0000	0.0265	0.0145	0.0000	0.0145	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.7500e-003	0.0934	0.0490	8.0000e-005		4.9800e-003	4.9800e-003		4.5800e-003	4.5800e-003	0.0000	7.3188	7.3188	2.2400e-003	0.0000	7.3749
Total	8.7500e-003	0.0934	0.0490	8.0000e-005	0.0265	4.9800e-003	0.0315	0.0145	4.5800e-003	0.0191	0.0000	7.3188	7.3188	2.2400e-003	0.0000	7.3749

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3.2 Site Preparation - 2017

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	9.3000e-004	0.0402	4.9700e-003	1.0000e-004	2.0700e-003	2.0000e-004	2.2700e-003	5.7000e-004	1.9000e-004	7.6000e-004	0.0000	9.3366	9.3366	7.4000e-004	0.0000	9.3550
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	2.4000e-004	1.9000e-004	1.9300e-003	0.0000	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.4033	0.4033	1.0000e-005	0.0000	0.4036
Total	1.1700e-003	0.0404	6.9000e-003	1.0000e-004	2.5100e-003	2.0000e-004	2.7100e-003	6.9000e-004	1.9000e-004	8.8000e-004	0.0000	9.7399	9.7399	7.5000e-004	0.0000	9.7586

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					0.0103	0.0000	0.0103	5.6600e-003	0.0000	5.6600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.1400e-003	0.0453	0.0515	8.0000e-005		2.4100e-003	2.4100e-003		2.3200e-003	2.3200e-003	0.0000	7.3188	7.3188	2.2400e-003	0.0000	7.3749
Total	3.1400e-003	0.0453	0.0515	8.0000e-005	0.0103	2.4100e-003	0.0127	5.6600e-003	2.3200e-003	7.9800e-003	0.0000	7.3188	7.3188	2.2400e-003	0.0000	7.3749

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3.2 Site Preparation - 2017

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	9.3000e-004	0.0402	4.9700e-003	1.0000e-004	2.0700e-003	2.0000e-004	2.2700e-003	5.7000e-004	1.9000e-004	7.6000e-004	0.0000	9.3366	9.3366	7.4000e-004	0.0000	9.3550
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	2.4000e-004	1.9000e-004	1.9300e-003	0.0000	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.4033	0.4033	1.0000e-005	0.0000	0.4036
Total	1.1700e-003	0.0404	6.9000e-003	1.0000e-004	2.5100e-003	2.0000e-004	2.7100e-003	6.9000e-004	1.9000e-004	8.8000e-004	0.0000	9.7399	9.7399	7.5000e-004	0.0000	9.7586

3.3 Grading - 2017

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					4.0000e-004	0.0000	4.0000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.0000e-004	5.6000e-003	1.4700e-003	0.0000		1.8000e-004	1.8000e-004		1.7000e-004	1.7000e-004	0.0000	0.4635	0.4635	1.4000e-004	0.0000	0.4671
Total	4.0000e-004	5.6000e-003	1.4700e-003	0.0000	4.0000e-004	1.8000e-004	5.8000e-004	4.0000e-005	1.7000e-004	2.1000e-004	0.0000	0.4635	0.4635	1.4000e-004	0.0000	0.4671

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3.3 Grading - 2017

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	2.0000e-005	1.0000e-005	1.4000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0303	0.0303	0.0000	0.0000	0.0303
Total	2.0000e-005	1.0000e-005	1.4000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0303	0.0303	0.0000	0.0000	0.0303

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					1.6000e-004	0.0000	1.6000e-004	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2000e-004	2.3500e-003	2.6400e-003	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	0.4635	0.4635	1.4000e-004	0.0000	0.4671
Total	1.2000e-004	2.3500e-003	2.6400e-003	0.0000	1.6000e-004	9.0000e-005	2.5000e-004	2.0000e-005	9.0000e-005	1.1000e-004	0.0000	0.4635	0.4635	1.4000e-004	0.0000	0.4671

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3.3 Grading - 2017

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	2.0000e-005	1.0000e-005	1.4000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0303	0.0303	0.0000	0.0000	0.0303
Total	2.0000e-005	1.0000e-005	1.4000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0303	0.0303	0.0000	0.0000	0.0303

3.4 Building Construction - 2017

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	5.3400e-003	0.0745	0.0195	7.0000e-005		2.4300e-003	2.4300e-003		2.2300e-003	2.2300e-003	0.0000	6.1607	6.1607	1.8900e-003	0.0000	6.2078
Total	5.3400e-003	0.0745	0.0195	7.0000e-005		2.4300e-003	2.4300e-003		2.2300e-003	2.2300e-003	0.0000	6.1607	6.1607	1.8900e-003	0.0000	6.2078

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3.4 Building Construction - 2017

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	3.0000e-004	9.2600e-003	1.9800e-003	2.0000e-005	4.4000e-004	9.0000e-005	5.3000e-004	1.3000e-004	9.0000e-005	2.1000e-004	0.0000	1.7482	1.7482	1.6000e-004	0.0000	1.7523
Worker	1.1500e-003	8.9000e-004	9.1600e-003	2.0000e-005	2.0900e-003	1.0000e-005	2.1000e-003	5.5000e-004	1.0000e-005	5.7000e-004	0.0000	1.9157	1.9157	6.0000e-005	0.0000	1.9172
Total	1.4500e-003	0.0102	0.0111	4.0000e-005	2.5300e-003	1.0000e-004	2.6300e-003	6.8000e-004	1.0000e-004	7.8000e-004	0.0000	3.6638	3.6638	2.2000e-004	0.0000	3.6695

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.6200e-003	0.0313	0.0351	7.0000e-005		1.1900e-003	1.1900e-003		1.1900e-003	1.1900e-003	0.0000	6.1606	6.1606	1.8900e-003	0.0000	6.2078
Total	1.6200e-003	0.0313	0.0351	7.0000e-005		1.1900e-003	1.1900e-003		1.1900e-003	1.1900e-003	0.0000	6.1606	6.1606	1.8900e-003	0.0000	6.2078

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3.4 Building Construction - 2017

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	3.0000e-004	9.2600e-003	1.9800e-003	2.0000e-005	4.4000e-004	9.0000e-005	5.3000e-004	1.3000e-004	9.0000e-005	2.1000e-004	0.0000	1.7482	1.7482	1.6000e-004	0.0000	1.7523
Worker	1.1500e-003	8.9000e-004	9.1600e-003	2.0000e-005	2.0900e-003	1.0000e-005	2.1000e-003	5.5000e-004	1.0000e-005	5.7000e-004	0.0000	1.9157	1.9157	6.0000e-005	0.0000	1.9172
Total	1.4500e-003	0.0102	0.0111	4.0000e-005	2.5300e-003	1.0000e-004	2.6300e-003	6.8000e-004	1.0000e-004	7.8000e-004	0.0000	3.6638	3.6638	2.2000e-004	0.0000	3.6695

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

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

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	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 Non-Asphalt Surfaces	0.533383	0.039495	0.183627	0.126156	0.018688	0.005561	0.017029	0.066607	0.001345	0.001247	0.004677	0.000974	0.001211

5.0 Energy Detail

Historical Energy Use: N

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5.2 Energy by Land Use - Natural Gas

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.3 Energy by Land Use - Electricity

Unmitigated

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

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5.3 Energy by Land Use - Electricity

Mitigated

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

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.6000e-003	1.0000e-005	5.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1200e-003	1.1200e-003	0.0000	0.0000	1.2000e-003
Unmitigated	3.6000e-003	1.0000e-005	5.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1200e-003	1.1200e-003	0.0000	0.0000	1.2000e-003

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6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	6.3000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.9200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.0000e-005	1.0000e-005	5.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1200e-003	1.1200e-003	0.0000	0.0000	1.2000e-003
Total	3.6100e-003	1.0000e-005	5.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1200e-003	1.1200e-003	0.0000	0.0000	1.2000e-003

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	6.3000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.9200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.0000e-005	1.0000e-005	5.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1200e-003	1.1200e-003	0.0000	0.0000	1.2000e-003
Total	3.6100e-003	1.0000e-005	5.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1200e-003	1.1200e-003	0.0000	0.0000	1.2000e-003

7.0 Water Detail

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7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

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

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7.2 Water by Land Use

Mitigated

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

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8.2 Waste by Land Use

Unmitigated

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

Mitigated

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

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation
