

# **DRAFT**

## **Initial Study/Mitigation Negative Declaration for the Tequesquite Creek Channel Maintenance Project**

*Prepared for:*

### **City of Riverside**

Public Works Department  
3900 Main Street, 4<sup>th</sup> Floor  
Riverside, California 92522

*Contact: Michael Roberts, Environmental Services Coordinator*

*Prepared by:*

**DUDEK**

3544 University Avenue  
Riverside, California 92501

*Contact: Wendy Worthey*

## **FEBRUARY 2020**



# Tequesquite Creek Channel Maintenance Project Initial Study/Mitigated Negative Declaration

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## 1 INTRODUCTION

### 1.1 Introduction

The City of Riverside (City) Public Works Department proposes to conduct maintenance within an approximately 500-foot segment of Tequesquite Creek Channel located within the City of Riverside in the County of Riverside. The purpose of the proposed Tequesquite Creek Channel Project (project) is to maintain adequate flood capacity and remove trash and debris that collects in the channel bottom to prevent it from washing downstream. The City Public Works Department will act as the lead agency under the California Environmental Quality Act (CEQA) (California Public Resources Code, Section 21000 et seq.) and will obtain all necessary regulatory permits.

### 1.2 CEQA Compliance

The City is the lead agency pursuant to CEQA, and is responsible for analyzing and approving the proposed project's CEQA documentation. The City has determined that a mitigated negative declaration (MND) is the appropriate environmental document to be prepared in compliance with CEQA. This finding is based on the initial study (IS)/environmental checklist (Section 3 of this MND). As provided for by CEQA Section 21064.5, an MND may be prepared for a project subject to CEQA when the project will not result in significant environmental impacts that cannot be mitigated to a level below significance.

This Draft IS/MND has been prepared for the City in conformance with Section 15070(a) of the CEQA Guidelines (14 CCR 15000 et seq.). The purpose of the IS/MND is to determine the potential significant impacts associated with ongoing, periodic maintenance (from 2020 to 2030) of the subject segment of Tequesquite Creek Channel, and to incorporate mitigation measures into the project design as necessary to reduce or eliminate any potentially significant effects of the project.

### 1.3 Content and Format of the IS/MND

This IS/MND includes the following:

**Section 1 Introduction:** Provides an introduction to the IS/MND.

**Section 2 Project Description:** Provides a detailed description of the proposed project evaluated in this IS/MND. This section also includes project location, project characteristics, and construction.

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**Section 3 Initial Study Environmental Checklist (Discussion of Environmental Impacts):** Provides an analysis of the environmental issues and concerns surrounding the project.

**Section 4 List of Preparers:** Provides a list of personnel responsible for report preparation.

**Section 5 References:** Provides citations for the references cited in the document.

## **1.4 Public Review Process**

In accordance with CEQA, a good faith effort has been made during the preparation of this MND to contact affected agencies, organizations, and individuals who may have an interest in this project. In reviewing the IS/MND, affected public agencies and the interested public should focus on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects on the project area are proposed to be avoided or mitigated.

Comments may be made on the IS/MND in writing before the end of the comment period. Following the close of the public comment period, the City will consider this IS/MND and comments thereto in determining whether to certify the environmental document. Written comments on the IS/MND should be sent to the following address no later than 5 PM on March 5, 2020.

Michael Roberts, Environmental Services Coordinator  
mdroberts@riversideca.gov  
City of Riverside Public Works Department  
3900 Main Street, 4<sup>th</sup> Floor  
Riverside, California 92522  
Phone: 951.351.6310  
Fax: 951.826.2046

The City Planning Commission will consider this document for approval and certification during a future public hearing.

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## **2 PROJECT DESCRIPTION**

### **2.1 Project Purpose and Background**

The Tequesquite Creek Channel Maintenance Project (project) consists of ongoing, periodic maintenance activities, including vegetation management and removal of accumulated sediment, trash, and debris, within an approximately 500-foot segment of Tequesquite Creek Channel, within the City of Riverside (City) in Riverside County. Maintenance activities would be conducted as needed (annually at a minimum) from 2020 to 2030. The purpose of the proposed project is to maintain adequate flood capacity and remove trash and debris that collects in the channel bottom to prevent it from washing downstream.

### **2.2 Project Location**

The segment of Tequesquite Creek within the project footprint is located downstream of Ryan Bonaminio Park, in the City (Figure 1, Project Location). Maintenance activities are proposed within an approximately 500-foot segment of the channel and the access roads on either side of the channel, with a total project area of approximately 0.93 acres (Figure 2, Project Site). The channel branches off from the Tequesquite Arroyo, which is located approximately 0.1 miles northeast of the site. The channel continues southwest before discharging to the Santa Ana River approximately 0.25 miles southwest of the study area.

The project site is within Township 2 South, Range 5 West, Section 28 of the Riverside, California, U.S. Geological Survey 7.5-minute West Riverside quadrangle map (Figure 1).

### **2.3 Existing Conditions**

The project site is disturbed and is composed primarily of an earthen trapezoidal storm channel with dirt access roads running parallel on either side. Access to the site is secured by a chain-link fence and locked gated that was installed around the channel and access roads. Directly upstream, the channel is maintained by the Riverside County Flood Control and Water Conservation District. The general vicinity surrounding the project site is a mix of developed and undeveloped land. Adjacent to the north is undeveloped land owned by the City that is within the 100-year floodplain of the Santa Ana River. Mount Rubidoux Park is located approximately 0.35 miles northeast from the project site. To the east is the maintained flood control channel and Ryan Bonaminio Park. To the south is the Santa Ana River Trail and Tequesquite Arroyo, to the southwest is the City landfill, and to the west is the Santa Ana River Regional Park. Multifamily residential development occurs within 0.15 miles to the south and east of the project site.

# **Tequesquite Creek Channel Maintenance Project Initial Study/Mitigated Negative Declaration**

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## **2.4 Project Description**

The proposed maintenance activities include the removal of accumulated sediment and vegetation from the channel bottom, removal of vegetation from the channel banks, and removal of vegetation from the 12-foot-wide section of the access roads adjacent to the channel banks. Any trash or debris in the channel or on the adjacent access roads would be removed concurrently. The maintenance activities would be conducted as needed, but would occur at least one time per year, from 2020 to 2030 (10 years).

Each annual maintenance event would require approximately 1 to 3 working days to complete, depending upon the amount of sediment, debris, and trash that must be removed. The equipment used to conduct the maintenance activities is expected to include hand tools, a backhoe, a long-reach excavator, a dump truck, and a trailer. Any sediment or vegetation removal from the channel using the backhoe is expected to be conducted from the existing access roads. Access into the channel bottom by heavy equipment and/or the construction of an access road into the channel is not required. Excavated material will be temporarily stockpiled in an upland location adjacent to the channel, prior to placement of the material in a dump truck for transport and off-site disposal. No nighttime lighting of the site would be required because all maintenance activities would occur during the day.

## **2.5 Discretionary Actions**

The following discretionary actions are required for the proposed project:

- Certification of this initial study/mitigated negative declaration by the City Planning Commission
- Approval of the mitigation monitoring and reporting program by the City Planning Commission

### **Other Agency Approvals**

- U.S. Army Corps of Engineers Section 404 – Nationwide Permit
- Regional Water Quality Control Board (Santa Ana Regional Board) – 401 Water Quality Certification
- California Department of Fish and Wildlife – Section 1602 Streambed Alteration Agreement



**Tequesquite Creek Channel Maintenance Project  
Initial Study/Mitigated Negative Declaration**

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SOURCE: Bing Maps 2019

**DUDEK**



0 100 200 Feet

FIGURE 2  
Project Site

Tequesquite Creek Channel Maintenance Project

**Tequesquite Creek Channel Maintenance Project  
Initial Study/Mitigated Negative Declaration**

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*DRAFT MITIGATED NEGATIVE DECLARATION*

### **3 Initial Study Environmental Checklist**

**WARD:** To be determined

1. **Case Number:** To be determined
2. **Project Title:** Tequesquite Creek Channel Maintenance Project
3. **Hearing Date:** **To be determined**
4. **Lead Agency:** City of Riverside  
Public Works Department  
3900 Main Street, 4th Floor  
Riverside, California 92522
5. **Contact Person:** Michael Roberts, Environmental Services Coordinator  
City of Riverside Public Works Department  
**Phone Number:** 951.351.6310
6. **Project Location:** The proposed Tequesquite Creek Channel Maintenance Project (project) site consists of an approximately 500-foot segment of Tequesquite Creek; it is a vegetated, earthen, trapezoidal channel located downstream of Ryan Bonaminio Park in the City of Riverside. Maintenance activities are proposed within the channel bottom and the access roads on either side of the channel, with a total project area of approximately 0.93 acres. The channel branches off from the Tequesquite Arroyo, which is located approximately 0.1 miles northeast of the site. The channel continues southwest before discharging to the Santa Ana River approximately 0.25 miles southwest of the project site.
7. **Project Applicant/Project Sponsor's Name and Address:**  
  
City of Riverside Public Works Department  
3900 Main Street, 4th Floor  
Riverside, California 92522
8. **General Plan Designation:** PR (Private Recreation)
9. **Zoning:** PF (Public Facilities)
10. **Description of Project:** (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)

The segment of Tequesquite Creek within the project footprint is a vegetated, earthen, trapezoidal channel, located downstream of Ryan Bonaminio Park, in the City of Riverside (Figure 1, Project Location, and Figure 2, Project Site). Maintenance activities are proposed within an approximately 500-foot segment of the channel and the access roads on either side of the channel, with a total project area of approximately 0.93 acres. The channel branches off from the Tequesquite Arroyo, which is located approximately 0.1 miles northeast of the site. The channel continues southwest before discharging to the Santa Ana River approximately 0.25 miles southwest of the study area. The project site occurs within Section 28 of Township 2 South, Range 5 West of the West Riverside 7.5-minute U.S. Geological Survey quadrangle.

The proposed maintenance activities include the removal of accumulated sediment and vegetation from the channel bottom, removal of vegetation from the channel banks, and removal of vegetation from the 12-foot-wide section of the access roads adjacent to the channel bank. Any trash or debris in the channel or on the adjacent access roads will be removed concurrently. The maintenance activities will be conducted as needed, but will occur at least one time per year from 2020 through 2029 (10 years). The equipment used to conduct the maintenance activities are expected to include hand tools, a backhoe, long-reach excavator, dump truck, and a trailer. Any sediment or vegetation removal from the channel using the backhoe is expected to be conducted from the existing access roads. Access into the channel bottom by heavy equipment and/or the construction of an access road into the channel is not required. Excavated material will be temporarily stockpiled in an upland location adjacent to the channel, prior to placement of the material in a dump truck for transport and off-site disposal.

**11. Surrounding land uses and setting: Briefly describe the project's surroundings:**

|                     | <b>Existing Land Use</b>   | <b>General Plan Designation</b>                      | <b>Zoning Designation</b>                           |
|---------------------|--|--|---|
| <b>Project Site</b> | Vegetated, earthen, trapezoidal flood control channel and maintenance access roads.  | PR (Private Recreation)                              | PF (Public Facilities)                              |
| <b>North</b>        | Undeveloped land owned by the City of Riverside within the 100-year floodplain of the Santa Ana River.<br><br>Rancho Jurupa Park | PR (Private Recreation)                              | PF (Public Facilities)                              |
| <b>East</b>         | Ryan Bonaminio Park  | PR (Private Recreation)                              | PF (Public Facilities)                              |
| <b>South</b>        | Santa Ana River Trail and Tequesquite Avenue   | PR (Private Recreation)                              | PF (Public Facilities)                              |
| <b>West</b>         | Lands under Conservation by Riverside-Corona Resource Conservation District, Santa Ana River Regional Park                       | PQP (Public-Quasi Public)<br>PR (Private Recreation) | PQP (Public-Quasi Public)<br>PF (Public Facilities) |

**12. Other public agencies whose approval is required (e.g., permits, financial approval, or participation agreement):**

- U.S. Army Corps of Engineers Section 404 – Nationwide Permit
- Santa Ana Regional Water Quality Control Board – 401 Water Quality Certification
- California Department of Fish and Wildlife – Section 1602 Streambed Alteration Agreement

**13. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significant impacts to tribal cultural resources, procedures regarding confidentiality, etc.?**

Tribal consultation was initiated by the City of Riverside in compliance with Assembly Bill 52 in July 2017. Consultation was concluded with no requested revisions to the findings of the cultural resources report or additional recommended mitigation measures.

**14. Other Environmental Reviews Incorporated by Reference in this Review:**

General Plan 2025 – City of Riverside. 2007a. *City of Riverside General Plan 2025*. Adopted November 2007.

General Plan 2025 FPEIR – City of Riverside. 2007b. *Final Program Environmental Impact Report for the City of Riverside General Plan*. Adopted November 2007.

**Acronyms**

|                     |  |
|---------------------|--|
| AB -                | Assembly Bill  |
| AQMP -              | Air Quality Management Plan  |
| AUSD -              | Alvord Unified School District   |
| CAAQS -             | California Ambient Air Quality Standards   |
| CalEEMod -          | California Emissions Estimator Model   |
| CARB -              | California Air Resources Board   |
| CDFW -              | California Department of Fish and Wildlife                                       |
| CEQA -              | California Environmental Quality Act   |
| CH <sub>4</sub> -   | methane  |
| CO -                | carbon monoxide  |
| CO <sub>2</sub> -   | carbon dioxide   |
| CO <sub>2</sub> e - | carbon dioxide equivalent  |
| CRHR -              | California Register of Historical Resources                                      |
| DBESP -             | Determination of Biologically Equivalent or Superior Preservation                |
| EIR -               | Environmental Impact Report  |
| FPEIR -             | Final Program Environmental Impact Report  |
| GHG -               | Greenhouse Gas   |
| IS -                | initial study  |
| JPR -               | Joint Project Review   |
| LST -               | localized significance threshold   |
| MM -                | Mitigation Measure   |
| MND -               | mitigated negative declaration   |
| MSHCP -             | Multiple Species Habitat Conservation Plan                                       |
| MT -                | metric ton   |
| N <sub>2</sub> O -  | nitrous oxide  |
| NAAQS -             | National Ambient Air Quality Standards   |
| NAHC -              | Native American Heritage Commission  |
| NO <sub>2</sub> -   | nitrogen dioxide   |
| NO <sub>x</sub> -   | oxides of nitrogen   |
| NRHP -              | National Register of Historic Places   |
| O <sub>3</sub> -    | ozone  |
| PM <sub>10</sub> -  | particulate matter with an aerodynamic diameter less than or equal to 10 microns |

|                     |   |
|---------------------|---|
| PM <sub>2.5</sub> - | particulate matter with an aerodynamic diameter less than or equal to 2.5 microns |
| RCA -               | Regional Conservation Authority   |
| RTP -               | Regional Transportation Plan  |
| RUSD -              | Riverside Unified School District   |
| SCAB -              | South Coast Air Basin   |
| SCAQMD -            | South Coast Air Quality Management District                                       |
| SCE -               | Southern California Edison  |
| SCS -               | Sustainable Communities Strategy  |
| SoCalGas -          | Southern California Gas   |
| SO <sub>x</sub> -   | sulfur oxides   |
| TAC -               | toxic air contaminant   |
| USGS -              | United States Geologic Survey   |
| VOC -               | volatile organic compound   |

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

### DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation which reflects the independent judgment of the City of Riverside, it is recommended that:

The City of Riverside finds that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐

The City of Riverside finds that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☒

The City of Riverside finds that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐

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

☐

The City of Riverside finds that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier 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 proposed project, nothing further is required.

☐

Signature 

Date 2-3-20

Printed Name & Title Mike Roberts, Environmental Services Coordinator

For City of Riverside

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*ENVIRONMENTAL INITIAL STUDY*

**EVALUATION OF ENVIRONMENTAL IMPACTS:**

- 1) A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.
- 4) “Negative Declaration: Less Than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from “Earlier Analyses,” as described in (5) below, may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
  - a. **Earlier Analysis Used.** Identify and state where they are available for review.
  - b. **Impacts Adequately Addressed.** Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
  - c. **Mitigation Measures.** For effects that are “Less than Significant with Mitigation Measures Incorporated,” describe the mitigation measure which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) The explanation of each issue should identify:
  - a. the significance criteria or threshold, if any, used to evaluate each question; and
  - b. the mitigation measure identified, if any, to reduce the impact to less than significance.

| ISSUES (AND SUPPORTING INFORMATION SOURCES):  | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact        | No Impact                           |
|---|--------------------------------|--|-------------------------------------|-------------------------------------|
| <b>3.1 AESTHETICS.</b><br>Except as provided in Public Resources Code Section 21099, would the project:   |                                |  |                                     |                                     |
| a. Have a substantial adverse effect on a scenic vista?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| <p><b>1a. Response: (Source: General Plan 2025 Figure CCM-4, Master Plan of Roadways; General Plan 2025 FPEIR Figure 5.1-1, Scenic and Special Boulevards and Parkways; General Plan 2025 FPEIR Table 5.1-A, Scenic and Special Boulevards; General Plan 2025 FPEIR Table 5.1-B, Scenic Parkways)</b></p> <p><b>Less Than Significant Impact.</b> The proposed Tequesquite Creek Channel Maintenance Project (project) site is developed with the Tequesquite Creek Channel trapezoidal channel and graded access roads on either side of the channel. The project site is surrounded by a chain-link fence to prevent access, with a locked gate to the east of the project area where the channel discharges to a reinforced concrete box culvert under Tequesquite Avenue. According to the General Plan 2025 Open Space and Conservation Element, Mount Rubidoux, which is located approximately 2 miles northeast of the project site, is considered a scenic resource for the project area. Additionally, the project site is located southeast of the Santa Ana River and associated open space and parkland around the river, which provides a natural viewshed for motorists and pedestrians traveling along Tequesquite Avenue or using local trails.</p> <p>The proposed activities are limited to ongoing maintenance activities (vegetation management, removal of accumulated sediment, and removal of debris/trash) within the existing trapezoidal channel and the adjacent access roads. The removal of trash and other debris is expected to improve views of the channel, both on site and downstream where trash and debris can be carried during large storm events. The vegetation that will be maintained generally occurs below the top of the slope of the channel, outside of the line of site from beyond the fenced access road. Maintenance vehicles and crews will be present on site annually to maintain the channel and temporary stockpiles of soil and vegetation will be placed on site for a period of approximately 2 to 3 days; however, this work is temporary and all debris will be removed following completion of the activities. There is no new construction, expansion of the existing channel, or other proposed activities that would block a scenic vista or result in a permanent change to the local viewshed. Therefore, the project will have a <b>less than significant impact</b> directly, indirectly, or cumulatively to a scenic vista. No mitigation is required.</p> |                                |  |                                     |                                     |
| b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| <p><b>1b. Response: (Source: Caltrans 2019)</b></p> <p><b>No Impact.</b> The California Department of Transportation designates official and eligible scenic highways within the state. There are no designated or proposed state scenic highways within the vicinity of Tequesquite Creek Channel. The nearest highway to the proposed project site is Interstate 215, located approximately 6 miles to the northeast. Interstate 215 is not listed as a designated or eligible scenic highway. Therefore, implementation of the proposed project would result in <b>no impact</b> related to scenic resources within a state scenic highway.</p>  |                                |  |                                     |                                     |
| c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly-accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |



| ISSUES (AND SUPPORTING INFORMATION SOURCES):   | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact                           |
|--|--------------------------------|--|------------------------------|-------------------------------------|
| <p><b>1c. Response: (Source: Project Description; Cadre Environmental 2018 – Appendix B)</b></p> <p><b>Less Than Significant Impact.</b> The project site is located in an area characterized by residential development to the south and open space associated with the Santa Ana River and several parks (e.g., Ryan Bonaminio Park and Santa Ana River Regional Park). As described above in response 1a, the project site is currently developed with the Tequesquite Creek Channel trapezoidal channel and graded access roads, and surrounded by chain-link fencing.</p> <p>The project proposes to conduct annual maintenance of a 500-foot segment of the existing trapezoidal channel, including vegetation management, removal of accumulated sediment, and removal of debris/trash for a period of 10 years (2020 through 2029). These activities are expected to improve the visual quality of the site and any minor changes to the project area through placement of stockpiles or the presence of maintenance vehicles would be temporary and would only occur periodically. The vegetation that occurs in the channel generally occurs in the channel bottom and is not visible above the top of the slope. There are no mature trees, rock outcroppings, or significant riparian cover in the subject segment of the channel that would be removed. Therefore, the project will not substantially degrade the visual character or public views of the site and its surroundings. The potential for project impacts to aesthetic resources are <b>less than significant</b>.</p> |                                |  |                              |                                     |
| d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| <p><b>1d. Response: (Source: Project Description)</b></p> <p><b>No Impact.</b> The proposed project consists of the ongoing maintenance (vegetation management, removal of accumulated sediment, and removal of debris/trash) of an approximately 500-foot segment of Tequesquite Creek Channel. All maintenance activities would be conducted during daytime hours and would not require lighting. There is no component of the proposed maintenance activities that would create any new sources of light and glare. Therefore, <b>no impact</b> related to light and glare is anticipated.</p>  |                                |  |                              |                                     |
| <p><b>3.2 AGRICULTURE AND FOREST RESOURCES.</b></p>  |                                |  |                              |                                     |
| <p>In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and the forest carbon measurement methodology provided in the Forest Protocols adopted by the California Air Resources Board. Would the project:</p>   |                                |  |                              |                                     |
| a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |

| ISSUES (AND SUPPORTING INFORMATION SOURCES):  | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact                           |
|---|--------------------------------|--|------------------------------|-------------------------------------|
| <b>2a. Response: (Source: General Plan 2025 Figure OS-2, Agricultural Suitability Map)</b><br><br><b>No Impact.</b> As depicted on the General Plan 2025 Agricultural Suitability Map (Figure OS-2), the segment of Tequesquite Creek Channel within the project site is located within an area designated Farmland of Local Importance, which is described as “non-irrigated properties that are either currently producing crops or had the capacity of production.” The project site is currently developed with the Tequesquite Creek Channel trapezoidal channel and graded access roads, and is surrounded by residential development to the south and parkland/open space to the north, east, and west. There are no agricultural uses on site, nor are there surrounding properties in agricultural use. The proposed activities are limited to ongoing maintenance activities (vegetation management, removal of accumulated sediment, and removal of debris/trash) within a 500-foot segment of the existing trapezoidal channel. There is no new construction, expansion of the existing channel, or other proposed activities that could result in the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use; therefore, the project will have <b>no impact</b> directly, indirectly, or cumulatively. |                                |  |                              |                                     |
| b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| <b>2b. Response: (Source: General Plan 2025 Figure OS-3, Williamson Act Preserves)</b><br><br><b>No Impact.</b> The project site is zoned as Public Facilities and is surrounded by property zoned as Public Facilities. There are no properties in the project vicinity that are zoned for agricultural use. A review of Figure OS-3, Williamson Act Preserves, of the General Plan 2025 indicates that the project site is not located within an area that is included in a Williamson Act Preserve or under a Williamson Act Contract; therefore, the project will have <b>no impact</b> directly, indirectly, or cumulatively.  |                                |  |                              |                                     |
| c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)) timberland (as defined in Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| <b>2c. Response: (Source: General Plan 2025 Figure OS-5, Habitat Areas and Vegetation Communities)</b><br><br><b>No Impact.</b> The project site is zoned Public Facilities and incorporates an existing trapezoidal channel and associated access roads. No part of the project site or the surrounding area is zoned as forest land or timberland. The City of Riverside (City) has no forest land that can support 10% native tree cover nor does it have any timberland. Therefore, <b>no impacts</b> will occur from this project directly, indirectly, or cumulatively.   |                                |  |                              |                                     |
| d. Result in the loss of forest land or conversion of forest land to non-forest use?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| <b>2d. Response: (Source: General Plan 2025 Figure OS-5, Habitat Areas and Vegetation Communities)</b><br><br><b>No Impact.</b> As described under response 2c, the project site incorporates an existing trapezoidal channel and associated access roads. No part of the project site or the surrounding area supports forest land or timberland. The City has no forest land that can support 10% native tree cover nor does it have any timberland. Therefore, <b>no impact</b> will occur from this project directly, indirectly, or cumulatively.  |                                |  |                              |                                     |
| e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |

| ISSUES (AND SUPPORTING INFORMATION SOURCES):   | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact        | No Impact                |
|--|--------------------------------|--|-------------------------------------|--------------------------|
| <p><b>2e. Response:</b> (Source: General Plan 2025 Figure OS-2, Agricultural Suitability; Figure OS-3, Williamson Act Preserves)</p> <p><b>No Impact.</b> As described under response 2a, the segment of Tequesquite Creek Channel within the project site is located in an area designated Farmland of Local Importance, which is described as “non-irrigated properties that are either currently producing crops or had the capacity of production.” The project site is currently developed with the Tequesquite Creek Channel trapezoidal channel and graded access roads, and is surrounded by residential development to the south and parkland/open space to the north, east, and west. There are no agricultural uses on site, nor are there surrounding properties in agricultural use. Similarly, as described under responses 2c and 2d, the project site is not located on or surrounded by properties that support or are zoned for forest land.</p> <p>The proposed activities are limited to ongoing maintenance activities (vegetation management, removal of accumulated sediment and removal of debris/trash) within a 500-foot segment of the existing trapezoidal channel. There is no new construction, expansion of the existing channel, or other proposed activities that could result in the conversion of Farmland of Local Importance to non-agricultural use and there are no forest lands within the project area; therefore, the project will have <b>no impact</b> directly, indirectly, or cumulatively.</p>  |                                |  |                                     |                          |
| <b>3.3 AIR QUALITY.</b>  |                                |  |                                     |                          |
| Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:   |                                |  |                                     |                          |
| <b>a.</b> Conflict with or obstruct implementation of the applicable air quality plan?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <p><b>3a.</b> (Source: SCAQMD 2016 Air Quality Management Plan, SCAQMD Air Quality Handbook, and SCAG 2016 Regional Transportation Plan/Sustainable Communities Strategy)</p> <p><b>Less Than Significant Impact.</b> The project site is located within the South Coast Air Basin (SCAB), which includes the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties and all of Orange County, and is within the jurisdictional boundaries of the South Coast Air Quality Management District (SCAQMD). The SCAQMD administers the Air Quality Management Plan (AQMP) for the SCAB, which is a comprehensive document outlining an air pollution control program for attaining all California Ambient Air Quality Standards (CAAQS) and National Ambient Air Quality Standards (NAAQS). The most recent adopted AQMP is the 2016 AQMP (SCAQMD 2016), which was adopted by the SCAQMD Governing Board on March 3, 2017.</p> <p>In general, projects are considered consistent with and would not conflict with or obstruct implementation of the SCAQMD AQMP if the growth in socioeconomic factors is consistent with the underlying regional plans used to develop the AQMP. The 2016 AQMP reduction and control measures, which are outlined to mitigate emissions, are based on existing and projected land use and development. Demographic growth forecasts for various socioeconomic categories (e.g., population, housing, employment by industry) were developed by the Southern California Association of Governments for its 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS) based on general plans for cities and counties in the SCAB. The 2016 AQMP relies on the land use and population projections provided in Southern California Association of Governments’ 2016 Regional Growth Forecast, which is generally consistent with the local plans; therefore, the 2016 AQMP is generally consistent with local government plans.</p> |                                |  |                                     |                          |

| ISSUES (AND SUPPORTING INFORMATION SOURCES):  | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact        | No Impact                |
|---|--------------------------------|--|-------------------------------------|--------------------------|
| <p>The purpose of a consistency finding is to determine if a project is inconsistent with the assumptions and objectives of the regional air quality plans, and, thus, if it would interfere with the region's ability to comply with federal and state air quality standards. The SCAQMD has established criteria for determining consistency with the currently applicable AQMP in Chapter 12, Sections 12.2 and 12.3, in the SCAQMD CEQA Air Quality Handbook. The criteria are as follows (SCAQMD 1993):</p> <ul style="list-style-type: none"> <li>• Whether the project would result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay timely attainment of the CAAQS and NAAQS or interim emission reductions in the AQMP.</li> <li>• Whether the project would exceed the assumptions in the AQMP or increments based on the year of project buildout and phase.</li> </ul> <p>To address the criterion regarding the proposed project's potential to result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay timely attainment of the ambient air quality standards or interim emission reductions in the AQMP, project-generated criteria air pollutant emissions were estimated and analyzed for significance and are addressed under criterion 3(b). The proposed project would generate minimal air pollutant emissions during short-term construction activities that would not exceed the SCAQMD thresholds, as discussed under criterion 3(b).</p> <p>The second criterion regarding the proposed project's potential to exceed the assumptions in the 2016 AQMP or increments based on the year of project buildout and phase is primarily assessed by determining consistency between the project's land use designations and potential to generate population growth, which were used in the development of the 2016 AQMP. The proposed project does not propose additional land for development nor would it induce additional population (residents or employees) in the project area. Rather, the proposed project involves limited construction activity, including removal of accumulated sediment and vegetation from the channel bottom, removal of vegetation from the channel banks, and removal of vegetation from the access roads adjacent to the channel bank. As such, the proposed project would not induce population growth to the region. Overall, impacts relating to the proposed project's potential to conflict with or obstruct implementation of the 2016 AQMP would be <b>less than significant</b>.</p> |                                |  |                                     |                          |
| b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <p><b>3b. Response: (Source: SCAQMD Air Quality Significance Thresholds and CalEEMod)</b></p> <p><b>Less Than Significant Impact.</b> Air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development, and the SCAQMD develops and implements plans for future attainment of ambient air quality standards. Based on these considerations, project-level thresholds of significance for criteria pollutants are used in the determination of whether a project's individual emissions would have a cumulatively considerable contribution on air quality. If a project's emissions would exceed the SCAQMD significance thresholds, it would be considered to have a cumulatively considerable contribution. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant (SCAQMD 2003).</p> <p>A quantitative analysis was conducted to determine whether proposed construction activities would result in a cumulatively considerable net increase in emissions of criteria air pollutants for which the SCAB is designated as nonattainment under the NAAQS or CAAQS. Criteria air pollutants include ozone (O<sub>3</sub>), nitrogen dioxide (NO<sub>2</sub>), carbon monoxide (CO), sulfur dioxide, particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM<sub>10</sub>), particulate matter with an aerodynamic diameter less than or equal to 2.5 microns (PM<sub>2.5</sub>), and lead. Pollutants that are evaluated herein include volatile organic compounds (VOCs) and oxides of nitrogen (NO<sub>x</sub>), which are important because they are precursors to O<sub>3</sub>, as well as CO, sulfur oxides (SO<sub>x</sub>), PM<sub>10</sub>, and PM<sub>2.5</sub>.</p>   |                                |  |                                     |                          |

| ISSUES (AND SUPPORTING INFORMATION SOURCES):  | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|------------------------------|-----------|
| <p>Regarding NAAQS and CAAQS attainment status,<sup>1</sup> the SCAB is designated as a nonattainment area for national and California O<sub>3</sub> and PM<sub>2.5</sub> standards (CARB 2017a; EPA 2017). The SCAB is designated as a nonattainment area for California PM<sub>10</sub> standards; however, it is designated as an attainment area for national PM<sub>10</sub> standards. The SCAB nonattainment status of O<sub>3</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> standards is the result of cumulative emissions from various sources of air pollutants and their precursors within the SCAB, including motor vehicles, off-road equipment, and commercial and industrial facilities. The SCAB is designated as an attainment area for national and California NO<sub>2</sub>, CO, and sulfur dioxide standards. Although the SCAB has been designated as partial nonattainment (Los Angeles County) for the federal rolling 3-month average lead standard, it is designated attainment for the state lead standard.<sup>2</sup></p> <p>Appendix G of the CEQA Guidelines indicates that, where available, the significance criteria established by the applicable air district may be relied upon to determine whether a project would have a significant impact on air quality. The SCAQMD has established air quality significance thresholds, as revised in March 2015, that set forth quantitative emissions significance thresholds below which a project would not have a significant impact on ambient air quality (SCAQMD 2015). The quantitative air quality analysis provided herein applies the SCAQMD thresholds to determine the potential for the project to result in a significant impact under CEQA. The SCAQMD mass daily construction thresholds are as follows: 75 pounds per day for VOC, 100 pounds per day for NO<sub>x</sub>, 550 pounds per day for CO, 150 pounds per day for SO<sub>x</sub>, 150 pounds per day for PM<sub>10</sub>, and 55 pounds per day for PM<sub>2.5</sub>.</p> <p>Maintenance activities would result in a temporary addition of pollutants to the local airshed caused by fugitive dust emissions and combustion pollutants from on-site construction equipment and on-road vehicles traveling to and from the project site. Emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and, for fugitive dust, the prevailing weather conditions. Therefore, an increment of day-to-day variability exists.</p> <p>Maintenance activities will be conducted as needed, but will occur at least one time per year, from 2020 through 2029 (10 years). The construction activity schedule, equipment mix, and number of vendor trucks and workers for the air pollutant emissions modeling of the proposed project are shown in Appendix A, CalEEMod Output. While duration of the maintenance activities could vary depending on the level of work required, this analysis assumes that construction activity would last for a total of 5 days per year. Maintenance activities would involve approximately 6 construction workers per day (12 one-way worker trips) and it is assumed that 1 haul truck trip per day (2 one-way haul trips) would be required. Table 3-1 shows the maximum daily construction emissions.</p> |                                |  |                              |           |

<sup>1</sup> An area is designated as in attainment when it is in compliance with the NAAQS and/or the CAAQS. The NAAQS and CAAQS are set by the Environmental Protection Agency and CARB, respectively, for the maximum level of a given air pollutant that can exist in the outdoor air without unacceptable effects on human health or the public welfare. Attainment = meets the standards; attainment/maintenance = achieve the standards after a nonattainment designation; nonattainment = does not meet the standards.

<sup>2</sup> Re-designation of the lead NAAQS designation to attainment for the Los Angeles County portion of the SCAB is expected based on current monitoring data. The phase out of leaded gasoline started in 1976. Since gasoline no longer contains lead, the project is not anticipated to result in impacts related to lead; therefore, it is not discussed in this analysis.

| ISSUES (AND SUPPORTING INFORMATION SOURCES): | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------|--|------------------------------|-----------|
|--|--------------------------------|--|------------------------------|-----------|

**Table 3-1**  
**Estimated Maximum Daily Construction Emissions**

| Year                           | VOC                   | NO <sub>x</sub> | CO          | SO <sub>x</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> |
|--------------------------------|-----------------------|-----------------|-------------|-----------------|------------------|-------------------|
|                                | <i>Pounds per Day</i> |                 |             |                 |                  |                   |
| 2020                           | 0.43                  | 3.91            | 4.85        | 0.01            | 5.40             | 0.73              |
| 2021                           | 0.39                  | 3.51            | 4.79        | 0.01            | 5.38             | 0.71              |
| 2022                           | 0.35                  | 3.02            | 4.71        | 0.01            | 5.35             | 0.68              |
| 2023                           | 0.32                  | 2.60            | 4.66        | 0.01            | 5.33             | 0.66              |
| 2024                           | 0.31                  | 2.42            | 4.64        | 0.01            | 5.32             | 0.65              |
| 2025                           | 0.29                  | 2.19            | 4.60        | 0.01            | 5.30             | 0.64              |
| 2026                           | 0.28                  | 2.18            | 4.57        | 0.01            | 5.30             | 0.64              |
| 2027                           | 0.28                  | 2.18            | 4.55        | 0.01            | 5.30             | 0.64              |
| 2028                           | 0.28                  | 2.17            | 4.55        | 0.01            | 5.30             | 0.63              |
| 2029                           | 0.28                  | 2.17            | 4.50        | 0.01            | 5.30             | 0.63              |
| <b>Maximum Daily Emissions</b> | <b>0.73</b>           | <b>3.91</b>     | <b>4.85</b> | <b>0.01</b>     | <b>5.40</b>      | <b>0.73</b>       |
| <i>SCAQMD threshold</i>        | <i>75</i>             | <i>100</i>      | <i>550</i>  | <i>150</i>      | <i>150</i>       | <i>55</i>         |
| Threshold exceeded?            | No                    | No              | No          | No              | No               | No                |

**Source:** SCAQMD 2015.

**Notes:** VOC = volatile organic compound; NO<sub>x</sub> = oxides of nitrogen; CO = carbon monoxide; SO<sub>x</sub> = sulfur oxides; PM<sub>10</sub> = coarse particulate matter; PM<sub>2.5</sub> = fine particulate matter; SCAQMD = South Coast Air Quality Management District.

See Appendix A for complete results.

The values shown are the maximum summer or winter daily emissions results from CalEEMod.

These estimates reflect control of fugitive dust required by SCAQMD Rule 403 and assumes watering of the site two times per day and limiting on-site vehicle speeds to 15 miles per hour.

As shown in Table 3-1, daily construction emissions for the proposed project would not exceed the SCAQMD significance thresholds for VOCs, NO<sub>x</sub>, CO, SO<sub>x</sub>, PM<sub>10</sub>, or PM<sub>2.5</sub> during any year that maintenance activities are undertaken. Therefore, maintenance activities would be **less than significant**. Notably, because the proposed project only proposes temporary construction activities associated with maintenance to the 500-foot segment of the Tequesquite Creek and its surrounding area, the proposed project would not result in any operational activities that could generate criteria air pollutant emissions.

|  |                          |                          |                                     |                          |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| c. Expose sensitive receptors to substantial pollutant concentrations? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

**3c. Response:** (*Source: SCAQMD Air Quality Handbook; SCAQMD's LST Methodology; SCAQMD's Appendix C, Mass Rate LST Look-up Tables; CalEEMod; and OEHHA Risk-Assessment Methodology*)

**Less Than Significant Impact.** Sensitive receptors are those individuals more susceptible to the effects of air pollution than the population at large. People most likely to be affected by air pollution include children, the elderly, and people with cardiovascular and chronic respiratory diseases. According to the SCAQMD, sensitive receptors include residences, schools, playgrounds, childcare centers, long-term healthcare facilities, rehabilitation centers, convalescent centers, and retirement homes (SCAQMD 1993). Sensitive receptors<sup>3</sup>

<sup>3</sup> Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. The SCAQMD identifies sensitive receptors as residences, schools, playgrounds, childcare centers, long-term healthcare facilities, rehabilitation centers, convalescent centers, and retirement homes.

| <b>ISSUES (AND SUPPORTING INFORMATION SOURCES):</b> | <b>Potentially Significant Impact</b> | <b>Less Than Significant With Mitigation Incorporated</b> | <b>Less Than Significant Impact</b> | <b>No Impact</b> |
|---|---------------------------------------|---|-------------------------------------|------------------|
|---|---------------------------------------|---|-------------------------------------|------------------|

that would potentially be affected by construction activity in the project area are residential uses located approximately 600 feet (183 meters) to the south of the proposed project.

#### Localized Significance Thresholds

The SCAQMD recommends a localized significance threshold (LST) analysis to evaluate localized air quality impacts to sensitive receptors in the immediate vicinity of the project site as a result of construction activities. The impacts were analyzed using methods consistent with those in the SCAQMD's Final Localized Significance Threshold Methodology (SCAQMD 2009). The allowable emissions rates depend on the following parameters: source/receptor area within which the project is located, the size of the project site, and the distance between the project site and the nearest sensitive receptor. Because the SCAQMD does not provide lookup tables for 183 meters, the LST values for 100 and 200 meters within Source-Receptor Area 23 (Metropolitan Riverside County) were interpolated to generate LSTs for a distance of 183 meters. The SCAQMD LST values for a 1-acre site within Source-Receptor Area 23 (with a receptor distance of 183 meters) were used.

Maintenance activities associated with a 500-foot segment of Tequesquite Creek would result in temporary sources of on-site fugitive dust and construction equipment emissions. The maximum daily on-site construction emissions generated by the proposed project, which are rounded to the nearest whole number, are presented in Table 3-2 and are compared to the SCAQMD localized significance criteria for Source-Receptor Area 23 to determine if project-generated on-site construction emissions would result in potential impacts.

**Table 3-2**  
**Construction Localized Significance Thresholds Analysis**

| Year   | NO <sub>2</sub>                 | CO    | PM <sub>10</sub> | PM <sub>2.5</sub> |
|--|---------------------------------|-------|------------------|-------------------|
|  | <i>Pounds per Day (on site)</i> |       |                  |                   |
| 2020   | 0.34                            | 3.39  | 0.19             | 0.17              |
| 2021   | 0.31                            | 3.04  | 0.16             | 0.15              |
| 2022   | 0.28                            | 2.59  | 0.13             | 0.12              |
| 2023   | 0.26                            | 2.31  | 0.11             | 0.10              |
| 2024   | 0.24                            | 2.14  | 0.10             | 0.09              |
| 2025   | 0.22                            | 1.92  | 0.09             | 0.08              |
| 2026   | 0.22                            | 1.92  | 0.09             | 0.08              |
| 2027   | 0.22                            | 1.92  | 0.09             | 0.08              |
| 2028   | 0.22                            | 1.92  | 0.09             | 0.08              |
| 2029   | 0.22                            | 1.92  | 0.09             | 0.08              |
| Maximum Daily On-Site Construction Emissions | 0.34                            | 3.39  | 0.19             | 0.17              |
| SCAQMD LST Criteria                          | 390                             | 5,535 | 84               | 25                |
| Threshold Exceeded?                          | No                              | No    | No               | No                |

**Source:** SCAQMD 2009.

**Notes:** NO<sub>2</sub> = nitrogen dioxide; CO = carbon monoxide; PM<sub>10</sub> = particulate matter; PM<sub>2.5</sub> = fine particulate matter; SCAQMD = South Coast Air Quality Management District; LST = localized significance threshold.

See Appendix A for detailed results.

Localized significance thresholds are shown for a 1-acre project site corresponding to a distance to a sensitive receptor of 183 meters.

As shown in Table 3-2, proposed construction activities would not generate emissions in excess of site-specific LSTs; therefore, localized project construction impacts would be **less than significant**.

| ISSUES (AND SUPPORTING INFORMATION SOURCES):  | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|------------------------------|-----------|
| <p><b>Carbon Monoxide Hotspots</b></p> <p>Traffic-congested roadways and intersections have the potential to generate localized high levels of CO. Localized areas where ambient concentrations exceed federal and/or state standards for CO are termed CO “hotspots.” CO transport is extremely limited and disperses rapidly with distance from the source. Under certain extreme meteorological conditions, however, CO concentrations near a congested roadway or intersection may reach unhealthy levels, affecting sensitive receptors. Typically, high CO concentrations are associated with severely congested intersections operating at an unacceptable level of service (level of service E or worse is unacceptable). Projects contributing to adverse traffic impacts may result in the formation of a CO hotspot. Additional analysis of CO hotspot impacts would be conducted if a project would result in a significant impact or contribute to an adverse traffic impact at a signalized intersection that would potentially subject sensitive receptors to CO hotspots. Due to the nature of the proposed project, vehicle trips associated with the proposed project would be temporary in nature, requiring minimal on-road vehicle trips over the estimated 5-day maintenance period each year. Accordingly, the proposed project would not result in the generation of traffic that would contribute to potential adverse traffic impacts that may result in the formation of CO hotspots, thus impacts would be <b>less than significant</b>.</p> <p><b>Toxic Air Contaminants</b></p> <p>Toxic air contaminants (TACs) are defined as substances that may cause or contribute to an increase in deaths or in serious illness, or which may pose a present or potential hazard to human health. The nearest sensitive receptors to the proposed project are residences located 600 feet to the south. Health effects from carcinogenic air toxics are usually described in terms of cancer risk. The SCAQMD recommends an incremental cancer risk threshold of 10 in 1 million. “Incremental cancer risk” is the net increased likelihood that a person continuously exposed to concentrations of TACs resulting from a project over a 9-, 30-, and 70-year exposure period will contract cancer based on the use of standard Office of Environmental Health Hazard Assessment risk-assessment methodology. In addition, some TACs have non-carcinogenic effects (OEHHA 2015). The SCAQMD recommends a Hazard Index of 1 or more for acute (short-term) and chronic (long-term) effects. The primary TAC that would be emitted during construction activities would be diesel particulate matter, which is emitted from diesel-fueled vehicles and equipment.</p> <p>Heavy-duty construction equipment is subject to a California Air Resources Board (CARB) Airborne Toxics Control Measure for in-use diesel construction equipment to reduce diesel particulate matter emissions. Proposed maintenance activities would be brief, lasting approximately 1 week; therefore, implementation of the proposed project would not require extensive use of heavy-duty construction equipment or extensive use of diesel trucks. As described for the LST discussion, the proposed project does not necessitate an extensive amount of earthwork that would require heavy-duty diesel engines; therefore, exhaust PM<sub>10</sub> (representative of diesel particulate matter) exposure would be minimal. According to Office of Environmental Health Hazard Assessment, health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 30-year exposure period for the maximally exposed individual resident; however, such assessments should be limited to the period/duration of activities associated with the project. Thus, the duration of the proposed construction activities would only constitute a small percentage of the total 30-year exposure period. Maintenance activities are assumed to occur through 2029 and are expected to be limited to approximately 5 days per year, after which construction-related TAC emissions would cease. Due to this relatively short period of exposure and minimal particulate emissions on site, TACs generated during maintenance activities would not be expected to result in concentrations causing significant health risks.</p> <p>In summary, the proposed project would not expose sensitive receptors to substantial, long-term pollutant concentrations or health risk during construction and this impact would be <b>less than significant</b> on a project-level and cumulative basis.</p> |                                |  |                              |           |



| ISSUES (AND SUPPORTING INFORMATION SOURCES):  | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact        | No Impact                |
|---|--------------------------------|--|-------------------------------------|--------------------------|
| d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <b>3d. Response: (Source: SCAQMD Air Quality Handbook)</b><br><br><p><b>Less Than Significant Impact.</b> The occurrence and severity of potential odor impacts depends on numerous factors. The nature, frequency, and intensity of the source; the wind speeds and direction; and the sensitivity of receiving location each contribute to the intensity of the impact. Although offensive odors seldom cause physical harm, they can be annoying and cause distress among the public and generate citizen complaints.</p> <p>Potential odor sources associated with construction of the proposed project may result from vehicle exhaust generated by workers and haul trucks traveling to and from the project site and from on-site equipment exhaust emissions. Standard construction requirements would minimize odor impacts resulting from the maintenance activities. It should be noted that any odor emissions generated would be temporary, short-term, and intermittent in nature and would cease upon completion of the construction activity. Such odors are temporary and generally occur at magnitudes that would not affect substantial numbers of people. Therefore, impacts associated with odors during the proposed maintenance activities would be considered <b>less than significant</b>.</p>   |                                |  |                                     |                          |
| <b>3.4 BIOLOGICAL RESOURCES.</b><br>Would the project:  |                                |  |                                     |                          |
| a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?  | <input type="checkbox"/>       | <input checked="" type="checkbox"/>                | <input type="checkbox"/>            | <input type="checkbox"/> |
| <b>4a. Response: (Source: Cadre Environmental 2018 – Appendix B)</b><br><br><p><b>Less Than Significant with Mitigation Incorporated.</b> The project site is located within the boundaries of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). Specifically, the site is within the Riverside/Norco Area Plan (SU1-Santa River South), partially within Criteria Area 443. Additionally, the site is located within the MSHCP survey area for burrowing owl (<i>Athene cunicularia</i>) and three narrow endemic plant species: San Diego ambrosia (<i>Ambrosia pumila</i>), Brand's phacelia (<i>Phacelia stellaris</i>), and San Miguel savory (<i>Satureja chandleri</i>). There are Public-Quasi Public lands under conservation by the Riverside-Corona Resource Conservation District immediately upstream to the west of the project site.</p> <p>In March 2018, Cadre Environmental conducted a biological resources survey within the proposed project footprint and a 100-foot buffer (study area), which is included with this initial study/mitigated negative declaration (IS/MND) as Appendix B, Biological Habitat Assessment. The survey included vegetation mapping, assessment for suitable habitat for special status plants and wildlife species (including burrowing owl and narrow endemic plant species), and mapping of riverine/riparian resources as defined by the MSHCP. A summary of the potential direct and indirect impacts to special status plant and wildlife species based upon the results of the biological resources survey is provided below.</p> <p><b>Special-Status Plants</b></p> <p>The project site is located within the MSHCP survey area for three narrow endemic plant species: San Diego ambrosia, Brand's phacelia, and San Miguel savory. The results of the biological resources survey report indicate that these plant species are not expected to occur on site due to the extensive disturbed nature of the vegetation communities, disturbed soils, and historic maintenance activities that have been conducted within the human-made segment of Tequesquite Creek that occurs in the project area. Due to the lack of suitable habitat for sensitive plant species within the project site, no focused spring surveys are required. No other sensitive plant species are expected to occur on site.</p> |                                |  |                                     |                          |

| ISSUES (AND SUPPORTING INFORMATION SOURCES):  | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|------------------------------|-----------|
| <p><b>Special-Status Wildlife</b></p> <p>The project site is located within the MSHCP survey area for burrowing owl. No suitable burrows were documented within or immediately adjacent to the project site during the habitat assessment. Therefore, focused burrowing owl surveys are not required. However, the project involves the implementation of channel maintenance activities over a period of 10 years (2020 through 2029) and conditions at the site may change; therefore, a site visit to determine whether suitable burrows are present must be conducted annually, prior to maintenance activities. In the even that suitable burrows are found to be present, a 30-day preconstruction burrowing owl survey shall be conducted prior to annual maintenance activities in accordance with the Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan (RCA 2006). Potential harm to burrowing owl as a result of project implementation would be considered a significant impact without appropriate mitigation. Implementation of Mitigation Measure (MM) BIO-1 would reduce impacts to <b>less than significant</b> through avoidance of direct take of burrowing owl and mitigation for any occupied burrows detected prior to construction.</p> <p>The vegetation within the channel bottom may provide suitable nesting habitat for birds that are protected by the Migratory Bird Treaty Act and California Fish and Game Code. Potential impacts to active bird nests would be a violation of the Migratory Bird Treaty Act and California Fish and Game Code and considered significant without appropriate mitigation. Implementation of MM-BIO-2 would reduce impacts to <b>less than significant</b> through avoidance of direct impacts to any active nest, eggs, or nesting bird observed during preconstruction nest surveys.</p> <p>Sensitive riparian birds that are known to occur in the region include least Bell's vireo (<i>Vireo bellii pusillus</i>), southwestern willow flycatcher (<i>Empidonax traillii extimus</i>), and yellow billed cuckoo (<i>Coccyzus americanus</i>). The results of the biological resources survey concluded that the segment of Tequesquite Creek Channel within the project site supports low-quality willow scrub vegetation, comprised mostly of a few saplings, which is not considered suitable habitat for southwestern willow flycatcher or yellow-billed cuckoo. This vegetation is also not considered suitable breeding/nesting habitat for least Bell's vireo; however, the project site is located in proximity to suitable habitat for least Bell's vireo on lands conserved by Riverside-Corona Resource Conservation District to the west. Potential indirect effects, such as equipment noise above baseline and human presence/motion during maintenance activities, could result in indirect impacts to nesting individuals and would be considered significant without appropriate mitigation. Implementation of MM-BIO-3 would reduce potential indirect impacts to nesting least Bell's vireo to <b>less than significant</b> by restricting maintenance activities to the period outside of the nesting season or establishing a buffer to avoid disturbance to any nesting individuals of these species.</p> <p>The highly disturbed channelized reach of Tequesquite Creek Channel within the project site does not provide suitable spawning or foraging habitat for Santa Ana sucker (<i>Catostomus santaanae</i>) due to the presence of disturbed soils, extensive trash and debris, and the presence of exotic fish (mosquitofish). The project site does not represent a dispersal route to upstream resources for the sucker; however, the proposed maintenance activities are expect to improve conditions downstream of the project site for the species by increasing annual scouring, removing trash, and maintaining potential dispersal routes to potential spawning areas downstream of the study area. Best management practices will be implemented during maintenance activities to avoid the discharge of chemicals, trash, and debris or spread of invasive plant species downstream. Implementation of MM-BIO-4 would reduce impacts to less than significant through the use of construction best management practices that control dust, invasive plant species, release of chemicals from equipment use in the channel, and disposal of debris and trash.</p> <p><b>Mitigation Measures</b></p> <p><b>MM-BIO-1 Burrowing Owl</b></p> <p>Prior to implementation of annual maintenance activities each year, the site shall be surveyed for suitable burrows. If burrows exist, a preconstruction survey shall be conducted in accordance with the Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP). If the survey is negative, no additional mitigation is required. If the survey is positive, a preconstruction survey shall be conducted in accordance with the Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area (RCA 2006). This survey would occur within 30 days prior to ground-disturbance activities. A minimum of one survey site visit within the described time frame prior to disturbance is required to confirm presence or absence of owls on the site. Preconstruction surveys are to be conducted by a qualified biologist. If surveys confirm occupied burrowing owl habitat is located in or adjoining the project site, an impact assessment and avoidance measures will be implemented consistent with the requirements of the MSHCP.</p> |                                |  |                              |           |

| ISSUES (AND SUPPORTING INFORMATION SOURCES):  | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|------------------------------|-----------|
| <p><b>MM-BIO-2      Nesting Birds</b></p> <p>Maintenance activities shall be avoided during nesting bird season, from approximately February 1 through August 31. If ground-disturbing activities cannot be completed outside the nesting bird season, the following measures shall be implemented:</p> <p>Surveys shall be conducted within 300 feet of disturbance areas no earlier than 3 days prior to the commencement of maintenance activities within the channel.</p> <p>If active nests are found, all maintenance activities shall be postponed or halted within a buffer area established by the qualified biologist that is suitable to the particular bird species and location of the nest until the nest is vacated and juveniles have fledged, as determined by the qualified biologist. The avoidance area shall be clearly demarcated in the field with highly visible construction fencing or flagging, and maintenance personnel shall be instructed on the sensitivity of nest areas. A qualified biologist shall serve as a monitor during those periods if maintenance activities must occur within active nest buffer area to ensure that no inadvertent impacts on these nests occur. The results of the survey, including graphics showing the locations of any active nests detected, and documentation of any recommended avoidance measures, shall be submitted to the City of Riverside within 24 hours.</p> <p><b>MM-BIO-3      Least Bell's Vireo</b></p> <p>Maintenance activities shall be avoided during the riparian bird nesting season, from approximately April 1 through August 15. If ground-disturbing activities cannot be completed outside the nesting riparian bird season, the following measures shall be implemented:</p> <p>If construction activities begin between March 15 and September 15, two preconstruction surveys shall be conducted within riparian habitat found within 500 feet of the disturbance areas. One survey shall occur no earlier than 7 days prior to the commencement of activity, with the second occurring within 3 days of activity commencement. If ground-disturbance activities are delayed, then additional pre-disturbance surveys shall be conducted such that no more than 3 days will have elapsed between the last survey and ground-disturbance activities. The survey shall be completed by a biologist who is experienced with the species.</p> <p>If active nests of least Bell's vireo are found, the qualified biologist shall monitor and determine if construction noise levels or motion are potential sources for nest failure, and avoidance buffers shall be established accordingly. Additional follow-up weekly visits by the qualified biologist shall be required if active nests occur within 300 feet of the project construction activities.</p> <p><b>MM-BIO-4      Indirect Impacts to Special-Status Species</b></p> <p>Best management practices shall be implemented to minimize indirect impacts to special-status species.</p> <p><b>Minimize Spills of Hazardous Materials.</b> All vehicles and equipment shall be maintained in proper condition to minimize the potential for fugitive emissions of motor oil, antifreeze, hydraulic fluid, grease, or other hazardous materials. Hazardous spills shall be immediately cleaned up, and the contaminated soil shall be properly handled or disposed of at a licensed facility. Servicing of construction equipment shall take place only at the Public Works Maintenance Yard or at an appropriate off-site staging area.</p> <ol style="list-style-type: none"> <li>2. <b>Worker Guidelines.</b> All trash and food-related waste shall be placed in self-closing containers and removed regularly from the site to prevent overflow. Workers shall not feed wildlife or bring pets to the project site.</li> <li>3. <b>Invasive Weeds.</b> The spread of invasive weeds shall be minimized through removal of non-native weed species and remedial measures as determined during routine monitoring.</li> <li>4. <b>Dust Minimization.</b> The spread of dust shall be minimized through periodic watering of actively disturbed soils or previously disturbed soils.</li> </ol> |                                |  |                              |           |

| ISSUES (AND SUPPORTING INFORMATION SOURCES):   | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact                |
|--|--------------------------------|--|------------------------------|--------------------------|
| b. 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 Game or U.S. Fish and Wildlife Service? | <input type="checkbox"/>       | <input checked="" type="checkbox"/>                | <input type="checkbox"/>     | <input type="checkbox"/> |

**4b. Response (Source: Cadre Environmental 2018 – Appendix B)**

**Less Than Significant with Mitigation Incorporated.** Native vegetation communities mapped within the 0.93-acre project footprint include freshwater marsh and disturbed willow scrub. The non-native vegetation communities and unvegetated land cover types occurring within the project site include ruderal, disturbed (access roads), and non-vegetated stream channel. All impacts to vegetation communities would be considered permanent since the vegetation within the channel bottom will be maintained/removed annually from 2020 through 2029. A summary of the impacts to vegetation communities associated with the proposed project is presented in Table 4-1.

**Table 4-1  
Permanent Impacts to Vegetation Communities within the Project Site**

| Vegetation Community/<br>Land Cover Type | Study Area<br>Total (acres) | Permanent Impacts<br>Acreage (acres) |
|--|-----------------------------|--------------------------------------|
| Freshwater Marsh                         | 0.12                        | 0.12                                 |
| Disturbed Willow Scrub                   | 0.03                        | 0.03                                 |
| Ruderal                                  | 0.46                        | 0.46                                 |
| Disturbed                                | 0.27                        | 0.27                                 |
| Stream Channel                           | 0.05                        | 0.05                                 |
| <b>Total</b>                             | <b>0.93</b>                 | <b>0.93</b>                          |

Although permanent and temporary direct impacts to vegetation communities would occur as a result of the project, only two communities, freshwater marsh and disturbed willow scrub, are native, riparian vegetation communities that would require mitigation. Permanent direct impacts to 0.12 acres of freshwater marsh and 0.03 acres of disturbed willow scrub are considered significant without appropriate mitigation. These vegetation communities are also considered state and federal waters under the jurisdiction of the U.S. Army Corps of Engineers, Regional Water Quality Control Board, and California Department of Fish and Wildlife (CDFW), and will be mitigated concurrently with permanent impacts to state and federal jurisdictional waters and wetlands, as discussed in criterion 4c. Implementation of MM-BIO-5 would reduce impacts to **less than significant** by establishing off-site mitigation requirements for permanent impacts to state and federal wetlands within the project footprint.

**Indirect Impacts**

Potential short-term indirect impacts to riparian communities in the buffer of the project site would primarily result from the potential generation of fugitive dust. Excessive dust can decrease the vigor and productivity of vegetation through effects on light, penetration, photosynthesis, respiration and transpiration, increased penetration of phytotoxic gaseous pollutants, and increased incidence of pests and diseases. Implementation of MM-BIO-4 would reduce impacts to **less than significant** by requiring periodic watering of exposed soils to control dust.

|  |                          |                                     |                          |                          |
|--|--------------------------|-------------------------------------|--------------------------|--------------------------|
| c. Have a substantial adverse effect on state or federally-protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|-------------------------------------|--------------------------|--------------------------|

| ISSUES (AND SUPPORTING INFORMATION SOURCES): | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------|--|------------------------------|-----------|
|--|--------------------------------|--|------------------------------|-----------|

**4c. Response (Source: Dudek 2019 – Appendix C)**

**Less Than Significant with Mitigation Incorporated.** Dudek conducted a jurisdictional delineation in 2014, which was updated in 2019 with a revised maintenance footprint and data collected during the biological resources fieldwork conducted by Cadre Environmental. The jurisdictional delineation report is included with this IS/MND as Appendix C. A total of 0.66 acres of jurisdictional wetlands and waters were mapped within the project study area, which incorporates a 500-linear-foot segment of Tequesquite Creek Channel and the associated access roads. The channel supports a total of 0.12 acres of wetland waters of the United States, 0.05 acres of non-wetland waters, 0.51 acres of unvegetated streambed, and 0.15 acres of CDFW vegetated streambed. The 0.27 acres of disturbed areas within the study area are associated with the access roads, which occur at the top of slope in the uplands, and are not considered state or federal jurisdictional waters or wetlands. All jurisdictional waters within the channel would be permanently impacted since maintenance activities (including vegetation management/removal) will occur annually from 2020 through 2029. The total on-site waters and permanent impacts to jurisdictional waters associated with the proposed project are summarized in Table 4-2.

**Table 4-2**  
**Permanent Impacts to Jurisdictional Waters within the Project Site**

| Jurisdiction                                   | Vegetation Community   | Total On-Site Acreage | Permanent Impact Acreage |
|--|------------------------|-----------------------|--------------------------|
| ACOE/RWQCB Wetland Waters                      | Freshwater Marsh       | 0.12                  | 0.12                     |
| <i>ACOE/RWQCB Wetland Waters Subtotal</i>      |                        | <i>0.12</i>           | <i>0.12</i>              |
| ACOE/RWQCB Non-Wetland Waters                  | Stream Channel         | 0.05                  | 0.05                     |
| <i>ACOE/RWQCB Non-Wetland Waters Subtotal</i>  |                        | <i>0.05</i>           | <i>0.05</i>              |
| <b><i>Total ACOE/RWQCB Waters/Wetlands</i></b> |                        | <b><i>0.17</i></b>    | <b><i>0.17</i></b>       |
|  | Stream Channel         | 0.05                  | 0.05                     |
|  | Ruderal                | 0.46                  | 0.46                     |
| <i>CDFW Unvegetated Streambed Subtotal</i>     |                        | <i>0.51</i>           | <i>0.51</i>              |
| CDFW Vegetated Streambed                       | Freshwater Marsh       | 0.12                  | 0.12                     |
|  | Disturbed Willow Scrub | 0.03                  | 0.03                     |
| <i>CDFW Vegetated Streambed Subtotal</i>       |                        | <i>0.15</i>           | <i>0.15</i>              |
| <b><i>Total CDFW Streambed</i></b>             |                        | <b><i>0.66</i></b>    | <b><i>0.66</i></b>       |

Note: ACOE = U.S. Army Corps of Engineers; RWQCB = Regional Water Quality Control Board; CDFW = California Department of Fish and Wildlife.

Implementation of the proposed maintenance activities are expected to benefit the biological resources downstream of the maintenance area through trash, debris, and sediment removal. Vegetation maintenance on site will ensure that non-native species are controlled and removed and flood capacity is retained. Permanent direct impacts to on-site jurisdictional waters would be **less than significant with mitigation incorporated**. Implementation of MM-BIO-5 would reduce impacts to less than significant by establishing off-site mitigation requirements for permanent impacts to state and federal waters with the project footprint.

| ISSUES (AND SUPPORTING INFORMATION SOURCES):  | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact        | No Impact                |
|---|--------------------------------|--|-------------------------------------|--------------------------|
| <p><b>Mitigation Measures</b></p> <p><b>MM-BIO-5      Avoidance, Minimization, and Mitigation for Jurisdictional Waters</b></p> <p>Appropriate permits shall be obtained from the regulatory agencies, including a Clean Water Act Section 404 permit from the U.S. Army Corps of Engineers (an Individual Permit will be required), a Water Quality Certification from the Regional Water Quality Control Board, and a Streambed Alteration Agreement from the California Department of Fish and Wildlife (CDFW).</p> <p>All mitigation measures and conditions contained within the permits shall be implemented. At a minimum, the following shall be completed for mitigation for impacts to waters of the United States and jurisdictional streambed:</p> <ul style="list-style-type: none"> <li>• <b>Compensation for Permanent Impacts:</b> Permanent impacts to waters of the United States and jurisdictional streambed shall be offset through one of the following options: (1) Purchase of 1.32 acres of credits within a resource agency–approved mitigation bank to an in-lieu fee program, (2) recordation of a Conservation Easement (CE) in favor of a CDFW-approved entity over Assessor’s Parcel Number (APN) 187-080-009, (3) Recordation of a CE in favor of a CDFW-approved entity over APN 187-080-010, and/or (4) as otherwise required by the respective permits.</li> <li>• <b>Best Management Practices.</b> Best management practices shall be implemented to avoid indirect impacts to downstream jurisdictional waters, including the following: <ul style="list-style-type: none"> <li>a. Vehicles and equipment will not be operated in ponded or flowing water except as described in the permits.</li> <li>b. Water containing mud, silt, or other pollutants from maintenance activities will not be allowed to enter jurisdictional waters or be placed in locations that may be subjected to high storm flows.</li> <li>c. Temporary stockpiles of vegetation, sediment, and debris will not be placed in locations that may be subject to high storm flows, where the materials might be washed back into the channel.</li> <li>d. Oil, gasoline, lubricants for equipment, other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources, resulting from project-related activities will be prevented from contaminating the soil and/or entering avoided jurisdictional waters.</li> <li>e. No equipment repairs will occur within 150 feet of jurisdictional waters and all planned maintenance will occur off site at the Public Works Equipment Yard. No petroleum products or other pollutants from the equipment will be allowed to enter these areas or enter any off-site state-jurisdictional waters under any flow.</li> </ul> </li> </ul> |                                |  |                                     |                          |
| d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <p><b>4d. Response: (Source: Cadre Environmental 2018 - Appendix B)</b></p> <p><b>Less Than Significant Impact.</b> The proposed project consists of periodic maintenance of a 500-foot segment of Tequesquite Creek Channel that extends east to an existing concrete channelized and subsurface flood control channel. The channel occurs within a portion of the Riverside/Norco Area Plan (SU1-Santa River South) Criteria Area 443, which incorporates lands to the west under conservation by the Riverside-Corona Resource Conservation District. The project site is not located within an MSHCP core area or linkage. The subject channel segment may still be utilized by local wildlife following each maintenance event since the channel bottom will remain earthen; however, movement to the east is restricted by the existing concrete, subsurface flood control channel that exists downstream. There are no significant wildlife corridors within the project site; therefore, there would be a <b>less than significant impact</b> to wildlife corridors or native wildlife nursery sites.</p>   |                                |  |                                     |                          |

| ISSUES (AND SUPPORTING INFORMATION SOURCES):   | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact                           |
|--|--------------------------------|--|------------------------------|-------------------------------------|
| e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| <p><b>4e. Response: (Source: Cadre Environmental 2018 - Appendix B)</b></p> <p><b>No Impact.</b> The proposed project is limited to the periodic maintenance of an existing 500-foot segment of Tequesquite Creek Channel. Implementation of these maintenance activities is expected to benefit downstream water quality and biological resources through the removal of trash, debris, and sediment. There are no oak trees or other large native trees within the project footprint under the protection of a tree preservation ordinance. In addition, the General Plan 2025 includes policies to ensure that future development would not conflict with any local policies or ordinances protecting biological resources, including tree preservation policies. This project has been reviewed against these policies and found to be in compliance. For these reasons, the project will have <b>no impact</b> directly, indirectly, and cumulatively regarding local policies or ordinances protecting biological resources.</p>   |                                |  |                              |                                     |
| f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?   | <input type="checkbox"/>       | <input checked="" type="checkbox"/>                | <input type="checkbox"/>     | <input type="checkbox"/>            |
| <p><b>4f. Response: (Source: Cadre 2018 – Appendix B; Cadre Environmental 2019 – Appendix D)</b></p> <p><b>Less Than Significant with Mitigation Incorporated.</b> As described in response 4a, the project site is located within the boundaries of the Western Riverside County MSHCP. Specifically, the site is within the Riverside/Norco Area Plan (SU1-Santa River South) and partially within Criteria Area 443. Due to the sites location within a criteria cell, a Habitat Evaluation and Acquisition Negotiation Strategy and Joint Project Review (JPR) through the Regional Conservation Authority (RCA) was required. The City submitted a JPR application (JPR 19-03-08-01) to the RCA in March 2019 and the consistency determination was issued by the RCA on March 20, 2019.</p> <p>The project site is also located within the MSHCP survey area for burrowing owl and three narrow endemic plant species: San Diego ambrosia, Brand’s phacelia, and San Miguel savory. In March 2018, Cadre Environmental conducted a biological resources survey within the proposed project footprint and a 100-foot buffer (study area), which is included with this IS/MND as Appendix B. The survey included vegetation mapping, assessment for suitable habitat for special status plants and wildlife species (including burrowing owl and narrow endemic plan species), and mapping of riverine/riparian resources as defined by the MSHCP. As described in response 4c, the project site supports state and federal jurisdictional wetlands and waters, which also meet the definition of riverine/riparian resources by the MSHCP under Section 6.1.2, Protection of Species Associated with Riverine/Riparian Areas and Vernal Pools. No vernal pools, road ruts, or other inundated features representing suitable habitat for fairy shrimp were documented within or adjacent to the study area. The active channel of Tequesquite Creek Channel does not represent suitable fairy shrimp habitat. The total on-site waters and permanent impacts to riverine/riparian resources associated with the proposed project are summarized in Table 4-3.</p> |                                |  |                              |                                     |

| ISSUES (AND SUPPORTING INFORMATION SOURCES): | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------|--|------------------------------|-----------|
|--|--------------------------------|--|------------------------------|-----------|

Table 4-3

**Permanent Impacts to MSHCP Riverine/Riparian Resources within the Project Site**

| Vegetation Community     | Total On-Site Acreage | Permanent Impacts to Riverine/Riparian Resources |
|--------------------------|-----------------------|--|
| Ruderal                  | 0.46                  | 0.46   |
| Disturbed (Access Roads) | 0.27                  | 0  |
| Freshwater Marsh         | 0.12                  | 0.12   |
| Stream Channel           | 0.05                  | 0.05   |
| Disturbed Willow Scrub   | 0.03                  | 0.03   |
| <b>Total</b>             | <b>0.93</b>           | <b>0.66</b>                                      |

A Determination of Biologically Equivalent or Superior Preservation (DBESP) was prepared by Cadre Environmental in June 2019 to address all impacts to resources characterized as MSHCP riverine/riparian resources. The DBESP was submitted by the City to the Wildlife Agencies responsible for overseeing implementation of the MSHCP (CDFW and U.S. Fish and Wildlife Service) for a 60-day review. CDFW provided comments, which have been incorporated into the final draft DBESP.

Based upon the results of the habitat assessment and the JPR consistency determination issued by the RCA, implementation of the proposed maintenance activities would result in **less than significant impacts with mitigation** to the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. Implementation of MM-BIO-1, MM-BIO-2, MM-BIO-3, and MM-BIO-4 would reduce impacts to less than significant and achieve project compliance with the MSHCP.

#### Mitigation Measures

Refer to MM-BIO-1, MM-BIO-2, MM-BIO-3, and MM-BIO-4.

### 3.5 CULTURAL RESOURCES.

Would the project:

- a. Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5 of the CEQA Guidelines?

☐
☒
☐
☐

#### 5a. Response: (Source: Dudek 2017 – Appendix E - Confidential)

**Less Than Significant with Mitigation Incorporated.** A cultural resources study, including a records search and ground survey, was conducted by Dudek in July 2018 within the 0.93-acre project footprint.

The results of the California Historical Resources Information System records search at the Eastern Information Center indicated that no previously recorded cultural resources have been identified within a 1-mile radius of the project site. The Dudek ground survey within the project footprint did not find evidence of any archaeological resources; however, a single historic-age built environment resource consisting of the channelized segment of the Tequesquite Creek was identified. The channel structure was recorded and evaluated in consideration of National Register of Historic Places (NRHP) and California Register of Historical Resources (CRHR), but was found not eligible for listing in the NRHP or CRHR. Therefore, Tequesquite Creek Channel is not considered a historical resource as defined under CEQA, nor is it a historic



| ISSUES (AND SUPPORTING INFORMATION SOURCES):   | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact                |
|--|--------------------------------|--|------------------------------|--------------------------|
| <p>property as defined under Section 106 of the National Historic Preservation Act. Therefore, implementation of the proposed maintenance activities will not cause a substantial adverse change in the significance of a historic resource.</p> <p>In the event that unanticipated cultural resources are uncovered during construction activities, implementation of MM-CUL-1 will reduce the potential for impacts to such resources to <b>less than significant with mitigation incorporated</b>.</p> <p><b>Mitigation Measures</b></p> <p><b>MM-CUL-1 Unanticipated Discovery of Archaeological and Paleontological Resources</b></p> <p>In the event that archaeological or paleontological resources (sites, features, or artifacts) are exposed during maintenance activities, all work occurring within 100 feet of the find shall immediately stop until a qualified archaeologist and/or paleontologist, meeting the Secretary of the Interior's Professional Qualification Standards, can evaluate the significance of the find and determine whether or not additional study is warranted. Depending upon the significance of the find under the California Environmental Quality Act (CEQA), the archaeologist and/or paleontologist may simply record the find and allow work to continue. If the discovery proves significant under CEQA, additional work, such as preparation of a cultural resources treatment plan and data recovery, may be warranted.</p> |                                |  |                              |                          |
| <p>b. Cause a substantial adverse change in the significance of an archeological resource pursuant to § 15064.5 of the CEQA Guidelines?</p>  | <input type="checkbox"/>       | <input checked="" type="checkbox"/>                | <input type="checkbox"/>     | <input type="checkbox"/> |
| <p><b>5b. Response:</b> <i>(Source: Dudek 2017 – Appendix E - Confidential; General Plan 2025 FPEIR Figure 5.5-1, Archaeological Sensitivity)</i></p> <p><b>Less Than Significant with Mitigation Incorporated.</b> The project site is located within an area designated in General Plan 2025 Figure 5.5-1 as having low archaeological sensitivity. Additionally, as described above under item 5a the results of the cultural resources records search and ground survey conducted by Dudek indicate that no previously recorded cultural resources have been identified within a 1-mile radius of the project site. Similarly, the Dudek ground survey within the project footprint did not find evidence of any archaeological resources. In the event that unanticipated cultural resources are found during maintenance activities, implementation of MM-CUL-1 will reduce the potential for impacts to such resources to <b>less than significant with mitigation incorporated</b>.</p> <p><b>Mitigation Measures</b></p> <p>Refer to MM-CUL-1</p>   |                                |  |                              |                          |
| <p>c. Disturb any human remains, including those interred outside of formal cemeteries?</p>  | <input type="checkbox"/>       | <input checked="" type="checkbox"/>                | <input type="checkbox"/>     | <input type="checkbox"/> |
| <p><b>5c. Response:</b> <i>(Source: Dudek 2017 – Appendix E - Confidential; General Plan 2025 FPEIR Figure 5.5-1, Archaeological Sensitivity)</i></p> <p><b>Less Than Significant with Mitigation Incorporated.</b> The project site is located within an area designated in General Plan 2025 Figure 5.5-1 as having low archaeological sensitivity, and no cultural resources were identified during the records search and on-site ground survey. The project consists of the periodic maintenance of a 500-foot segment of an existing human-made trapezoidal channel. There are no known formal or undesignated cemeteries or evidence of previous human habitation within the project site. The proposed activities are limited to ongoing maintenance activities (vegetation management, removal of accumulated sediment, and removal of debris/trash), which will not require any grading or digging below existing channel grade in previously undisturbed sediment. In the unlikely event that human remains are discovered, implementation of MM-CUL-2 would reduce the potential for significant impacts associated with disturbance of such remains to a level of <b>less than significant with mitigation incorporated</b>.</p>  |                                |  |                              |                          |

| ISSUES (AND SUPPORTING INFORMATION SOURCES):   | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact        | No Impact                |
|--|--------------------------------|--|-------------------------------------|--------------------------|
| Mitigation Measures  |                                |  |                                     |                          |
| MM-CUL-2      Unanticipated Discovery of Human Remains   |                                |  |                                     |                          |
| <p>In accordance with Section 7050.5 of the California Health and Safety Code, if human remains are found, the County coroner shall be immediately notified of the discovery. No further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the County coroner has determined, within 2 working days of notification of the discovery, the appropriate treatment and disposition of the human remains. If the County coroner determines that the remains are, or are believed to be, Native American, he or she shall notify the Native American Heritage Commission (NAHC) in Sacramento within 24 hours. In accordance with California Public Resources Code, Section 5097.98, the NAHC must immediately notify those persons it believes to be the most likely descendant from the deceased Native American. The most likely descendant shall complete their inspection within 48 hours of being granted access to the site. The designated Native American representative would then determine, in consultation with the property owner, the disposition of the human remains.</p>  |                                |  |                                     |                          |
|  |                                |  |                                     |                          |
| <b>3.6 ENERGY.</b><br>Would the project:   |                                |  |                                     |                          |
| a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <p><b>6a. Response:</b> <i>(Source: CEC Electricity and Natural Gas Consumption by Entity, SCE 2017 Sustainability Report, SoCalGas Company Profile, EIA California State Profile and Energy Estimates Table F15, and CalEEMod Version 2016.3.2)</i></p> <p><b>Less Than Significant Impact.</b> Implementation of the proposed maintenance activities will require energy use through the use of electrical equipment and gas (petroleum) powered vehicles and equipment. The use of natural gas is not anticipated to be required. The service providers, supply sources, and estimated consumption for electricity, natural gas, and petroleum is discussed as follows.</p> <p><b>Energy Overview</b></p> <p><i>Electricity</i></p> <p>Southern California Edison (SCE) is the utility provider within the project area. SCE provides electric services to 15 million customers located within a 50,000-square-mile area in central, coastal, and Southern California. According to SCE, customers consumed approximately 83 billion kilowatt-hours of electricity in 2018 (CEC 2019a). SCE receives electric power from a variety of sources. According to the SCE Sustainability Report, 32% of SCE's power came from renewable energy sources in 2017, including biomass/waste, geothermal, hydroelectric, solar, and wind sources (SCE 2018).</p> <p><i>Natural Gas</i></p> <p>Southern California Gas (SoCalGas) serves the proposed project area. SoCalGas serves 21.6 million customers in a 20,000-square-mile service area that includes over 500 communities (SoCalGas 2018). In 2018 (the most recent year for which data is available), SoCalGas delivered 5,156 million therms of natural gas, with the majority going to residential uses (CEC 2019b). Demand for natural gas can vary depending on factors such as weather, price of electricity, the health of the economy, environmental regulations, energy-efficiency programs, and the availability of alternative renewable energy sources. Natural gas is available from a variety of in-state and out-of-state sources and is provided throughout the state in response to market supply and demand.</p> |                                |  |                                     |                          |

| ISSUES (AND SUPPORTING INFORMATION SOURCES):  | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|------------------------------|-----------|
| <p><i>Petroleum</i></p> <p>Transportation accounts for the majority of California’s total energy consumption. According to the Energy Information Association, California used approximately 683 million barrels of petroleum in 2017 (EIA 2019). This equates to a daily use of approximately 1.8 million barrels of petroleum. There are 42 U.S. gallons in a barrel, so California consumes approximately 77 million gallons of petroleum per day, adding up to an annual consumption of 28 billion gallons of petroleum. However, technological advances, market trends, consumer behavior, and government policies could result in significant changes in fuel consumption by type and in total. At the federal and state levels, various policies, rules, and regulations have been enacted to improve vehicle fuel efficiency, promote the development and use of alternative fuels, reduce transportation-source air pollutants and greenhouse gas (GHG) emissions, and reduce vehicle miles traveled.</p> <p><b>Maintenance Activities - Energy Use</b></p> <p><i>Electricity</i></p> <p>Temporary electric power for electrical equipment would be provided by generator and/or SCE. The amount of electricity used during the maintenance would be minimal, because typical demand would stem from electrically powered hand tools. The electricity used for maintenance activities would be temporary and minimal; therefore, the proposed project would not result in wasteful, inefficient, or unnecessary consumption of electricity. Impacts would be <b>less than significant</b>.</p> <p><i>Natural Gas</i></p> <p>Natural gas is not anticipated to be required for the maintenance activities. Fuels used for the maintenance activities would primarily consist of diesel and gasoline, which are discussed under the subsection Petroleum. Any minor amounts of natural gas that may be consumed as a result of the proposed project would be temporary and negligible and would not have an adverse effect. Therefore, the proposed project would not result in wasteful, inefficient, or unnecessary consumption of natural gas. Impacts would be <b>less than significant</b>.</p> <p><i>Petroleum</i></p> <p>Petroleum would be consumed throughout the maintenance duration. Fuel consumed by construction equipment would be the primary energy resource expended over the course of the maintenance. Transportation of construction equipment and workers would also result in petroleum consumption. Heavy-duty construction equipment, vendor trucks, and haul trucks would use diesel fuel. Workers would likely travel to and from the project area in gasoline-powered vehicles. Maintenance activities will be conducted as needed, but will occur at least one time per year from 2020 to 2029 (10 years). Once maintenance activities cease, petroleum use from off-road equipment and transportation vehicles would end. Because of the short-term nature of maintenance each year and relevantly small scale of the project, impacts would be <b>less than significant</b>.</p> <p><b>Operational Energy Use</b></p> <p>As discussed previously, the proposed project consists of maintenance activities associated with a 500-foot segment of Tequesquite Creek. Therefore, the proposed project would not result in operational energy use and would have <b>no impact</b> in regards to operations.</p> |                                |  |                              |           |

| ISSUES (AND SUPPORTING INFORMATION SOURCES):   | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact        | No Impact                           |
|--|--------------------------------|--|-------------------------------------|-------------------------------------|
| b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| <b>6b. Response: (Source: Assembly Bill 1493)</b><br><br><b>Less Than Significant Impact.</b> The proposed project would follow applicable energy standards and regulations during the maintenance activities. Worker vehicles would meet the applicable standards of Assembly Bill (AB) 1493 (vehicles manufactured 2009 or later) and, as a result, would likely consume less energy as fuel efficiency standards are increased and vehicles are replaced. As such, impacts related to the proposed project's potential to conflict with plans for renewable energy and energy efficiency would be <b>less than significant</b> .  |                                |  |                                     |                                     |
| <b>3.7 GEOLOGY AND SOILS.</b><br>Would the project:  |                                |  |                                     |                                     |
| a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:   |                                |  |                                     |                                     |
| i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| <b>7ai. Response: (Source: General Plan 2025 Figure PS-1, Regional Fault Zones; General Plan 2025 FPEIR Appendix E, Geotechnical Report)</b><br><br><b>No Impact.</b> As depicted on the General Plan 2025 Regional Fault Zones Map (Figure PS-1), there are no Alquist-Priolo Earthquake Fault Zones mapped within the limits of the City, including the proposed project site. However, the site is located in proximity to three regional fault zones. The nearest of these faults is the San Jacinto Fault, located approximately 8 miles northeast of the project site. Faulting activity at these faults or other nearby faults could cause ground shaking at the project site. However, since active faults are not present within project area, the potential for risk of loss, injury, or death due to ground-surface rupture is considered low.<br><br>The proposed activities are limited to ongoing maintenance activities (vegetation management, removal of accumulated sediment, and removal of debris/trash) within a 500-foot segment of an existing trapezoidal channel. There is no new construction proposed, nor is the project located on or adjacent to a known fault zone; therefore, there would be <b>no impact</b> associated with the rupture of a known earthquake fault. |                                |  |                                     |                                     |
| ii. Strong seismic ground shaking?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| <b>7aii. Response: (Source: General Plan 2025 FPEIR Appendix E, Geotechnical Report)</b><br><br><b>No Impact.</b> As described above in response 7i, the nearest fault zone to the project site is the San Jacinto Fault Zone, which is located 8 miles to the northeast. The San Jacinto Fault Zone has the potential to cause moderate to large earthquakes that would cause intense ground shaking. However, the project is limited to ongoing maintenance activities (vegetation management, removal of accumulated sediment, and removal of debris/trash) within a 500-foot segment of an existing trapezoidal channel. There is no new construction proposed; therefore, impacts associated with strong seismic ground shaking will have <b>no impact</b> directly, indirectly, and cumulatively.  |                                |  |                                     |                                     |

| ISSUES (AND SUPPORTING INFORMATION SOURCES):  | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact        | No Impact                           |
|---|--------------------------------|--|-------------------------------------|-------------------------------------|
| iii. Seismic-related ground failure, including liquefaction?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| <p><b>7aiii. Response:</b> (Source: General Plan 2025 Figure PS-1, Regional Fault Zones; Figure PS-2, Liquefaction Zones; General Plan 2025 FPEIR Figure PS-3, Soils with High Shrink-Swell Potential; General Plan 2025 FPEIR Appendix E, Geotechnical Report)</p> <p><b>Less Than Significant Impact.</b> Liquefaction is a secondary effect of seismic shaking that causes soils to lose the ability to support structures. For liquefaction to occur, three conditions must coincide: (1) loose, recently deposited sediments, typically sandy in composition; (2) shallow groundwater, typically within 50 feet of the ground surface; and (3) seismic shaking with ground accelerations over 02 g (local acceleration due to gravity). The project site is located within Tequesquite Creek Channel and adjacent to the Santa Ana River, which is depicted in the General Plan 2025 Figure PS-2, Liquefaction Zones Map, as having very high potential for liquefaction.</p> <p>However, the project is limited to ongoing maintenance activities (vegetation management, removal of accumulated sediment and debris/trash removal) within a 500-foot segment of an existing trapezoidal channel. The project does not include construction of any building structures, dams, levees, or other large structures that would be occupied or could pose a risk to local residents. Therefore, the potential for impacts associated with liquefaction and other soil related hazards would be <b>less than significant</b>.</p> |                                |  |                                     |                                     |
| iv. Landslides?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| <p><b>7aiv. Response:</b> (Source: General Plan 2025 FPEIR Figure 5.6-1, Areas Underlain by Steep Slope; General Plan 2035 FPEIR, Appendix E)</p> <p><b>No Impact.</b> The project site consists of a 500-foot segment of the existing Tequesquite Creek Channel, which is an earthen trapezoidal channel with graded access roads on either side. The surrounding area is generally flat and is not located in an area prone to landslides as depicted on Figure 5.6-1 of the General Plan 2025 FPEIR. There are no habitable buildings or other large structures proposed that could put occupants or local residents at risk in the case of landslide. Therefore, there will be <b>no impact</b> related to landslides directly, indirectly, and cumulatively.</p>   |                                |  |                                     |                                     |
| b. Result in substantial soil erosion or the loss of topsoil?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| <p><b>7b. Response:</b> (Source: Project Description; General Plan 2025 FPEIR Figure 5.6-1, Areas Underlain by Steep Slope)</p> <p><b>No Impact.</b> The project proposes to conduct annual maintenance of a 500-foot segment of the existing trapezoidal channel, including vegetation management, removal of accumulated sediment, and removal of debris/trash for a period of 10 years (2020 through 2029). The project does not involve development, significant grading activities, or structures that would result in soil erosion or the loss of topsoil. As such, the project will have <b>no impact</b> resulting in substantial soil erosion or loss of topsoil directly, indirectly, or cumulatively.</p>  |                                |  |                                     |                                     |
| c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| <p><b>7c. Response:</b> (Source: General Plan 2025 Figure PS-1 – Regional Fault Zones, Figure PS-2, Liquefaction Zones; General Plan 2025 FPEIR Figure PS-3, Soils with High Shrink-Swell Potential; Figure 5.6-1, Areas Underlain by Steep Slope)</p> <p><b>No Impact.</b> The project is located within an area that has a high potential for liquefaction due to its location within a segment of Tequesquite Creek Channel and proximity to the Santa Ana River Floodplain. However, there are no other soil or geologic unit conditions within the channel that are considered unstable and the proposed channel maintenance activities will not cause soil to become unstable. The project does not involve development, significant grading, or construction of habitable</p>  |                                |  |                                     |                                     |

| ISSUES (AND SUPPORTING INFORMATION SOURCES):   | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact                           |
|--|--------------------------------|--|------------------------------|-------------------------------------|
| structures that could place the public at risk due to unstable soils. As such, the project will have <b>no impact</b> resulting in a geologic unit or soil becoming unstable resulting in an on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse either directly, indirectly, or cumulatively.   |                                |  |                              |                                     |
| d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| <b>7d. Response: (Source: General Plan 2025 FPEIR Figure 5.6-4, Soils; Figure 5.6-4, Soils; Table 5.6-B, Soil Types; Figure 5.6-5, Soils with High Shrink-Swell Potential)</b><br><br><b>No Impact.</b> Expansive soils contain high levels of clay that expand when wet and contract when dry, which can damage building foundations and other structures. The soils within the project area are categorized as Riverwash, which are highly drained and sandy soils associated with streambeds. Riverwash is not characterized as a clay soil. Therefore, there would be <b>no impact</b> associated with expansive soils.  |                                |  |                              |                                     |
| e. 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?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| <b>7e. Response: (Source: General Plan 2025 FPEIR Figure 5.6-4, Soils; Table 5.6-B, Soil Types)</b><br><br><b>No Impact.</b> The proposed project involves annual maintenance of a 500-foot segment of the existing trapezoidal channel, including vegetation management, removal of accumulated sediment, and removal of debris/trash for a period of 10 years (2020 through 2029). Implementation of the proposed project would not include uses that could generate wastewater, and therefore would not require septic tanks or other alternative wastewater treatment methods. Implementation of the proposed project would result in <b>no impact</b> associated with soils incapable of supporting septic systems or alternative wastewater treatment methods.   |                                |  |                              |                                     |
| f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?  | <input type="checkbox"/>       | <input checked="" type="checkbox"/>                | <input type="checkbox"/>     | <input type="checkbox"/>            |
| <b>7f. Response: (Source: General Plan 2025 FPEIR Figure 5.5-2, Paleontological Sensitivity)</b><br><br><b>Less Than Significant with Mitigation Incorporated.</b> The project site is located within an area of the City identified as having unknown paleontological sensitivity. The project consists of the periodic maintenance of a 500-foot segment of an existing man-made trapezoidal channel. The proposed activities are limited to ongoing maintenance activities (vegetation management, removal of accumulated sediment, and removal of debris/trash), which will not require any grading or digging below existing channel grade in previously undisturbed sediment. In the unlikely event that paleontological resources are discovered, implementation of MM-CUL-1 would reduce the potential for significant impacts associated with disturbance of such remains to a level of <b>less than significant with mitigation incorporated</b> .<br><br><b>Mitigation Measures</b><br><br>Refer to MM-CUL-1. |                                |  |                              |                                     |

| ISSUES (AND SUPPORTING INFORMATION SOURCES):   | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact        | No Impact                |
|--|--------------------------------|--|-------------------------------------|--------------------------|
| <b>3.8 GREENHOUSE GAS EMISSIONS.</b><br>Would the project:   |                                |  |                                     |                          |
| a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <p><b>8a. Response:</b> <i>(Source: SCAQMD Draft Guidance Document – Interim CEQA GHG Significance Threshold and SCAQMD GHG CEQA Significance Thresholds Working Group Meeting No. 15 and CalEEMod)</i></p> <p><b>Less Than Significant Impact.</b> Climate change refers to any significant change in measures of climate, such as temperature, precipitation, or wind patterns, lasting for an extended period of time (decades or longer). The Earth’s temperature depends on the balance between energy entering and leaving the planet’s system, and many factors (natural and human) can cause changes in Earth’s energy balance. The greenhouse effect is the trapping and build-up of heat in the atmosphere (troposphere) near the Earth’s surface. The greenhouse effect is a natural process that contributes to regulating the Earth’s temperature, and it creates a livable environment on Earth. Human activities that emit additional GHGs to the atmosphere increase the amount of infrared radiation that gets absorbed before escaping into space, thus enhancing the greenhouse effect and causing the Earth’s surface temperature to rise. Global climate change is a cumulative impact; a project contributes to this impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs. Thus, GHG impacts are recognized exclusively as cumulative impacts (CAPCOA 2008).</p> <p>A GHG is any gas that absorbs infrared radiation in the atmosphere; in other words, GHGs trap heat in the atmosphere. As defined in California Health and Safety Code Section 38505(g) for purposes of administering many of the state’s primary GHG emissions reduction programs, GHGs include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride (see also 14 CCR 15364.5). The three GHGs evaluated herein are CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O. Emissions of hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride are generally associated with industrial activities including the manufacturing of electrical components, heavy duty air conditioning units, and insulation of electrical transmission equipment (substations, power lines, and switch gears.). Therefore, emissions of these GHGs were not evaluated or estimated in this analysis because the project would not include these activities or components and would not generate hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride in measurable quantities.</p> <p>Gases in the atmosphere can contribute to climate change both directly and indirectly.<sup>4</sup> The Intergovernmental Panel on Climate Change developed the global warming potential (GWP) concept to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The reference gas used is CO<sub>2</sub>; therefore, GWP-weighted emissions are measured in metric tons of CO<sub>2</sub> equivalent (MT CO<sub>2</sub>e). Consistent with California Emissions Estimator Model (CalEEMod), this GHG emissions analysis assumed the GWP for CH<sub>4</sub> is 25 (emissions of 1 MT of CH<sub>4</sub> are equivalent to emissions of 25 MT of CO<sub>2</sub>), and the GWP for N<sub>2</sub>O is 298, based on the Intergovernmental Panel on Climate Change Fourth Assessment Report (IPCC 2007).</p> <p>As discussed in Section 3.3, Air Quality, of this IS/MND, the project is located within the jurisdictional boundaries of the SCAQMD. In October 2008, the SCAQMD proposed recommended numeric CEQA significance thresholds for GHG emissions for lead agencies to use in assessing GHG impacts of residential and commercial development projects as presented in its Draft Guidance Document – Interim CEQA Greenhouse Gas Significance Threshold (SCAQMD 2008). This document, which builds on the previous guidance prepared by the California Air Pollution Control Officers Association, explored various approaches for establishing a significance threshold for GHG emissions. The draft interim CEQA thresholds guidance document was not adopted or approved by the Governing Board. However, in December 2008, the SCAQMD adopted an interim 10,000 MT CO<sub>2</sub>e per-year screening level threshold for stationary source/industrial projects for which the SCAQMD is the lead agency (see SCAQMD Resolution No. 08-35, December 5, 2008).</p> |                                |  |                                     |                          |

<sup>4</sup> Direct effects occur when the gas itself absorbs radiation. Indirect radiative forcing occurs when chemical transformations of the substance produce other GHGs, when a gas influences the atmospheric lifetimes of other gases, and/or when a gas affects atmospheric processes that alter the radiative balance of the Earth (e.g., affect cloud formation or albedo) (EPA 2017).

| ISSUES (AND SUPPORTING INFORMATION SOURCES):  | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|------------------------------|-----------|
| <p>The SCAQMD formed a GHG CEQA Significance Threshold Working Group to work with SCAQMD staff on developing GHG CEQA significance thresholds until statewide significance thresholds or guidelines are established. From December 2008 to September 2010, the SCAQMD hosted working group meetings and revised the draft threshold proposal several times, although it did not officially provide these proposals in a subsequent document. The SCAQMD has continued to consider adoption of significance thresholds for residential and general land use development projects. The most recent proposal, issued in September 2010, uses the following tiered approach to evaluate potential GHG impacts from various uses (SCAQMD 2010):</p> <p><b>Tier 1.</b> Determine if CEQA categorical exemptions are applicable. If not, move to Tier 2.</p> <p><b>Tier 2.</b> Consider whether or not the proposed project is consistent with a locally adopted GHG reduction plan that has gone through public hearing and CEQA review, that has an approved inventory, includes monitoring, etc. If not, move to Tier 3.</p> <p><b>Tier 3.</b> Consider whether the project generates GHG emissions in excess of screening thresholds for individual land uses. The 10,000 MT CO<sub>2</sub>e per-year threshold for industrial uses would be recommended for use by all lead agencies. Under option 1, separate screening thresholds are proposed for residential projects (3,500 MT CO<sub>2</sub>e per year), commercial projects (1,400 MT CO<sub>2</sub>e per year), and mixed-use projects (3,000 MT CO<sub>2</sub>e per year). Under option 2, a single numerical screening threshold of 3,000 MT CO<sub>2</sub>e per year would be used for all non-industrial projects. If the project generates emissions in excess of the applicable screening threshold, move to Tier 4.</p> <p><b>Tier 4.</b> Consider whether the project generates GHG emissions in excess of applicable performance standards for the project service population (population plus employment). The efficiency targets were established based on the goal of AB 32 to reduce statewide GHG emissions to 1990 levels by 2020. The 2020 efficiency targets are 4.8 MT CO<sub>2</sub>e per-service population for project-level analyses and 6.6 MT CO<sub>2</sub>e per-service population for plan-level analyses. If the project generates emissions in excess of the applicable efficiency targets, move to Tier 5.</p> <p><b>Tier 5.</b> Consider the implementation of CEQA mitigation (including the purchase of GHG offsets) to reduce the project efficiency target to Tier 4 levels.</p> <p>Section 15064.7(c) of the CEQA Guidelines specifies that “[w]hen adopting thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence.” The CEQA Guidelines do not prescribe specific methodologies for performing an assessment, establish specific thresholds of significance, or mandate specific mitigation measures. Rather, the CEQA Guidelines emphasize the lead agency’s discretion to determine the appropriate methodologies and thresholds of significance that are consistent with the manner in which other impact areas are handled in CEQA (CNRA 2009).</p> <p>To determine the proposed project’s potential to generate GHG emissions that would have a significant impact on the environment, the project’s GHG emissions were compared to the non-industrial land project quantitative threshold of 3,000 MT CO<sub>2</sub>e per year. Because the proposed project does not include operational sources of emissions, and because the proposed project does not conform to the standard land use types, the 3,000 MT CO<sub>2</sub>e per year threshold, which was identified under Tier 3 Option 1, was applied herein. Per the SCAQMD guidance, construction emissions should be amortized over the operational life of the project, which is assumed to be 30 years (SCAQMD 2008). This impact analysis, therefore, compares amortized construction emissions to the proposed SCAQMD threshold of 3,000 MT CO<sub>2</sub>e per year.</p> <p>The proposed project’s GHG emissions were estimated using CalEEMod and are based on the construction scenario described in the air quality analysis. Table 8-1 presents total construction-related GHG emissions over the anticipated 10-year period during which maintenance activities would occur.</p> |                                |  |                              |           |



| ISSUES (AND SUPPORTING INFORMATION SOURCES): | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------|--|------------------------------|-----------|
|--|--------------------------------|--|------------------------------|-----------|

**Table 8-1**  
**Estimated Annual Construction Greenhouse Gas Emissions**

| Year         | CO <sub>2</sub>      | CH <sub>4</sub>             | N <sub>2</sub> O | CO <sub>2</sub> e |
|--------------|----------------------|-----------------------------|------------------|-------------------|
|              | Metric Tons per Year |                             |                  |                   |
| 2020         | 2.09                 | <0.01 <sup>a</sup>          | 0.00             | 2.11              |
| 2021         | 2.08                 | <0.01 <sup>a</sup>          | 0.00             | 2.09              |
| 2022         | 2.06                 | <0.01 <sup>a</sup>          | 0.00             | 2.07              |
| 2023         | 2.04                 | <0.01 <sup>a</sup>          | 0.00             | 2.05              |
| 2024         | 2.03                 | <0.01 <sup>a</sup>          | 0.00             | 2.04              |
| 2025         | 2.01                 | <0.01 <sup>a</sup>          | 0.00             | 2.02              |
| 2026         | 2.00                 | <0.01 <sup>a</sup>          | 0.00             | 2.01              |
| 2027         | 1.99                 | <0.01 <sup>a</sup>          | 0.00             | 2.00              |
| 2028         | 1.98                 | <0.01 <sup>a</sup>          | 0.00             | 1.99              |
| 2029         | 1.97                 | <0.01 <sup>a</sup>          | 0.00             | 1.98              |
| <b>Total</b> | <b>20.25</b>         | <b>&lt;0.01<sup>a</sup></b> | <b>0.00</b>      | <b>20.36</b>      |

**Notes:** CO<sub>2</sub> = carbon dioxide; CH<sub>4</sub> = methane; N<sub>2</sub>O = nitrous oxide; CO<sub>2</sub>e = carbon dioxide equivalent.

See Appendix A for detailed results.

<sup>a</sup> <0.01 = value less than reported 0.01 metric tons per year.

As shown Table 8-1, the estimated total GHG emission over the entire maintenance period would be approximately 20 MT CO<sub>2</sub>e, resulting in amortized (30-year period) emissions of 0.7 MT CO<sub>2</sub>e. As with project-generated air quality pollutant emissions, GHG emissions generated by maintenance activities would be short term in nature. The proposed project's amortized GHG emissions would not exceed the SCAQMD thresholds of 3,000 MT CO<sub>2</sub>e. Therefore, the proposed project would not result in cumulatively considerable emissions. Impacts would be **less than significant**.

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

**8b. Response:** *(Source: City of Riverside Economic Prosperity Action Plan, CARB's First Update to the Climate Change Scoping Plan, CARB's 2017 Climate Change Scoping Plan Update, and CNRA's Notice of Public Hearings and Notice of Proposed Amendment of Regulations Implementing the California Environmental Quality Act)*

**Less Than Significant Impact.**

**Consistency with the City of Riverside Economic Prosperity Action Plan and the Climate Action Plan**

The City has an adopted a GHG reduction plan, which combines two plans: the Economic Prosperity Action Plan and the Climate Action Plan. The Riverside Restorative Growthprint includes a variety of recommended measures and strategies to help reduce the City reduce its GHG emissions. However, because the proposed project consists of minor construction activities, the reduction measures are not applicable to the proposed project. Many of the measures outlined within the Riverside Restorative Growthprint involve taking GHG reductions from the energy, transportation, and solid waste sectors. Thus, the proposed project would not conflict with the Riverside Restorative Growthprint.

### **Consistency with CARB's Scoping Plan**

The CARB Scoping Plan, approved by CARB in 2008 and updated in 2014 and 2017, provides a framework for actions to reduce California's GHG emissions and requires CARB and other state agencies to adopt regulations and other initiatives to reduce GHGs. The Scoping Plan is not directly applicable to specific projects, nor is it intended to be used for project-level evaluations.<sup>5</sup> Under the Scoping Plan, however, there are several state regulatory measures aimed at the identification and reduction of GHG emissions. CARB and other state agencies have adopted many of the measures identified in the Scoping Plan. Most of these measures focus on area source emissions (e.g., energy usage, high-GWP GHGs in consumer products) and changes to the vehicle fleet (i.e., hybrid, electric, and more fuel-efficient vehicles) and associated fuels (e.g., Low Carbon Fuel Standard), among others.

### **Consistency with the Southern California Association of Governments 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy**

Southern California Association of Governments' 2016 RTP/SCS is a regional growth-management strategy that targets per capita GHG reduction from passenger vehicles and light-duty trucks in the Southern California region. The 2016 RTP/SCS incorporates local land use projections and circulation networks in city and county general plans. The 2016 RTP/SCS is not directly applicable to the project because the purpose of the 2016 RTP/SCS is to provide direction and guidance by making the best transportation and land use choices for future development. The proposed project would not conflict with implementation of the strategies identified in the 2016 RTP/SCS that would reduce GHG emissions.

### **Consistency with Executive Order S-3-05 and Senate Bill 32**

The project would not impede the attainment of the GHG reduction goals for 2030 or 2050 identified in Executive Order S-3-05 and Senate Bill 32. Executive Order S-3-05 establishes the following goals: GHG emissions should be reduced to 2000 levels by 2010, to 1990 levels by 2020, and to 80% below 1990 levels by 2050. Senate Bill 32 establishes a statewide GHG emissions reduction target whereby CARB, in adopting rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions reductions, shall ensure that statewide GHG emissions are reduced to at least 40% below 1990 levels by December 31, 2030. While there are no established protocols or thresholds of significance for that future year analysis, CARB forecasts that compliance with the current Scoping Plan puts the state on a trajectory of meeting these long-term GHG goals, although the specific path to compliance is unknown (CARB 2014).

CARB has expressed optimism with regard to both the 2030 and 2050 goals. It states in the First Update to the Climate Change Scoping Plan that "California is on track to meet the near-term 2020 GHG emissions limit and is well positioned to maintain and continue reductions beyond 2020 as required by AB 32" (CARB 2014). With regard to the 2050 target for reducing GHG emissions to 80% below 1990 levels, the First Update to the Climate Change Scoping Plan states that the level of reduction is achievable in California (CARB 2014). CARB believes that the state is on a trajectory to meet the 2030 and 2050 GHG reduction targets set forth in AB 32, Senate Bill 32, and Executive Order S-3-05. This is confirmed in the 2017 Scoping Plan, which states (CARB 2017b):

The Scoping Plan builds upon the successful framework established by the Initial Scoping Plan and First Update, while identifying new, technologically feasible and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health, including in disadvantaged communities.

The proposed project would not interfere with implementation of any of the previously described GHG reduction goals for 2030 or 2050 because the proposed project would not exceed the SCAQMD's recommended threshold of 3,000 MT CO<sub>2</sub>e per year as presented previously in Table 8-1. This analysis provides support for the conclusion that the proposed project would not impede the state's trajectory toward the previously described statewide GHG reduction goals for 2030 or 2050.

Based on the considerations previously outlined, the proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. This impact would be **less than significant**.

| ISSUES (AND SUPPORTING INFORMATION SOURCES):  | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact                           |
|---|--------------------------------|--|------------------------------|-------------------------------------|
| <b>3.9 HAZARDS &amp; HAZARDOUS MATERIALS.</b><br>Would the project:   |                                |  |                              |                                     |
| a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| <b>9a. Response: (Source: Project Description)</b><br><br><b>No Impact.</b> The proposed project involves ongoing, periodic maintenance of a 500-foot segment of Tequesquite Creek Channel, which includes vegetation management, sediment removal, and debris/trash removal. Each maintenance event will be conducted within 1 to 7 days, depending on the amount of accumulated sediment and trash in the channel bottom. The equipment that will be used is limited hand tools, a backhoe, long-reach excavator, dump truck, and a trailer, which will be staged on the existing access roads. Equipment maintenance, fueling, and long-term storage will be conducted off site at the City of Riverside Public Works Equipment Yard. All waste generated during each maintenance activity will be temporarily stockpiled on site within the access roads and then removed to the appropriate waste facility. There is no proposed use, routine transport, or disposal of hazardous materials during operation of the proposed project; therefore, there would be <b>no impact</b> to the environment or the public. |                                |  |                              |                                     |
| b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| <b>9b. Response: (Source: Project Description)</b><br><br><b>No Impact.</b> As discussed in response 9a, the project involves ongoing, periodic maintenance of a 500-foot segment of Tequesquite Creek Channel. Each maintenance event will last less than 7 days and all equipment and vehicles used on site will be maintained, fueled and parked at the City of Riverside Public Works Equipment Yard. No hazardous substances or wastes would be stored, used, or generated during channel maintenance. Therefore, there would <b>no impact</b> related to the use or release of hazardous materials during channel maintenance activities.   |                                |  |                              |                                     |
| c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| <b>9c. Response: (Source: General Plan 2025 Figure 5.13-2, RUSD Boundaries; General Plan 2025 Table 5.13-D, RUSD Schools; General Plan 2025 Figure 5.13-3, AUSD Boundaries)</b><br><br><b>No Impact.</b> As discussed in responses 9a and 9b, the project involves ongoing, periodic maintenance of a 500-foot segment of Tequesquite Creek Channel. No hazardous substances or wastes would be emitted or handled during channel maintenance. Additionally, the nearest schools to the project site are Central Middle School, located approximately 1.5 miles west of the project site, and Magnolia Elementary School, located approximately 1.9 miles to the northwest. There are no existing or proposed schools located within 0.25 miles of the project site. Therefore, the project will have <b>no impact</b> regarding emitting hazardous emissions or handling hazardous or acutely hazardous materials, substances, or waste within 0.25 miles of an existing or proposed school directly, indirectly, or cumulatively.   |                                |  |                              |                                     |
| d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |

<sup>5</sup> The Final Statement of Reasons for the amendments to the CEQA Guidelines reiterates the statement in the Initial Statement of Reasons that “[t]he Scoping Plan may not be appropriate for use in determining the significance of individual projects because it is conceptual at this stage and relies on the future development of regulations to implement the strategies identified in the Scoping Plan” (CNRA 2009).

| ISSUES (AND SUPPORTING INFORMATION SOURCES):  | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact        | No Impact                           |
|---|--------------------------------|--|-------------------------------------|-------------------------------------|
| Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?  |                                |  |                                     |                                     |
| <p><b>9d. Response:</b> (Source: General Plan 2025 Figure PS-5, Hazardous Waste Sites; General Plan 2025 FPEIR Table 5.7-A, CERCLIS Facility Information; DTSC 2019)</p> <p><b>No Impact.</b> A review of hazardous materials site lists compiled pursuant to California Government Code Section 65962.5 (also known as the Cortese List) found that the project site is not included on the list, nor is it within 1000 feet of a site included on the list. Therefore, the project would have <b>no impact</b> associated with the creation of any significant hazard to the public or environment directly, indirectly, or cumulatively.</p>   |                                |  |                                     |                                     |
| e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| <p><b>9e. Response:</b> (Source: General Plan 2025 Figure PS-6, Airport Safety Zones and Influence Areas)</p> <p><b>Less Than Significant Impact.</b> The nearest airports to the project site are the Flabob Airport, which is located approximately 1 mile west of the project site, and the Riverside Municipal Airport, which is located approximately 1.5 miles southwest of the project site. The project site is located within Zone E, as designated by the Riverside County Airport Land Use Compatibility Plan for both airports, which is considered compatible with flood areas and waterways including creeks and canals.</p> <p>Implementation of the proposed maintenance activities within the existing trapezoidal channel would not result in a change in air traffic patterns. Additionally, the project does not involve the construction of new residential development and workers in the area would be limited to City employees conducting periodic maintenance of the channel. There are no other private or public airports within the vicinity of the project. Therefore, implementation of the proposed project would result in a <b>less than significant impact</b> to safety hazards associated with a change in air traffic patterns.</p>   |                                |  |                                     |                                     |
| f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| <p><b>9f. Response:</b> (Source: General Plan 2025 Figure PS-8.1, Evacuation Routes)</p> <p><b>No Impact.</b> Emergency response and disaster preparedness is coordinated by the Emergency Management Office within the City of Riverside Fire Department. The Emergency Operations Plan is maintained by the Emergency Manager and updated every 5 years. The General Plan 2025 (Figure PS-8.1) identifies major freeways and arterial streets throughout the City to be used as evacuation routes in the event of an emergency. The evacuation routes nearest to the project site are Magnolia Avenue, located approximately 2 miles east of the project site, and Mission Inn Avenue, located approximately 4 miles north of the project site. There are no other known emergency evacuation or response plans within the vicinity of the project site. The project consists of periodic maintenance to be conducted within an existing trapezoidal flood control channel, which is located within an area surrounded by parklands and gated to prevent public access. The project site includes access roads on either side of the channel to accommodate maintenance vehicles; therefore, no temporary road closures would be required during maintenance activities. Implementation of the project would result in <b>no impact</b> to an adopted emergency response plan or emergency evacuation plan.</p> |                                |  |                                     |                                     |

| ISSUES (AND SUPPORTING INFORMATION SOURCES):   | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact        | No Impact                           |
|--|--------------------------------|--|-------------------------------------|-------------------------------------|
| g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| <p><b>9g. Response:</b> (Source: General Plan 2025 Figure PS-7, Fire Hazard Areas)</p> <p><b>Less Than Significant Impact.</b> Although the project site is located within the vicinity of several parks and open space associated with Santa Ana River Channel, the project is not located on or adjacent to lands designated as a fire risk zone as depicted in Figure 5.7-3 of the General Plan 2025 FPEIR. The proposed project involves ongoing, periodic maintenance of a 500-foot segment of the existing Tequesquite Creek Channel, and does not include the construction of any new buildings or facilities or changes to a building use that might expose people or structures to the potential for loss, injury, or death by wildland fires. Furthermore, the proposed maintenance activities include vegetation management and debris removal within the channel, which will reduce the on-site fire risk potential. Therefore, impacts from wildland fires associated with the proposed maintenance activities proposed by this project are <b>less than significant</b> directly, indirectly, and cumulatively.</p>  |                                |  |                                     |                                     |
| <p><b>3.10 HYDROLOGY AND WATER QUALITY.</b></p> <p>Would the project:</p>  |                                |  |                                     |                                     |
| a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?   | <input type="checkbox"/>       | <input checked="" type="checkbox"/>                | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <p><b>10a. Response:</b> (Source: General Plan 2025 FPEIR Table 5.8-A, Beneficial Uses Receiving Water)</p> <p><b>Less Than Significant with Mitigation Incorporated.</b> The Tequesquite Creek Channel discharges downstream to the Santa Ana River, and ultimately to the Pacific Ocean. In order to maintain flood control capacity of the on-site channelized segment of the channel and prevent sediment and debris/trash from discharging downstream, the City of Riverside Public Works Department is proposing to conduct ongoing maintenance within the channel and the adjacent access roads for a period of 10 years (from 2020 through 2029). The proposed maintenance activities include sediment removal and vegetation management, which may temporarily disturb soils in the channel bottom. Prior to conducting maintenance with the channel, issuance of a 401 water quality certification from the Regional Water Quality Control Board, Santa Ana Region, will be required. Implementation of the measures in the 401 water quality certification and MM-BIO-5 would reduce impacts to <b>less than significant with mitigation incorporated</b> through best management practices intended to prevent the off-site discharge of soil or construction materials in stormwater.</p> |                                |  |                                     |                                     |
| b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| <p><b>10b. Response:</b> (Source: General Plan 2025 Figure OS-9, Watersheds)</p> <p><b>No Impact.</b> The proposed project is located within the boundaries of the Santa Ana River Groundwater Basin. The project consists of the implementation of ongoing maintenance (sediment removal, vegetation management, and debris/trash removal) within a 500-foot segment of Tequesquite Creek Channel for a period of 10 years (from 2020 through 2029). The project does not include use of groundwater or the installation of groundwater wells, nor does it propose the construction of buildings or facilities that would require water service that may include local groundwater sources. Additionally, the channel bottom will remain earthen and the project does not include the construction of new impervious surfaces that could interfere with groundwater recharge. Therefore, implementation of the proposed project will result in <b>no impact</b> associated with depletion of groundwater supplies or interference with groundwater recharge.</p>  |                                |  |                                     |                                     |

| ISSUES (AND SUPPORTING INFORMATION SOURCES):   | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact                           |
|--|--------------------------------|--|------------------------------|-------------------------------------|
| c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:   |                                |  |                              |                                     |
| i. Result in substantial erosion or siltation on-or-off-site?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| <b>10c.i Response: (Source: Project Description)</b><br><br><b>No Impact.</b> The proposed project consists of ongoing maintenance within a 500-foot segment of Tequesquite Creek Channel for a period of 10 years (from 2020 through 2029). The activities include the removal of accumulated sediment from the channel bottom to prevent siltation downstream; however, all work in the channel bottom will be conducted using hand crews and equipment stationed at the top of slope. There are no activities proposed that include grading or significant disturbance of the earthen channel bottom; therefore, the project would result in <b>no impact</b> associated with substantial erosion or siltation caused by the alteration of existing drainage patterns.  |                                |  |                              |                                     |
| ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-or-off-site?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| <b>10c.ii Response: (Source: Project Description)</b><br><br><b>No Impact.</b> The proposed project consists of ongoing maintenance within a 500-foot segment of Tequesquite Creek Channel for a period of 10 years (from 2020 through 2029). The activities proposed include vegetation management and removal of debris and trash to maintain the hydrologic capacity of the channel and prevent flooding. However, the project does not involve significant grading or the construction of new impervious surfaces, which could alter existing drainage patterns or increase the rate or amount of surface runoff. Therefore, implementation of the proposed project will result in <b>no impact</b> associated with flooding on or off site as a result of project-related increases in the rate or amount of surface runoff.  |                                |  |                              |                                     |
| iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| <b>10c.iii Response: (Source: Project Description)</b><br><br><b>No Impact.</b> The proposed project consists of ongoing maintenance within a 500-foot segment of Tequesquite Creek Channel for a period of 10 years (from 2020 through 2029). The project does not include the alteration of the existing channel or access roads (i.e., through grading, construction of structures, or additional paving), which could result in the creation of additional stormwater runoff or provide substantial additional sources of polluted runoff. On the contrary, the project proposes to maintain a channelized segment of Tequesquite Creek Channel that functions as part of the City's stormwater drainage system through removal of sediment, trash, and debris to retain flood capacity and prevent localized flooding during large storm events. Therefore, the project will not create or contribute runoff water exceeding capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff and there will be <b>no impact</b> directly, indirectly, or cumulatively. |                                |  |                              |                                     |
| iv. Impede or redirect flood flows?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| <b>10c.iv. Response: (Source: Project Description, General Plan 2025 Figure PS-4, Flood Hazard Areas)</b><br><br><b>No Impact.</b> The segment of the Tequesquite Creek Channel within the project site is located within a City-designated flood hazard zone (1% Annual Chance of Flood) associated within the Santa Ana River and Tequesquite Creek. As described in responses 10i, 10ii, and 10iii, the proposed project consists of ongoing maintenance that is intended to retain hydrologic capacity of the channel and prevent localized flooding. Accumulated sediment, debris, and trash will be removed from the   |                                |  |                              |                                     |

| ISSUES (AND SUPPORTING INFORMATION SOURCES):  | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact        | No Impact                           |
|---|--------------------------------|--|-------------------------------------|-------------------------------------|
| <p>segment of Tequesquite Creek Channel within the project footprint to allow the uninterrupted conveyance of stormwater into the existing reinforced concrete box at the downstream end of the channel. No equipment or materials will be placed in the channel during maintenance and there are no permanent fills or improvements proposed in the channel. Therefore, implementation of the proposed project will result in <b>no impact</b> associated with impeding or redirecting runoff.</p>   |                                |  |                                     |                                     |
| <p>d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?</p>  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| <p><b>10d. Response:</b> (Source: General Plan 2025 FPEIR Chapter 7.5.8, Hydrology and Water Quality; General Plan 2025 Figure PS-4, Flood Hazard Areas)</p> <p><b>Less Than Significant Impact.</b> Tsunamis are large waves that occur in coastal areas; therefore, since the City is not located in a coastal area, <b>no impacts</b> due to tsunamis will occur directly, indirectly, or cumulatively.</p> <p>A seiche can occur within an enclosed waterbody and is a wave typically created by seismic activity. The nearest large body of water is Lake Evans, which is located approximately 2 miles north of the project site. The project consists of the implementation of ongoing channel maintenance and does not propose the development of any new structures or facilities. Due to the distance of Lake Evans from the project site and the nature of the maintenance activities proposed, <b>no impacts</b> associated with overtopping and inundation of the area surrounding the project site by a seiche would occur.</p> <p>As depicted in Figure PS-4 of the General Plan 2025, the segment of the Tequesquite Creek Channel within the project site is located within the dam inundation area for Sycamore Canyon Dam. Additionally, as described in response 10c.iv, the project site is located within a City-designated flood hazard zone (1% Annual Chance of Flood). However, the proposed project consists of ongoing channel maintenance activities (vegetation management and sediment, trash, and debris removal) that are expected to involve 1 to 3 days of work and will not require heavy equipment access in the channel bottom. All stockpiles of soil and debris will be removed at the end of each maintenance event and there are no construction or equipment materials proposed to be stored on site. Therefore, the potential for impacts associated with the release of pollutants due to project inundation by floodwaters is <b>less than significant</b>.</p> |                                |  |                                     |                                     |
| <p>e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?</p>  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| <p><b>10e. Response:</b> (Source: General Plan 2025 FPEIR Chapter 7.5.8, Hydrology and Water Quality)</p> <p><b>No Impact.</b> The proposed project consists of ongoing maintenance within a 500-foot segment of Tequesquite Creek Channel for a period of 10 years (from 2020 through 2029). The maintenance activities include vegetation management and trash, debris, and sediment removal to retain sufficient flood capacity and prevent the discharge of debris and sediment downstream, which is anticipated to improve water quality. There are no components of the project that would use groundwater or prevent the groundwater infiltration through the construction of impermeable surfaces (i.e., concrete or riprap) in the channel. Therefore, <b>no impacts</b> associated with conflict or obstruction of an implementation of a water quality control plan or sustainable groundwater management plan would occur.</p>  |                                |  |                                     |                                     |

| ISSUES (AND SUPPORTING INFORMATION SOURCES):  | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact                           |
|---|--------------------------------|--|------------------------------|-------------------------------------|
| <b>3.11 LAND USE AND PLANNING.</b>  |                                |  |                              |                                     |
| Would the project:  |                                |  |                              |                                     |
| a. Physically divide an established community?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| <b>11a. Response: (Source: General Plan 2025 Land Use and Urban Design Element; Project Description)</b><br><br><b>No Impact.</b> The proposed project footprint consists of an existing, fenced trapezoidal flood control channel and adjacent access roads, surrounded by parkland to the east, west, north, and south. The nearest residential development is located approximately 0.15 miles north east of the project site. There are no existing structures within the project footprint and the proposed project would not divide an existing community, since all development occurs north and east of the project site. There is <b>no impact</b> associated with the physical division of an established community through implementation of the proposed project.   |                                |  |                              |                                     |
| b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| <b>11b. Response: (Source: General Plan 2025 Figure LU-10, Land Use Policy Map)</b><br><br><b>No Impact.</b> The project site is an existing trapezoidal channel within parkland that is designated by the General Plan 2025 for Private Recreation (PR) and zoned Public Facilities (PF). The proposed project consists of the maintenance of the channel to ensure that adequate flood protection is maintained and to avoid flood damage to adjacent park uses or development downstream. There are no changes to the project site or new uses or development proposed that could conflict with the existing general plan designation and zoning. The project site is not subject to any other land use plans or programs. Implementation of the proposed project would result in <b>no impact</b> to existing land use plans, policies, or regulations.   |                                |  |                              |                                     |
| <b>MINERAL RESOURCES.</b>   |                                |  |                              |                                     |
| Would the project:  |                                |  |                              |                                     |
| a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| <b>12a. Response: (Source: General Plan 2025 Figure OS-1, Mineral Resources)</b><br><br><b>No Impact.</b> Based on the General Plan 2025 Mineral Resources Element, the quarrying of granitic rock was historically considered a significant industry in the City. These operations have not been active for decades and most of the extraction sites are now located beyond the City's urban area. However, a large area of the northern portion of the City, including the project site, is designated as a state-classified mineral resource zone (MRZ-3), which indicates that the area contains known or inferred occurrences of minerals of undetermined significance. The area is known to support marginal deposits of feldspar, silica, limestone, and other rock products.<br><br>The project site consists of a trapezoidal flood control channel that is surrounded by existing parklands. No existing mineral extraction operations occur on site or within the project vicinity. Additionally, implementation of the proposed maintenance activities will not preclude any future mineral extraction operations. Therefore, implementation of the project would result in <b>no impact</b> to the availability of a state or regionally important mineral resource. |                                |  |                              |                                     |
| b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| <b>12b. Response: (Source: General Plan 2025 Figure OS-1, Mineral Resources)</b><br><br><b>No Impact.</b> As discussed under Response 11a, above, a large area of the northern portion of the City, including the project site, is designated as a state-classified mineral resource zone (MRZ-3) and is known to support marginal deposits of feldspar, silica,  |                                |  |                              |                                     |



| ISSUES (AND SUPPORTING INFORMATION SOURCES):   | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact        | No Impact                           |
|--|--------------------------------|--|-------------------------------------|-------------------------------------|
| limestone, and other rock products. However, there is no existing mineral extraction operations located on, or in the vicinity of, the project site. Additionally, implementation of the proposed maintenance activities will not preclude any future mineral extraction operations. Therefore, implementation of the project would result in <b>no impact</b> to the availability of a locally important mineral resource.  |                                |  |                                     |                                     |
| <b>3.13 NOISE.</b><br>Would the project result in:   |                                |  |                                     |                                     |
| a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| <b>13a. Response: (Sources: General Plan 2025 – Noise Element)</b><br><br><b>Less Than Significant Impact.</b> The City of Riverside Noise Ordinance (Riverside Municipal Code Section 7.35.10[B][5]) restricts construction activities, including maintenance, to the hours of 7:00 a.m. to 7:00 p.m. during weekdays and 8:00 a.m. to 5:00 p.m. on Saturdays. Work is not allowed on Sundays or federal holidays. Additionally, the Municipal Code limits noise levels from construction activities to the maximum permitted exterior noise level for the affected land use.<br><br>The proposed project consists of periodic maintenance (sediment and debris removal and vegetation management) within a 500-foot segment of Tequesquite Creek Channel for a period of 10 years (from 2020 through 2029). Each maintenance event would involve short-term (3 to 5 days) use of hand tools, an excavator, backhoe, and a dump truck. The maintenance events would be conducted as needed, but at a minimum of one time per year. The nearest sensitive receptors are residential uses located approximately 600 feet (183 meters) to the south of the proposed project. Additionally, noise generated by maintenance activities may be audible to individuals using the adjacent Santa Ana River Trail and Ryan Bonaminio Park located approximately 500 feet to the west. Due to the distance to the nearest sensitive receptor and the type and number of equipment used, temporary noise levels are not anticipated to exceed the thresholds set forth in the City of Riverside Noise Ordinance. Additionally, as required, all maintenance activities will be limited to the days and hours specified in the Noise Ordinance. There is no permanent noise that would be generated by operation or maintenance of the channel. Therefore, impacts associated with the temporary or permanent increase in ambient noise levels due to the proposed channel maintenance activities are considered less than significant. |                                |  |                                     |                                     |
| b. Generation of excessive groundborne vibration or groundborne noise levels?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| <b>13b. Response: (Sources: General Plan 2025 – Noise Element; Caltrans 2013)</b><br><br><b>No Impact.</b> As described in response 13a, maintenance activities would be short term (3 to 5 days) and the heavy equipment used would be limited to one bulldozer, one excavator, and one dump truck. Ground-borne vibration information related to construction activities has been collected by the California Department of Transportation (Caltrans 2013). Based upon this information, transient vibrations (such as construction activity) with a peak particle velocity of approximately 0.035 inches per second may be characterized as barely perceptible, and vibration levels of 0.24 inches per second may be characterized as distinctly perceptible. The heavier pieces of construction equipment, such as bulldozers, would have peak particle velocities of approximately 0.089 inches per second or less at a distance of 25 feet. Ground-borne vibration is typically attenuated over short distances. At a distance of 150 feet, the vibration level from heavy construction equipment associated with the proposed project would be approximately 0.006 inches per second, which is well below the threshold of perception. Considering that the nearest sensitive receptors are residential uses located approximately 600 feet (183 meters) to the south of the proposed project, the project would result in <b>no impact</b> related to ground-borne vibration.   |                                |  |                                     |                                     |
| c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

| ISSUES (AND SUPPORTING INFORMATION SOURCES):   | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact                           |
|--|--------------------------------|--|------------------------------|-------------------------------------|
| 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?  |                                |  |                              |                                     |
| <b>13c. Response: (Source: General Plan 2025 Figure N-8, Riverside and Flabob Airport Noise Contours)</b><br><br><b>No Impact.</b> The nearest airports to the project site are the Flabob Airport, which is located approximately 1 mile west of the project site, and the Riverside Municipal Airport, which is located approximately 1.5 miles southwest of the project site. However, the project site is located outside of the noise contours for both airports. The project does not involve the construction of new residential development and workers in the area would be limited to City employees conducting short-term maintenance activities. Therefore, implementation of the proposed project would result in <b>no impact</b> associated with the exposure of people to excessive airport noise.                         |                                |  |                              |                                     |
| <b>3.14 POPULATION AND HOUSING.</b><br>Would the project:  |                                |  |                              |                                     |
| a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| <b>14a. Response: (Source: Project Description)</b><br><br><b>No Impact.</b> The proposed project consists of the maintenance of an existing trapezoidal flood control channel and adjacent maintenance access roads within an approximately 500-linear-foot segment of Tequesquite Creek. The project does not propose construction of any new residential or commercial development, the extension of roads, or any other infrastructure that might induce population growth. The proposed channel maintenance is intended to ensure that the capacity of the channel is maintained to protect the existing surrounding parklands and roadways from flooding during large storm events. Therefore, implementation of the proposed project would have <b>no impact</b> related to population growth associated with the proposed project. |                                |  |                              |                                     |
| b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| <b>14b. Response: (Source: ArcGIS Online Basemap Imagery 2019)</b><br><br><b>No Impact.</b> The proposed maintenance activities would be conducted entirely within an existing trapezoidal flood control channel and adjacent access roads. The channel segment and access roads are fenced and surrounded by existing parkland. There is no component of the proposed project that would displace or demolish any existing housing. Therefore, implementation of the proposed project would have <b>no impact</b> to existing housing and would not necessitate the construction of replacement housing elsewhere.  |                                |  |                              |                                     |
| <b>3.15 PUBLIC SERVICES.</b><br>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:   |                                |  |                              |                                     |
| a. Fire protection?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| <b>15a. Response: (Source: FPEIR Table 5.13-B, Fire Station Locations; Table 5.13-C, Riverside Fire Department Statistics; Ordinance 5948; City of Riverside 2019a)</b>  |                                |  |                              |                                     |

| ISSUES (AND SUPPORTING INFORMATION SOURCES):   | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact                           |
|--|--------------------------------|--|------------------------------|-------------------------------------|
| <p><b>No Impact.</b> The City of Riverside Fire Department maintains and staffs 14 fire stations in within the city limits. All of the stations are staffed 24 hours per day, 7 days per week, and provide service to designated City neighborhoods. The closest fire station to the project site is Fire Station 1: Downtown, located at 3900 Main Street, approximately 2 miles northeast of the project. The proposed project consists of the maintenance of an existing trapezoidal flood control channel and adjacent maintenance access roads within an approximately 500-linear-foot segment of Tequesquite Creek. The project does not propose construction of any new buildings or facilities that would require new or expanded fire services that might require the construction of new fire facilities or affect service ratios and response times. On the contrary, vegetation maintenance and the removal of trash and debris from the channel is expected to reduce on-site fire risk. Implementation of the proposed project would result in <b>no impacts</b> related to fire protection.</p> |                                |  |                              |                                     |
| b. Police protection?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| <p><b>15b. Response:</b> <i>(Source: General Plan 2025 Figure PS-8, Neighborhood Policing Centers; City of Riverside 2019b)</i></p>  |                                |  |                              |                                     |
| <p><b>No Impact.</b> The City of Riverside Police Department operates seven police stations within the city limits, which are responsible for servicing four designated policing centers. The closest police station to the project site is located at 4102 Orange Street, approximately 2 miles northeast of the project. The proposed project consists of the maintenance of an existing trapezoidal flood control channel and adjacent maintenance access roads within an approximately 500-linear-foot segment of Tequesquite Creek. The project does not propose construction of any new buildings or facilities that would require new or expanded police services that might require the construction of new police facilities or affect service ratios and response times. The project site is fenced to prevent public access and flood control channels are not considered facilities that would attract criminal activity. Implementation of the proposed project would result in <b>no impacts</b> related to police protection.</p>   |                                |  |                              |                                     |
| c. Schools?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| <p><b>15c. Response:</b> <i>(Source: General Plan 2025 FPEIR Figure 5.13-2, RUSD Boundaries; Table 5.13-G, Student Generation for RUSD and AUSD By Education Level)</i></p>  |                                |  |                              |                                     |
| <p><b>No Impact.</b> The proposed project consists of the maintenance of an existing trapezoidal flood control channel and adjacent maintenance access roads within an approximately 500-linear-foot segment of Tequesquite Creek. The project does not involve the addition of any housing units or employment generating uses that could result in population growth, including an increase in the number of school-age children. Therefore, there will be <b>no impact</b> on the demand for additional school facilities or services either directly, indirectly, or cumulatively</p>  |                                |  |                              |                                     |
| d. Parks?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| <p><b>15d. Response:</b> <i>(Source: General Plan 2025 Figure PR-1, Parks, Open Spaces and Trails; Table PR-4, Park and Recreation Facilities)</i></p>   |                                |  |                              |                                     |
| <p><b>No Impact.</b> The proposed project consists of the maintenance of an existing trapezoidal flood control channel and adjacent maintenance access roads within an approximately 500-linear foot segment of Tequesquite Creek. The project does not involve the addition of any housing units or employment generating uses that could result in population growth and an increase in park use. Therefore, there will be <b>no impact</b> on the demand for additional park facilities or services either directly, indirectly, or cumulatively.</p>   |                                |  |                              |                                     |
| e. Other public facilities?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |

| ISSUES (AND SUPPORTING INFORMATION SOURCES):  | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact        | No Impact                           |
|---|--------------------------------|--|-------------------------------------|-------------------------------------|
| <p><b>15e. Response:</b> <i>(Source: General Plan 2025 Figure LU-8, Community Facilities; FPEIR Figure 5.13-5, Library Facilities; Figure 5.13-6, Community Centers; Table 5.3-F, Riverside Community Centers; Table 5.13-H, Riverside Public Library Service Standards)</i></p> <p><b>No Impact.</b> The proposed project does not involve the construction of any new residential or commercial development, or new infrastructure (such as roads) that could result in population growth and require additional demand for public facilities or services. The proposed project consists of the ongoing maintenance of an existing drainage channel segment intended to maintain flood capacity and prevent the discharge of trash and debris downstream. Therefore, the proposed project would result in <b>no impact</b> to public facilities.</p>  |                                |  |                                     |                                     |
| <b>3.16 RECREATION.</b>   |                                |  |                                     |                                     |
| 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?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| <p><b>16a. Response:</b> <i>(Source: Project Description; General Plan 2025 Figure PR-1, Parks, Open Spaces and Trails)</i></p> <p><b>No Impact.</b> The proposed project consists of the ongoing maintenance of an approximately 500-foot segment of Tequesquite Creek Channel to preserve sufficient flood capacity. Maintenance activities would include annual vegetation management, removal of accumulated sediment, and removal of debris/trash. The proposed project does not include new residential development that would increase demand for parks or other recreational services. Therefore, <b>no impact</b> to existing recreational facilities would occur as a result of the proposed project.</p>   |                                |  |                                     |                                     |
| 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?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| <p><b>16b. Response:</b> <i>(Source: Project Description; General Plan 2025 Figure PR-1, Parks, Open Spaces and Trails)</i></p> <p><b>No Impact.</b> As described in response 16a, the project proposes ongoing maintenance of an existing trapezoidal channel to preserve sufficient flood capacity. The project does not include the construction or expansion of any recreational facilities. <b>No impact</b> associated with the construction or expansion of recreational facilities would occur as a result of the proposed project.</p>   |                                |  |                                     |                                     |
| <b>3.17 TRANSPORTATION</b>  |                                |  |                                     |                                     |
| Would the project result in:  |                                |  |                                     |                                     |
| a. Conflict with a program plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| <p><b>17a. Response:</b> <i>(Source: Project Description; General Plan 2025 Figure CCM-4, Master Plan of Roadways)</i></p> <p><b>Less Than Significant Impact.</b> The proposed project consists of the maintenance of an existing trapezoidal flood control channel and adjacent maintenance access roads within an approximately 500-linear-foot segment of Tequesquite Creek. The maintenance activities would be short term (3 to 5 days) and occur as needed for a period of 10 years (2020 through 2029) at a minimum of one time per year. The project would temporarily add trips on the local roadways when maintenance is occurring through delivery of equipment, maintenance worker trips, and stockpile removal. Maintenance equipment is limited to a maximum of one bulldozer, one excavator, and one dump truck. The delivery of this equipment would not require road closures or a traffic control plan since access, staging, and stockpiling will be conducted from the adjacent access roads along the channel. The temporary addition of trips to local roads to conduct channel maintenance is not expected to exceed 20 trips per maintenance event (four trips per day for a period of 5 days). Therefore, potential impacts to traffic would be <b>less than significant</b>.</p> |                                |  |                                     |                                     |

| ISSUES (AND SUPPORTING INFORMATION SOURCES):  | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact        | No Impact                           |
|---|--------------------------------|--|-------------------------------------|-------------------------------------|
| a. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| <b>17b. Response: (Source: Project Description; General Plan 2025 Figure CCM-4, Master Plan of Roadways)</b><br><br><b>Less Than Significant Impact.</b> As described in response 17a, the proposed project consists of channel maintenance that is expected to generate approximately 20 trips per maintenance event. These trips are associated with the delivery of equipment, removal of stockpiled sediment and debris, and arrival on site of City of Riverside Public Works staff. The maintenance activities would be short term (3 to 5 days) and occur as needed for a period of 10 years (2020 through 2029) at a minimum of one time per year. Due to the short-term, infrequent addition of traffic trips to local roadways, implementation of the proposed project will not result in traffic impacts that would conflict or be inconsistent with CEQA Guidelines Section 15064.3(b). The project does not involve the construction of any new residences or facilities that could increase the local population or generate significant new traffic trips. Therefore, potential impacts to traffic would be <b>less than significant</b> . |                                |  |                                     |                                     |
| b. 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?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| <b>17c. Response: (Source: General Plan 2025 Figure PS-6, Airport Safety Zones and Influence Areas)</b><br><br><b>No Impact.</b> The nearest airports to the project site are the Flabob Airport, which is located approximately 1 mile west of the project site, and the Riverside Municipal Airport, which is located approximately 1.5 miles southwest of the project site. The project site is located within Zone E, as designated by the Riverside County Airport Land Use Compatibility Plan for both airports, which is considered compatible with flood areas and waterways including creeks and canals. Implementation of the proposed channel maintenance activities would not result a change in air traffic patterns. Additionally, the project does not involve the construction of new residential development and workers in the area would be limited to City employees conducting periodic maintenance activities. Therefore, implementation of the proposed project would result in <b>no impact</b> to safety hazards associated with a change in air traffic patterns.   |                                |  |                                     |                                     |
| c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| <b>17d. Response: (Source: Project Description)</b><br><br><b>Less Than Significant Impact.</b> The proposed project does not include the construction of new roads that would include sharp turns or new intersections. The transport of equipment to conduct maintenance activities will occur infrequently (as needed, but at a minimum once per year) and all equipment staging and stockpiling would occur off of existing roadways within the fenced project footprint that encloses the channel and access roads. Therefore, there would be a <b>less than significant impact</b> associated with traffic hazards due to a design feature or incompatible uses.  |                                |  |                                     |                                     |
| d. Result in inadequate emergency access?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

| ISSUES (AND SUPPORTING INFORMATION SOURCES):  | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact                |  |                          |                                     |                          |                          |
|---|--------------------------------|--|------------------------------|--------------------------|--|--------------------------|-------------------------------------|--------------------------|--------------------------|
| <p><b>17e. Response: (Source: Project Description)</b></p> <p><b>No Impact.</b> All proposed maintenance activities would occur within a 500-foot segment of Tequesquite Creek Channel, which is currently fenced and accessed by a locked gate. There are existing access roads on either side of the channel where maintenance vehicles would be parked, equipment staged, and temporary debris/sediment stockpiles placed prior to removal off site. Implementation of the proposed maintenance activities would not require temporary closure of any streets, nor would temporary redirection of traffic be required. Therefore, the project would result in <b>no impact</b> to long-term emergency access.</p>  |                                |  |                              |                          |  |                          |                                     |                          |                          |
| <p><b>3.18 TRIBAL CULTURAL RESOURCES.</b></p> <p>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:</p> <table border="1" data-bbox="99 814 1430 905"> <tr> <td data-bbox="99 814 837 905">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</td> <td data-bbox="837 814 992 905"><input type="checkbox"/></td> <td data-bbox="992 814 1138 905"><input checked="" type="checkbox"/></td> <td data-bbox="1138 814 1284 905"><input type="checkbox"/></td> <td data-bbox="1284 814 1430 905"><input type="checkbox"/></td> </tr> </table>  |                                |  |                              |                          | 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"/> |
| 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"/> |  |                          |                                     |                          |                          |
| <p><b>18a. Response: (Source: Dudek 2017 – Appendix E - Confidential)</b></p> <p><b>Less Than Significant with Mitigation Incorporated.</b> AB 52 (California Public Resources Code, Section 21074) requires consideration of impacts to tribal cultural resources as part of the CEQA process, and requires the City, the CEQA lead agency for the proposed project, to notify any groups (who have requested notification) of the proposed project who are traditionally or culturally affiliated with the geographic area of the project. As a first step in this process, the City retained Dudek to conduct a cultural resources study for the proposed channel maintenance project in August 2017. The results of the California Historical Resources Information System records search at the Eastern Information Center indicated that no previously recorded cultural resources have been identified within a 1-mile radius of the project site. Similarly, the Dudek ground survey within the project footprint did not find evidence of any archaeological resources; however, a single historic-age built environment resource consisting of the channelized segment of the Tequesquite Creek was identified. The channel structure was recorded and evaluated in consideration of NRHP and CRHR, but was found not eligible for listing in the NRHP or CRHR. No additional study or mitigation is required for this resource.</p> <p>Following completion of the cultural resources survey and report, the City sent project notification letters via certified mail in July 2017 to traditionally and culturally affiliated Native American Tribes. In compliance with AB 52, the intent of the notification letters was to provide the Tribes with the opportunity to enter into government-to-government consultation with the City and to solicit their participation in project scoping, development, and/or review of documentation. Written responses were received by the City from the Rincon Band of Luiseno Indians, Soboba Band of Luiseno Indians, and the San Manuel Band of Mission Indians. The San Manuel Band of Mission Indians declined to consult since the project area was determined by the Tribal contact to be located outside of Serrano ancestral territory. Consultation with the Rincon Band of Luiseno Indians was concluded with no requested revisions to the findings of the cultural resources report or additional recommended mitigation measures. A conference call was held by the City of Riverside with the Soboba Band of Luiseno Indians on November 6, 2017 to discuss the project. Emails providing additional project information and soliciting any additional questions or requests were sent to Mr. Joseph Ontiveros, Director of Cultural Resources, for the Soboba Band of Luiseno Indians by the City of Riverside on December 14, 2017 and December 11, 2019. To date, no additional communication has been received from the Soboba Band of Luiseno Indians. In the event that unanticipated cultural resources or human remains are found during maintenance activities, implementation of MM-CUL-1 and MM-CUL-2 will reduce the potential for impacts to such resources to <b>less than significant with mitigation incorporated</b>.</p> <p><b>Mitigation Measures</b></p> <p>Refer to MM-CUL-1 and MM-CUL-2.</p> |                                |  |                              |                          |  |                          |                                     |                          |                          |

| ISSUES (AND SUPPORTING INFORMATION SOURCES):  | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact                           |
|---|--------------------------------|--|------------------------------|-------------------------------------|
| 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"/>            |
| <p><b>18b. Response: (Source: Dudek 2017 – Appendix E - Confidential)</b></p> <p><b>Less Than Significant with Mitigation Incorporated.</b> As described in response 18a, the results of the cultural resources study conducted by Dudek for the proposed channel maintenance project concluded that there were no previously recorded cultural resources within a 1-mile radius of the project site and the Dudek ground survey did not find evidence of any archaeological resources. The channelized segment of Tequesquite Creek was found to be a historic-age built environment resource and was recorded and evaluated in consideration of NRHP and CRHR, but was found not eligible for listing in the NRHP or CRHR.</p> <p>The City conducted Tribal consultation in accordance with AB 52 in July 2017, following completion of the cultural report. Consultation was completed with no requested revisions to the findings of the cultural resources report or additional recommended mitigation measures. In the event that unanticipated cultural resources or human remains are found during maintenance activities, implementation of MM-CUL-1 and MM-CUL-2 will reduce the potential for impacts to such resources to <b>less than significant with mitigation incorporated</b>.</p> <p><b>Mitigation Measures</b></p> <p>Refer to MM-CUL-1 and MM-CUL-2.</p> |                                |  |                              |                                     |
| <p><b>3.19 UTILITIES AND SYSTEM SERVICES.</b></p> <p>Would the project:</p>   |                                |  |                              |                                     |
| a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| <p><b>19a. Response: (Source: Project Description)</b></p> <p><b>No Impact.</b> The proposed project consists of the ongoing maintenance of an approximately 500-foot segment of Tequesquite Creek Channel to preserve sufficient flood capacity. No expansion or increase in capacity of the existing trapezoidal storm channel is proposed. There is no component of the project that would require wastewater treatment, potable water, or natural gas or telecommunication services; therefore, implementation of the proposed project would result in <b>no impact</b> associated with the relocation or construction of new or expanded utility and service systems.</p>  |                                |  |                              |                                     |
| b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |

| ISSUES (AND SUPPORTING INFORMATION SOURCES):  | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact        | No Impact                           |
|---|--------------------------------|--|-------------------------------------|-------------------------------------|
| <b>19b. Response: (Source: Project Description)</b><br><br><b>No Impact.</b> As described in response 19a, the proposed project consists of the ongoing maintenance of an approximately 500-foot segment of an existing trapezoidal channel (Tequesquite Creek Channel) to preserve sufficient flood capacity. There is no component of the project that would require potable or recycled water service; therefore, implementation of the proposed project would result in <b>no impact</b> to water supply.   |                                |  |                                     |                                     |
| c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| <b>19c. Response: (Source: Project Description)</b><br><br><b>No Impact.</b> As described in responses 19a and 19b, the proposed project consists of the ongoing maintenance of an approximately 500-foot segment of an existing trapezoidal channel (Tequesquite Creek Channel) to preserve sufficient flood capacity. There is no component of the project that would require wastewater treatment; therefore, implementation of the proposed project would result in <b>no impact</b> to wastewater treatment capacity.  |                                |  |                                     |                                     |
| d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| <b>19d. Response: (Source: General Plan 2025 FPEIR Table 5.16-A, Existing Landfills; General Plan 2025 FPEIR Table 5.16-M, Estimated Future Solid Waste Generation from the Planning Area)</b><br><br><b>Less Than Significant Impact.</b> The proposed project would generate a minimal amount of waste during each maintenance event, including vegetation trimmings, accumulated sediment, and any trash or debris that is washed downstream into the 500-foot segment of Tequesquite Creek Channel that incorporates the project site. All waste materials produced by City staff during maintenance of Tequesquite Creek Channel will be taken off site and disposed of in accordance with current City protocol. As described in the General Plan 2025 FPEIR, the City of Riverside Public Works Department currently collects trash from approximately 70% of all city households, along with any waste materials generated during City maintenance activities. All non-hazardous solid waste collected is taken to the Robert A. Nelson Transfer station, which is owned by the County of Riverside, and then transferred to the Badlands, El Sobrante, or Lamb Canyon Landfills for disposal.<br><br>The solid waste generated during each maintenance event within Tequesquite Creek Channel would be limited to minimal amounts of vegetation trimmings, sediment, and trash/debris and would not be substantial or interfere with the sufficient permitted capacity of nearby landfills. Therefore, impacts would be <b>less than significant</b> . |                                |  |                                     |                                     |
| e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| <b>19e. Response: (Source: California Integrated Waste Management Board 2002 Landfill Facility Compliance Study)</b><br><br><b>No Impact.</b> The California Integrated Waste Management Act under the California Public Resources Code requires that local jurisdictions divert at least 50% of all solid waste generated by January 1, 2000. The City is currently achieving a 60% diversion rate, well above state requirements. As described in response 19d, the proposed project would result in a minimal amount of waste (vegetation trimmings, sediment, and trash/debris) collected during each maintenance event, which would be disposed of off site. The proposed project must comply with the City's waste disposal requirements, and as such would not conflict with any federal, state, or local regulations related to solid waste. Therefore, <b>no impacts</b> related to solid waste statutes will occur directly, indirectly, or cumulatively.   |                                |  |                                     |                                     |



| ISSUES (AND SUPPORTING INFORMATION SOURCES):   | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact                           |
|--|--------------------------------|--|------------------------------|-------------------------------------|
| <b>3.20 WILDFIRE.</b>  |                                |  |                              |                                     |
| If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:   |                                |  |                              |                                     |
| a. Substantially impair an adopted emergency response plan or emergency evacuation plan?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| <b>20a. Response: (Source: General Plan 2025 Figure PS-8.1, Evacuation Routes)</b><br><br><b>No Impact.</b> As described in response 9f, emergency response and disaster preparedness is coordinated by the Emergency Management Office within the City of Riverside Fire Department. The Emergency Operations Plan is maintained by the Emergency Manager and updated every 5 years. The General Plan 2025 (Figure PS-8.1) identifies major freeways and arterial streets throughout the City to be used as evacuation routes in the event of an emergency. The evacuation routes nearest to the project site are Magnolia Avenue, located approximately 2 miles east of the project site, and Mission Inn Avenue, located approximately 4 miles north of the project site. There are no other known emergency evacuation or response plans within the vicinity of the project site. The project consists of periodic maintenance to be conducted within an existing trapezoidal flood control channel, which is located within an area surrounded by parklands and gated to prevent public access. The project site includes access roads on either side of the channel to accommodate maintenance vehicles; therefore, no temporary road closures would be required during maintenance activities. Implementation of the project would result in <b>no impact</b> to an adopted emergency response plan or emergency evacuation plan. |                                |  |                              |                                     |
| b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| <b>20b. Response: (Source: General Plan 2025 Figure PS-7, Fire Hazard Areas)</b><br><br><b>No Impact.</b> The project site is not located on or adjacent to lands designated as a Fire Hazard Area as depicted in Figure PS-7 of the General Plan 2025. Additionally, the proposed project involves ongoing, periodic maintenance of a 500-foot segment of the existing Tequesquite Creek Channel, and does not include the construction of any new buildings or facilities which would house occupants. Therefore, the project will result in <b>no impact</b> associated with the exposure of project occupants to pollutants from a wildland fire.  |                                |  |                              |                                     |
| c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| <b>20c. Response: (Source: General Plan 2025 Figure PS-7, Fire Hazard Areas)</b><br><br><b>No Impact.</b> As described in response 20b, the project site is not located on or adjacent to lands designated as a Fire Hazard Area as depicted in Figure PS-7 of the General Plan 2025. The proposed project involves ongoing, periodic maintenance of a 500-foot segment of the existing Tequesquite Creek Channel and the adjacent access roads. The project does not include the construction of any new buildings or facilities, nor would the project be occupied by the public; therefore, no additional infrastructure or maintenance, such as roads, fuel breaks, or other utilities are needed to reduce wildfire risks. The project will result in <b>no impact</b> associated with the exposure of project occupants to pollutants from a wildland fire.  |                                |  |                              |                                     |
| d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |

| ISSUES (AND SUPPORTING INFORMATION SOURCES):  | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact        | No Impact                |
|---|--------------------------------|--|-------------------------------------|--------------------------|
| <p><b>20d. Response:</b> <i>(Source: General Plan 2025 Figure PS-7, Fire Hazard Areas)</i></p> <p><b>No Impact.</b> As described in response 20b, the project site is not located on or adjacent to lands designated as a Fire Hazard Area and does not include the construction of buildings or facilities that would be occupied. The proposed project involves ongoing, periodic maintenance of a 500-foot segment of the existing Tequesquite Creek Channel and the adjacent access roads. There is no potential for these activities to expose people or structures to significant risk of flooding, landslides or other drainage and wildfire related risks. On the contrary, the proposed vegetation maintenance will decrease on-site fire risk and the sediment and debris removal activities are proposed to prevent flooding by maintaining channel capacity. There are no structural changes or permanent fills proposed within the channel that could change existing drainage patterns or create instable slopes that could be exacerbated by post-wildfire conditions. The project will result in <b>no impact</b> associated with the exposure of people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes.</p>  |                                |  |                                     |                          |
| <b>3.21 MANDATORY FINDINGS OF SIGNIFICANCE</b>  |                                |  |                                     |                          |
| <p>a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or an endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?</p>  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <p><b>21a. Response:</b> <i>(Cadre Environmental 2018 - Appendix B; Dudek 2019 – Appendix C)</i></p> <p><b>Less Than Significant Impact.</b> The proposed project is considered beneficial for downstream water quality and biological resources by removing trash, sediment, and other debris that would otherwise be discharged downstream during storm events. Additionally, these activities will reduce on-site fire risk and localized flooding by removing potentially combustible materials and ensuring that the hydrologic capacity of the channel is retained. Maintenance activities would occur as needed for a period of 10 years; however, each maintenance event is short term (3 to 5 days) and will be scheduled outside of the nesting bird season in accordance with MM-BIO-1, MM-BIO-2, and MM-BIO-3. The project has been deemed consistent with the Western Riverside MSHCP by the RCA and the proposed mitigation plan for riverine/riparian resources has been approved by the resource agencies (CDFW and U.S. Fish and Wildlife Service). Based upon the results of the cultural resources survey report and AB 52 consultation initiated by the City, significant impacts to cultural resources, including tribal lands, as a result of the proposed maintenance activities are not anticipated. Additionally, avoidance measures (MM-CUL-1 and MM-CUL-2) are in place to address any previously unanticipated discoveries of cultural resources during construction. Therefore, as indicated in this IS/MND, the project's potential impacts to the environment, wildlife species, and archaeological and tribal resources will be <b>mitigated below a level of significance</b>.</p> |                                |  |                                     |                          |

| ISSUES (AND SUPPORTING INFORMATION SOURCES):  | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact        | No Impact                |
|---|--------------------------------|--|-------------------------------------|--------------------------|
| 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)?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <p><b>21b. Response:</b> (<i>Cadre Environmental 2018 – Appendix B; Dudek 2019 – Appendix C</i>)</p> <p><b>Less Than Significant Impact.</b> As discussed above in response to 21a, the proposed maintenance activities are short term and infrequent and involve limited numbers of maintenance staff and equipment to ensure that the capacity of the channel is retained and that any accumulated sediment, trash, or debris is removed. All potential impacts to biological and cultural resources will be either less than significant or will be mitigated below a level of significance. The project is expected to benefit downstream water quality and biological resources through the removal of debris and accumulated sediment, which otherwise may be discharged off site during storm events. Cumulatively considerable impacts would be <b>less than significant</b>.</p>   |                                |  |                                     |                          |
| c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <p><b>21c. Response:</b> (<i>Source: General Plan 2025 FPEIR Section 5, Environmental Impact Analysis for the General Plan 2025 Program</i>)</p> <p><b>Less Than Significant Impact.</b> Effects on human beings were evaluated as part of the aesthetics, air quality, hydrology and water quality, noise, population and housing, hazards and hazardous materials, and traffic sections of this IS/MND and found to be less than significant for each of the above sections. The proposed channel maintenance activities are anticipated to benefit the public since the potential for on-site and downstream flooding will be reduced through the removal of sediment and debris. Based on the analysis and conclusions in this initial study, the project will not cause substantial adverse effects directly or indirectly to human beings. Therefore, potential direct and indirect impacts on human beings that result from the proposed project are <b>less than significant</b>.</p> |                                |  |                                     |                          |
|   |                                |  |                                     |                          |

**Note:** Authority cited: Sections 21083 and 21087, California Public Resources Code. Reference: Sections 21080(c), 21080.1, 21080.3, 21082.1, 21083, 21083.3, 21093, 21094, 21151, California Public Resources Code; *Sundstrom v. County of Mendocino*, 202 Cal.App.3d 296 (1988); *Leonoff v. Monterey Board of Supervisors*, 222 Cal.App.3d 1337 (1990).

### Staff Recommended Mitigation Measures

| Impact Category      | Mitigation Measures  | Implementation Timing  | Responsible Monitoring Party <sup>6</sup> | Monitoring/ Reporting Method |
|----------------------|--|--|---|------------------------------|
| Biological Resources | <b>MM-BIO-1 Burrowing Owl.</b> Prior to implementation of annual maintenance activities each year, the site shall be surveyed for suitable burrows. If burrows exist, a preconstruction survey shall be conducted in accordance with the Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP). If the survey is negative, no additional mitigation is required. If the survey is positive, Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area (RCA 2006). This survey would occur within 30 days prior to ground-disturbance activities. A minimum of one survey site visit within the described time frame prior to disturbance is required to confirm presence or absence of owls on the site. Preconstruction surveys are to be conducted by a qualified biologist. If surveys confirm occupied burrowing owl habitat is located in or adjoining the project site, an impact assessment and avoidance measures will be implemented consistent with the requirements of the MSHCP.  | Prior to implementation of annual maintenance activities   | City of Riverside Public Works            | Survey Report                |
|                      | <b>MM-BIO-2 Nesting Birds.</b> Maintenance activities shall be avoided during nesting bird season, from approximately February 1 through August 31. If ground-disturbing activities cannot be completed outside the nesting bird season, the following measures shall be implemented: Surveys shall be conducted within 300 feet of disturbance areas no earlier than 3 days prior to the commencement of maintenance activities within the channel. If active nests are found, all maintenance activities shall be postponed or halted within a buffer area established by the qualified biologist that is suitable to the particular bird species and location of the nest until the nest is vacated and juveniles have fledged, as determined by the qualified biologist. The avoidance area shall be clearly demarcated in the field with highly visible construction fencing or flagging, and maintenance personnel shall be instructed on the sensitivity of nest areas. A qualified biologist shall serve as a monitor during those periods if maintenance activities must occur within active nest buffer area to ensure that no inadvertent impacts on these nests occur. The results of the survey, including graphics showing the locations of any active nests detected, and documentation of any recommended avoidance measures, shall be submitted to the City of Riverside within 24 hours. | Prior to implementation of annual maintenance activities (when conducted during nesting bird season) | City of Riverside Public Works            | Survey Report                |

<sup>6</sup> All agencies are City of Riverside Departments/Divisions unless otherwise noted.

### Staff Recommended Mitigation Measures

| Impact Category | Mitigation Measures  | Implementation Timing   | Responsible Monitoring Party <sup>6</sup> | Monitoring/ Reporting Method |
|-----------------|--|---|---|------------------------------|
|                 | <p><b>MM-BIO-3 Least Bell's Vireo.</b> Maintenance activities shall be avoided during the riparian bird nesting season, from approximately April 1 through August 15. If ground-disturbing activities cannot be completed outside the nesting riparian bird season, the following measures shall be implemented: If construction activities begin between March 15 and September 15, two preconstruction surveys shall be conducted within riparian habitat found within 500 feet of the disturbance areas. One survey shall occur no earlier than 7 days prior to the commencement of activity, with the second occurring within 3 days of activity commencement. If ground-disturbance activities are delayed, then additional pre-disturbance surveys shall be conducted such that no more than 3 days will have elapsed between the last survey and ground-disturbance activities. The survey shall be completed by a biologist who is experienced with the species. If active nests of least Bell's vireo are found, the qualified biologist shall monitor and determine if construction noise levels or motion are potential sources for nest failure, and avoidance buffers shall be established accordingly. Additional follow-up weekly visits by the qualified biologist shall be required if active nests occur within 300 feet of the project construction activities.</p> | Prior to implementation of annual maintenance activities (when conducted during nesting riparian bird season) | City of Riverside Public Works            | Survey Report                |
|                 | <p><b>MM-BIO-4 Indirect Impacts to Special-Status Species.</b> Best management practices shall be implemented to minimize indirect impacts to special-status species.</p> <ol style="list-style-type: none"> <li><b>1. Minimize Spills of Hazardous Materials.</b> All vehicles and equipment shall be maintained in proper condition to minimize the potential for fugitive emissions of motor oil, antifreeze, hydraulic fluid, grease, or other hazardous materials. Hazardous spills shall be immediately cleaned up, and the contaminated soil shall be properly handled or disposed of at a licensed facility. Servicing of construction equipment shall take place only at the Public Works Maintenance Yard or at an appropriate off-site staging area.</li> <li><b>2. Worker Guidelines.</b> All trash and food-related waste shall be placed in self-closing containers and removed regularly from the site to prevent overflow. Workers shall not feed wildlife or bring pets to the project site.</li> </ol>   | During construction   | City of Riverside Public Works            | Maintenance Summary Report   |

### Staff Recommended Mitigation Measures

| Impact Category | Mitigation Measures   | Implementation Timing  | Responsible Monitoring Party <sup>6</sup> | Monitoring/ Reporting Method   |
|-----------------|---|--|---|--|
|                 | <p>3. <b>Invasive Weeds.</b> The spread of invasive weeds shall be minimized through removal of non-native weed species and remedial measures as determined during routine monitoring.</p> <p>4. <b>Dust Minimization.</b> The spread of dust shall be minimized through periodic watering of actively disturbed soils or previously disturbed soils.</p>   |  |   |  |
|                 | <p><b>MM-BIO-5 Avoidance, Minimization, and Mitigation for Jurisdictional Waters.</b> Appropriate permits shall be obtained from the regulatory agencies, including a Clean Water Act Section 404 permit from the U.S. Army Corps of Engineers (an Individual Permit will be required), a Water Quality Certification from the Regional Water Quality Control Board, and a Streambed Alteration Agreement from the California Department of Fish and Wildlife (CDFW). All mitigation measures and conditions contained within the permits shall be implemented. At a minimum, the following shall be completed for mitigation for impacts to waters of the United States and jurisdictional streambed:</p> <ul style="list-style-type: none"> <li>• <b>Compensation for Permanent Impacts:</b> Permanent impacts to waters of the United States and jurisdictional streambed shall be offset through one of the following options: (1) Purchase of 1.32 acres of credits within a resource agency-approved mitigation bank to an in-lieu fee program, (2) recordation of a Conservation Easement (CE) in favor of a CDFW-approved entity over Assessor's Parcel Number (APN) 187-080-009, (3) Recordation of a CE in favor of a CDFW-approved entity over APN 187-080-010, or as otherwise required by the respective permits.</li> <li>• <b>Best Management Practices.</b> Best management practices shall be implemented to avoid indirect impacts to downstream jurisdictional waters, including the following: <ul style="list-style-type: none"> <li>a. Vehicles and equipment will not be operated in ponded or flowing water except as described in the permits.</li> <li>b. Water containing mud, silt, or other pollutants from maintenance activities will not be allowed to enter jurisdictional waters or be placed in locations that may be subjected to high storm flows.</li> <li>c. Temporary stockpiles of vegetation, sediment, and debris will not be placed in locations that may be subject to high</li> </ul> </li> </ul> | Prior to, and during implementation of annual maintenance activities | City of Riverside Public Works            | <p>Project permits (401 water quality certification, 404 permit authorization, and 1602 Streambed Alteration Agreement)</p> <p>Mitigation bank purchase receipt or copy of conservation easement</p> <p>Maintenance Summary Report</p> |

### Staff Recommended Mitigation Measures

| Impact Category | Mitigation Measures  | Implementation Timing | Responsible Monitoring Party <sup>6</sup> | Monitoring/ Reporting Method |
|-----------------|--|-----------------------|---|------------------------------|
|                 | <p>storm flows, where the materials might be washed back into the channel.</p> <p>d. Oil, gasoline, lubricants for equipment, other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources, resulting from project-related activities will be prevented from contaminating the soil and/or entering avoided jurisdictional waters.</p> <p>e. No equipment repairs will occur within 150 feet of jurisdictional waters and all planned maintenance will occur off site at the Public Works Equipment Yard. No petroleum products or other pollutants from the equipment will be allowed to enter these areas or enter any off-site state-jurisdictional waters under any flow.</p>   |                       |   |                              |
|                 | <p><b>MM-CUL-1 Unanticipated Discovery of Archaeological and Paleontological Resources.</b> In the event that archaeological or paleontological resources (sites, features, or artifacts) are exposed during maintenance activities, all work occurring within 100 feet of the find shall immediately stop until a qualified archaeologist and/or paleontologist, meeting the Secretary of the Interior's Professional Qualification Standards, can evaluate the significance of the find and determine whether or not additional study is warranted. Depending upon the significance of the find under the California Environmental Quality Act (CEQA), the archaeologist and/or paleontologist may simply record the find and allow work to continue. If the discovery proves significant under CEQA, additional work, such as preparation of a cultural resources treatment plan and data recovery, may be warranted.</p> | During construction   | City of Riverside Public Works            | Maintenance Summary Report   |
|                 | <p><b>MM-CUL-2 Unanticipated Discovery of Human Remains.</b> In accordance with Section 7050.5 of the California Health and Safety Code, if human remains are found, the County coroner shall be immediately notified of the discovery. No further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the County coroner has determined, within 2 working days of notification of the discovery, the appropriate treatment and disposition of the human remains. If the County coroner determines that the remains are, or are believed</p>   | During construction   | City of Riverside Public Works            | Maintenance Summary Report   |

### Staff Recommended Mitigation Measures

| Impact Category | Mitigation Measures  | Implementation Timing | Responsible Monitoring Party <sup>6</sup> | Monitoring/ Reporting Method |
|-----------------|--|-----------------------|---|------------------------------|
|                 | to be, Native American, he or she shall notify the Native American Heritage Commission (NAHC) in Sacramento within 24 hours. In accordance with California Public Resources Code, Section 5097.98, the NAHC must immediately notify those persons it believes to be the most likely descendant from the deceased Native American. The most likely descendant shall complete their inspection within 48 hours of being granted access to the site. The designated Native American representative would then determine, in consultation with the property owner, the disposition of the human remains. |                       |   |                              |



# **Tequesquite Creek Channel Maintenance Project Initial Study/Mitigated Negative Declaration**

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## **4 LIST OF PREPARERS**

### **4.1 Lead Agency – City of Riverside Public Works Department**

Michael Roberts, Environmental Services Coordinator  
City of Riverside Public Works Department  
3900 Main Street, 4<sup>th</sup> Floor  
Riverside, California 92522

### **4.2 Project Consultants**

#### **Dudek**

Shelah Riggs, Project Manager  
Wendy Worthey, Deputy Project Manager  
Ian McIntire, Air Quality Specialist  
Anna Cassady, Biologist  
Spenser Lucarelli, GIS Technician  
Jessica Colston, Archaeologist  
Samantha Murray, Architectural Historian

#### **Cadre Environmental**

Ruben Ramirez, Senior Biologist

**Tequesquite Creek Channel Maintenance Project  
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# Tequesquite Creek Channel Maintenance Project Initial Study/Mitigated Negative Declaration

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**Tequesquite Creek Channel Maintenance Project  
Initial Study/Mitigated Negative Declaration**

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# APPENDIX A

## *CalEEMod Output*





**Tequesquite Creek Maintenance Project**  
**Riverside-South Coast County, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses               | Size | Metric            | Lot Acreage | Floor Surface Area | Population |
|-------------------------|------|-------------------|-------------|--------------------|------------|
| User Defined Industrial | 1.00 | User Defined Unit | 0.93        | 40,510.80          | 0          |

### 1.2 Other Project Characteristics

|                             |                            |                             |       |                             |       |
|-----------------------------|----------------------------|-----------------------------|-------|-----------------------------|-------|
| Urbanization                | Rural                      | Wind Speed (m/s)            | 2.4   | Precipitation Freq (Days)   | 28    |
| Climate Zone                | 10                         |                             |       | Operational Year            | 2030  |
| Utility Company             | Southern California Edison |                             |       |                             |       |
| CO2 Intensity<br>(lb/MW hr) | 702.44                     | CH4 Intensity<br>(lb/MW hr) | 0.029 | N2O Intensity<br>(lb/MW hr) | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - Tequesquite Creek Maintenance Project. Riverside County (SCAB).

Land Use - Project site is 0.93 acre.

Construction Phase - Maintenance activity would occur once a year from 2020 to 2029.

Off-road Equipment - Equipment based project specifics. Assumed to operate 6 hours/day.

Off-road Equipment - Equipment based on project specifics. Assumed excavator and backhoe to operate 6 hours/day.

Off-road Equipment - Equipment based on project specifics. Assumed excavator and backhoe to operate 6 hours/day.

Off-road Equipment - Equipment based on project specifics. Assumed excavator and backhoe to operate 6 hours/day.

Off-road Equipment - Equipment based on project specifics. Assumed excavator and backhoe to operate 6 hours/day.

Off-road Equipment - Equipment based on project specifics. Assumed excavator and backhoe to operate 6 hours/day.

Construction Off-road Equipment Mitigation - Water twice daily and 15 mph vehicle speeds.

[illegible]

[illegible]

[illegible]

## Tequesquite Creek Maintenance Project - Riverside-South Coast County, Annual

|                |                   |      |       |
|----------------|-------------------|------|-------|
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 10.00 |
| tblTripsAndVMT | WorkerTripNumber  | 5.00 | 12.00 |
| tblTripsAndVMT | WorkerTripNumber  | 5.00 | 12.00 |
| tblTripsAndVMT | WorkerTripNumber  | 5.00 | 12.00 |
| tblTripsAndVMT | WorkerTripNumber  | 5.00 | 12.00 |
| tblTripsAndVMT | WorkerTripNumber  | 5.00 | 12.00 |
| tblTripsAndVMT | WorkerTripNumber  | 5.00 | 12.00 |
| tblTripsAndVMT | WorkerTripNumber  | 5.00 | 12.00 |
| tblTripsAndVMT | WorkerTripNumber  | 5.00 | 12.00 |
| tblTripsAndVMT | WorkerTripNumber  | 5.00 | 12.00 |
| tblTripsAndVMT | WorkerTripNumber  | 5.00 | 12.00 |

## 2.0 Emissions Summary

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## 2.1 Overall Construction

### Unmitigated Construction

|         | ROG         | NOx         | CO     | SO2         | Fugitive<br>PM10 | Exhaust<br>PM10 | PM10<br>Total | Fugitive<br>PM2.5 | Exhaust<br>PM2.5 | PM2.5<br>Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e   |
|---------|-------------|-------------|--------|-------------|------------------|-----------------|---------------|-------------------|------------------|----------------|----------|-----------|-----------|-------------|--------|--------|
| Year    | tons/yr     |             |        |             |                  |                 |               |                   |                  |                | MT/yr    |           |           |             |        |        |
| 2020    | 1.0500e-003 | 9.8100e-003 | 0.0119 | 2.0000e-005 | 0.0194           | 4.8000e-004     | 0.0199        | 2.0200e-003       | 4.4000e-004      | 2.4600e-003    | 0.0000   | 2.0943    | 2.0943    | 4.7000e-004 | 0.0000 | 2.1061 |
| 2021    | 9.7000e-004 | 8.8200e-003 | 0.0118 | 2.0000e-005 | 0.0194           | 4.1000e-004     | 0.0198        | 2.0200e-003       | 3.8000e-004      | 2.4000e-003    | 0.0000   | 2.0785    | 2.0785    | 4.7000e-004 | 0.0000 | 2.0903 |
| 2022    | 8.6000e-004 | 7.5900e-003 | 0.0116 | 2.0000e-005 | 0.0194           | 3.4000e-004     | 0.0197        | 2.0200e-003       | 3.1000e-004      | 2.3300e-003    | 0.0000   | 2.0616    | 2.0616    | 4.7000e-004 | 0.0000 | 2.0734 |
| 2023    | 8.0000e-004 | 6.5100e-003 | 0.0115 | 2.0000e-005 | 0.0194           | 2.9000e-004     | 0.0197        | 2.0200e-003       | 2.6000e-004      | 2.2900e-003    | 0.0000   | 2.0376    | 2.0376    | 4.6000e-004 | 0.0000 | 2.0492 |
| 2024    | 7.6000e-004 | 6.0500e-003 | 0.0114 | 2.0000e-005 | 0.0194           | 2.6000e-004     | 0.0196        | 2.0200e-003       | 2.4000e-004      | 2.2600e-003    | 0.0000   | 2.0251    | 2.0251    | 4.6000e-004 | 0.0000 | 2.0367 |
| 2025    | 7.1000e-004 | 5.4800e-003 | 0.0113 | 2.0000e-005 | 0.0194           | 2.2000e-004     | 0.0196        | 2.0200e-003       | 2.0000e-004      | 2.2200e-003    | 0.0000   | 2.0109    | 2.0109    | 4.6000e-004 | 0.0000 | 2.0225 |
| 2026    | 7.0000e-004 | 5.4600e-003 | 0.0113 | 2.0000e-005 | 0.0194           | 2.2000e-004     | 0.0196        | 2.0200e-003       | 2.0000e-004      | 2.2200e-003    | 0.0000   | 1.9978    | 1.9978    | 4.6000e-004 | 0.0000 | 2.0094 |
| 2027    | 6.9000e-004 | 5.4500e-003 | 0.0112 | 2.0000e-005 | 0.0194           | 2.2000e-004     | 0.0196        | 2.0200e-003       | 2.0000e-004      | 2.2200e-003    | 0.0000   | 1.9864    | 1.9864    | 4.6000e-004 | 0.0000 | 1.9979 |
| 2028    | 6.9000e-004 | 5.4300e-003 | 0.0112 | 2.0000e-005 | 0.0194           | 2.2000e-004     | 0.0196        | 2.0200e-003       | 2.0000e-004      | 2.2200e-003    | 0.0000   | 1.9765    | 1.9765    | 4.6000e-004 | 0.0000 | 1.9880 |
| 2029    | 6.8000e-004 | 5.4200e-003 | 0.0111 | 2.0000e-005 | 0.0194           | 2.2000e-004     | 0.0196        | 2.0200e-003       | 2.0000e-004      | 2.2200e-003    | 0.0000   | 1.9679    | 1.9679    | 4.6000e-004 | 0.0000 | 1.9794 |
| Maximum | 1.0500e-003 | 9.8100e-003 | 0.0119 | 2.0000e-005 | 0.0194           | 4.8000e-004     | 0.0199        | 2.0200e-003       | 4.4000e-004      | 2.4600e-003    | 0.0000   | 2.0943    | 2.0943    | 4.7000e-004 | 0.0000 | 2.1061 |

**Mitigated Construction**

|         | ROG         | NOx         | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O    | CO2e   |
|---------|-------------|-------------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|--------|
| Year    | tons/yr     |             |        |             |               |              |            |                |               |             | MT/yr    |           |           |             |        |        |
| 2020    | 1.0500e-003 | 9.8100e-003 | 0.0119 | 2.0000e-005 | 0.0121        | 4.8000e-004  | 0.0125     | 1.2900e-003    | 4.4000e-004   | 1.7300e-003 | 0.0000   | 2.0943    | 2.0943    | 4.7000e-004 | 0.0000 | 2.1061 |
| 2021    | 9.7000e-004 | 8.8200e-003 | 0.0118 | 2.0000e-005 | 0.0121        | 4.1000e-004  | 0.0125     | 1.2900e-003    | 3.8000e-004   | 1.6700e-003 | 0.0000   | 2.0785    | 2.0785    | 4.7000e-004 | 0.0000 | 2.0903 |
| 2022    | 8.6000e-004 | 7.5900e-003 | 0.0116 | 2.0000e-005 | 0.0121        | 3.4000e-004  | 0.0124     | 1.2900e-003    | 3.1000e-004   | 1.6000e-003 | 0.0000   | 2.0616    | 2.0616    | 4.7000e-004 | 0.0000 | 2.0734 |
| 2023    | 8.0000e-004 | 6.5100e-003 | 0.0115 | 2.0000e-005 | 0.0121        | 2.9000e-004  | 0.0124     | 1.2900e-003    | 2.6000e-004   | 1.5500e-003 | 0.0000   | 2.0376    | 2.0376    | 4.6000e-004 | 0.0000 | 2.0492 |
| 2024    | 7.6000e-004 | 6.0500e-003 | 0.0114 | 2.0000e-005 | 0.0121        | 2.6000e-004  | 0.0123     | 1.2900e-003    | 2.4000e-004   | 1.5300e-003 | 0.0000   | 2.0251    | 2.0251    | 4.6000e-004 | 0.0000 | 2.0367 |
| 2025    | 7.1000e-004 | 5.4800e-003 | 0.0113 | 2.0000e-005 | 0.0121        | 2.2000e-004  | 0.0123     | 1.2900e-003    | 2.0000e-004   | 1.4900e-003 | 0.0000   | 2.0109    | 2.0109    | 4.6000e-004 | 0.0000 | 2.0225 |
| 2026    | 7.0000e-004 | 5.4600e-003 | 0.0113 | 2.0000e-005 | 0.0121        | 2.2000e-004  | 0.0123     | 1.2900e-003    | 2.0000e-004   | 1.4900e-003 | 0.0000   | 1.9978    | 1.9978    | 4.6000e-004 | 0.0000 | 2.0094 |
| 2027    | 6.9000e-004 | 5.4500e-003 | 0.0112 | 2.0000e-005 | 0.0121        | 2.2000e-004  | 0.0123     | 1.2900e-003    | 2.0000e-004   | 1.4900e-003 | 0.0000   | 1.9864    | 1.9864    | 4.6000e-004 | 0.0000 | 1.9979 |
| 2028    | 6.9000e-004 | 5.4300e-003 | 0.0112 | 2.0000e-005 | 0.0121        | 2.2000e-004  | 0.0123     | 1.2900e-003    | 2.0000e-004   | 1.4900e-003 | 0.0000   | 1.9765    | 1.9765    | 4.6000e-004 | 0.0000 | 1.9880 |
| 2029    | 6.8000e-004 | 5.4200e-003 | 0.0111 | 2.0000e-005 | 0.0121        | 2.2000e-004  | 0.0123     | 1.2900e-003    | 2.0000e-004   | 1.4900e-003 | 0.0000   | 1.9678    | 1.9678    | 4.6000e-004 | 0.0000 | 1.9794 |
| Maximum | 1.0500e-003 | 9.8100e-003 | 0.0119 | 2.0000e-005 | 0.0121        | 4.8000e-004  | 0.0125     | 1.2900e-003    | 4.4000e-004   | 1.7300e-003 | 0.0000   | 2.0943    | 2.0943    | 4.7000e-004 | 0.0000 | 2.1061 |

|                   | ROG  | NOx  | CO   | SO2  | 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 | 37.72         | 0.00         | 37.18      | 36.14          | 0.00          | 32.01       | 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 1  | Site Preparation | 9/1/2020   | 9/7/2020 | 5             | 5        |                   |
| 2            | Site Preparation 2  | Site Preparation | 9/1/2021   | 9/7/2021 | 5             | 5        |                   |
| 3            | Site Preparation 3  | Site Preparation | 9/1/2022   | 9/7/2022 | 5             | 5        |                   |
| 4            | Site Preparation 4  | Site Preparation | 9/1/2023   | 9/7/2023 | 5             | 5        |                   |
| 5            | Site Preparation 5  | Site Preparation | 9/1/2024   | 9/6/2024 | 5             | 5        |                   |
| 6            | Site Preparation 6  | Site Preparation | 9/1/2025   | 9/5/2025 | 5             | 5        |                   |
| 7            | Site Preparation 7  | Site Preparation | 9/1/2026   | 9/7/2026 | 5             | 5        |                   |
| 8            | Site Preparation 8  | Site Preparation | 9/1/2027   | 9/7/2027 | 5             | 5        |                   |
| 9            | Site Preparation 9  | Site Preparation | 9/1/2028   | 9/7/2028 | 5             | 5        |                   |
| 10           | Site Preparation 10 | Site Preparation | 9/1/2029   | 9/7/2029 | 5             | 5        |                   |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0**

#### OffRoad Equipment

| Phase Name         | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|--------------------|---------------------------|--------|-------------|-------------|-------------|
| Site Preparation 1 | Excavators                | 1      | 6.00        | 158         | 0.38        |
| Site Preparation 1 | Tractors/Loaders/Backhoes | 1      | 6.00        | 97          | 0.37        |
| Site Preparation 2 | Excavators                | 1      | 6.00        | 158         | 0.38        |
| Site Preparation 2 | Tractors/Loaders/Backhoes | 1      | 6.00        | 97          | 0.37        |
| Site Preparation 3 | Excavators                | 1      | 6.00        | 158         | 0.38        |
| Site Preparation 3 | Tractors/Loaders/Backhoes | 1      | 6.00        | 97          | 0.37        |
| Site Preparation 4 | Excavators                | 1      | 6.00        | 158         | 0.38        |
| Site Preparation 4 | Tractors/Loaders/Backhoes | 1      | 6.00        | 97          | 0.37        |



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|                     |                           |   |      |     |      |
|---------------------|---------------------------|---|------|-----|------|
| Site Preparation 5  | Excavators                | 1 | 6.00 | 158 | 0.38 |
| Site Preparation 5  | Tractors/Loaders/Backhoes | 1 | 6.00 | 97  | 0.37 |
| Site Preparation 6  | Excavators                | 1 | 6.00 | 158 | 0.38 |
| Site Preparation 6  | Tractors/Loaders/Backhoes | 1 | 6.00 | 97  | 0.37 |
| Site Preparation 7  | Excavators                | 1 | 6.00 | 158 | 0.38 |
| Site Preparation 7  | Tractors/Loaders/Backhoes | 1 | 6.00 | 97  | 0.37 |
| Site Preparation 8  | Excavators                | 1 | 6.00 | 158 | 0.38 |
| Site Preparation 8  | Tractors/Loaders/Backhoes | 1 | 6.00 | 97  | 0.37 |
| Site Preparation 9  | Excavators                | 1 | 6.00 | 158 | 0.38 |
| Site Preparation 9  | Tractors/Loaders/Backhoes | 1 | 6.00 | 97  | 0.37 |
| Site Preparation 10 | Excavators                | 1 | 6.00 | 158 | 0.38 |
| Site Preparation 10 | Tractors/Loaders/Backhoes | 1 | 6.00 | 97  | 0.37 |

**Trips and VMT**

| Phase Name          | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Site Preparation 1  | 2                       | 12.00              | 0.00               | 10.00               | 19.80              | 7.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Site Preparation 2  | 2                       | 12.00              | 0.00               | 10.00               | 19.80              | 7.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Site Preparation 3  | 2                       | 12.00              | 0.00               | 10.00               | 19.80              | 7.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Site Preparation 4  | 2                       | 12.00              | 0.00               | 10.00               | 19.80              | 7.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Site Preparation 5  | 2                       | 12.00              | 0.00               | 10.00               | 19.80              | 7.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Site Preparation 6  | 2                       | 12.00              | 0.00               | 10.00               | 19.80              | 7.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Site Preparation 7  | 2                       | 12.00              | 0.00               | 10.00               | 19.80              | 7.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Site Preparation 8  | 2                       | 12.00              | 0.00               | 10.00               | 19.80              | 7.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Site Preparation 9  | 2                       | 12.00              | 0.00               | 10.00               | 19.80              | 7.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Site Preparation 10 | 2                       | 12.00              | 0.00               | 10.00               | 19.80              | 7.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

### 3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

### 3.2 Site Preparation 1 - 2020

#### Unmitigated Construction On-Site

|               | ROG                | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|---------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category      | tons/yr            |                    |               |                    |               |                    |                    |                |                    |                    | MT/yr         |               |               |                    |               |               |
| Fugitive Dust |                    |                    |               |                    | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      | 8.5000e-004        | 8.4700e-003        | 0.0104        | 2.0000e-005        |               | 4.7000e-004        | 4.7000e-004        |                | 4.3000e-004        | 4.3000e-004        | 0.0000        | 1.3623        | 1.3623        | 4.4000e-004        | 0.0000        | 1.3733        |
| <b>Total</b>  | <b>8.5000e-004</b> | <b>8.4700e-003</b> | <b>0.0104</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>4.7000e-004</b> | <b>4.7000e-004</b> | <b>0.0000</b>  | <b>4.3000e-004</b> | <b>4.3000e-004</b> | <b>0.0000</b> | <b>1.3623</b> | <b>1.3623</b> | <b>4.4000e-004</b> | <b>0.0000</b> | <b>1.3733</b> |

#### 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      | 3.0000e-005        | 1.2100e-003        | 1.6000e-004        | 0.0000        | 2.8000e-003   | 0.0000        | 2.8100e-003   | 2.9000e-004        | 0.0000        | 3.0000e-004        | 0.0000        | 0.3626        | 0.3626        | 2.0000e-005        | 0.0000        | 0.3631        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Worker       | 1.7000e-004        | 1.3000e-004        | 1.3400e-003        | 0.0000        | 0.0166        | 0.0000        | 0.0166        | 1.7300e-003        | 0.0000        | 1.7300e-003        | 0.0000        | 0.3695        | 0.3695        | 1.0000e-005        | 0.0000        | 0.3697        |
| <b>Total</b> | <b>2.0000e-004</b> | <b>1.3400e-003</b> | <b>1.5000e-003</b> | <b>0.0000</b> | <b>0.0194</b> | <b>0.0000</b> | <b>0.0194</b> | <b>2.0200e-003</b> | <b>0.0000</b> | <b>2.0300e-003</b> | <b>0.0000</b> | <b>0.7321</b> | <b>0.7321</b> | <b>3.0000e-005</b> | <b>0.0000</b> | <b>0.7329</b> |

**Mitigated Construction On-Site**

|               | ROG                | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|---------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category      | tons/yr            |                    |               |                    |               |                    |                    |                |                    |                    | MT/yr         |               |               |                    |               |               |
| Fugitive Dust |                    |                    |               |                    | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      | 8.5000e-004        | 8.4700e-003        | 0.0104        | 2.0000e-005        |               | 4.7000e-004        | 4.7000e-004        |                | 4.3000e-004        | 4.3000e-004        | 0.0000        | 1.3623        | 1.3623        | 4.4000e-004        | 0.0000        | 1.3733        |
| <b>Total</b>  | <b>8.5000e-004</b> | <b>8.4700e-003</b> | <b>0.0104</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>4.7000e-004</b> | <b>4.7000e-004</b> | <b>0.0000</b>  | <b>4.3000e-004</b> | <b>4.3000e-004</b> | <b>0.0000</b> | <b>1.3623</b> | <b>1.3623</b> | <b>4.4000e-004</b> | <b>0.0000</b> | <b>1.3733</b> |

**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      | 3.0000e-005        | 1.2100e-003        | 1.6000e-004        | 0.0000        | 1.7500e-003   | 0.0000        | 1.7500e-003   | 1.9000e-004        | 0.0000        | 1.9000e-004        | 0.0000        | 0.3626        | 0.3626        | 2.0000e-005        | 0.0000        | 0.3631        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Worker       | 1.7000e-004        | 1.3000e-004        | 1.3400e-003        | 0.0000        | 0.0103        | 0.0000        | 0.0103        | 1.1000e-003        | 0.0000        | 1.1000e-003        | 0.0000        | 0.3695        | 0.3695        | 1.0000e-005        | 0.0000        | 0.3697        |
| <b>Total</b> | <b>2.0000e-004</b> | <b>1.3400e-003</b> | <b>1.5000e-003</b> | <b>0.0000</b> | <b>0.0121</b> | <b>0.0000</b> | <b>0.0121</b> | <b>1.2900e-003</b> | <b>0.0000</b> | <b>1.2900e-003</b> | <b>0.0000</b> | <b>0.7321</b> | <b>0.7321</b> | <b>3.0000e-005</b> | <b>0.0000</b> | <b>0.7329</b> |

### 3.3 Site Preparation 2 - 2021

#### Unmitigated Construction On-Site

|               | ROG                | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|---------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category      | tons/yr            |                    |               |                    |               |                    |                    |                |                    |                    | MT/yr         |               |               |                    |               |               |
| Fugitive Dust |                    |                    |               |                    | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      | 7.8000e-004        | 7.5900e-003        | 0.0104        | 2.0000e-005        |               | 4.1000e-004        | 4.1000e-004        |                | 3.7000e-004        | 3.7000e-004        | 0.0000        | 1.3626        | 1.3626        | 4.4000e-004        | 0.0000        | 1.3737        |
| <b>Total</b>  | <b>7.8000e-004</b> | <b>7.5900e-003</b> | <b>0.0104</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>4.1000e-004</b> | <b>4.1000e-004</b> | <b>0.0000</b>  | <b>3.7000e-004</b> | <b>3.7000e-004</b> | <b>0.0000</b> | <b>1.3626</b> | <b>1.3626</b> | <b>4.4000e-004</b> | <b>0.0000</b> | <b>1.3737</b> |

#### 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      | 2.0000e-005        | 1.1100e-003        | 1.5000e-004        | 0.0000        | 2.8000e-003   | 0.0000        | 2.8100e-003   | 2.9000e-004        | 0.0000        | 3.0000e-004        | 0.0000        | 0.3588        | 0.3588        | 2.0000e-005        | 0.0000        | 0.3593        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Worker       | 1.6000e-004        | 1.1000e-004        | 1.2300e-003        | 0.0000        | 0.0166        | 0.0000        | 0.0166        | 1.7300e-003        | 0.0000        | 1.7300e-003        | 0.0000        | 0.3571        | 0.3571        | 1.0000e-005        | 0.0000        | 0.3573        |
| <b>Total</b> | <b>1.8000e-004</b> | <b>1.2200e-003</b> | <b>1.3800e-003</b> | <b>0.0000</b> | <b>0.0194</b> | <b>0.0000</b> | <b>0.0194</b> | <b>2.0200e-003</b> | <b>0.0000</b> | <b>2.0300e-003</b> | <b>0.0000</b> | <b>0.7159</b> | <b>0.7159</b> | <b>3.0000e-005</b> | <b>0.0000</b> | <b>0.7166</b> |

**Mitigated Construction On-Site**

|               | ROG                | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|---------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category      | tons/yr            |                    |               |                    |               |                    |                    |                |                    |                    | MT/yr         |               |               |                    |               |               |
| Fugitive Dust |                    |                    |               |                    | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      | 7.8000e-004        | 7.5900e-003        | 0.0104        | 2.0000e-005        |               | 4.1000e-004        | 4.1000e-004        |                | 3.7000e-004        | 3.7000e-004        | 0.0000        | 1.3626        | 1.3626        | 4.4000e-004        | 0.0000        | 1.3737        |
| <b>Total</b>  | <b>7.8000e-004</b> | <b>7.5900e-003</b> | <b>0.0104</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>4.1000e-004</b> | <b>4.1000e-004</b> | <b>0.0000</b>  | <b>3.7000e-004</b> | <b>3.7000e-004</b> | <b>0.0000</b> | <b>1.3626</b> | <b>1.3626</b> | <b>4.4000e-004</b> | <b>0.0000</b> | <b>1.3737</b> |

**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      | 2.0000e-005        | 1.1100e-003        | 1.5000e-004        | 0.0000        | 1.7500e-003   | 0.0000        | 1.7500e-003   | 1.9000e-004        | 0.0000        | 1.9000e-004        | 0.0000        | 0.3588        | 0.3588        | 2.0000e-005        | 0.0000        | 0.3593        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Worker       | 1.6000e-004        | 1.1000e-004        | 1.2300e-003        | 0.0000        | 0.0103        | 0.0000        | 0.0103        | 1.1000e-003        | 0.0000        | 1.1000e-003        | 0.0000        | 0.3571        | 0.3571        | 1.0000e-005        | 0.0000        | 0.3573        |
| <b>Total</b> | <b>1.8000e-004</b> | <b>1.2200e-003</b> | <b>1.3800e-003</b> | <b>0.0000</b> | <b>0.0121</b> | <b>0.0000</b> | <b>0.0121</b> | <b>1.2900e-003</b> | <b>0.0000</b> | <b>1.2900e-003</b> | <b>0.0000</b> | <b>0.7159</b> | <b>0.7159</b> | <b>3.0000e-005</b> | <b>0.0000</b> | <b>0.7166</b> |

### 3.4 Site Preparation 3 - 2022

#### Unmitigated Construction On-Site

|               | ROG                | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|---------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category      | tons/yr            |                    |               |                    |               |                    |                    |                |                    |                    | MT/yr         |               |               |                    |               |               |
| Fugitive Dust |                    |                    |               |                    | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      | 6.9000e-004        | 6.4700e-003        | 0.0103        | 2.0000e-005        |               | 3.3000e-004        | 3.3000e-004        |                | 3.0000e-004        | 3.0000e-004        | 0.0000        | 1.3629        | 1.3629        | 4.4000e-004        | 0.0000        | 1.3739        |
| <b>Total</b>  | <b>6.9000e-004</b> | <b>6.4700e-003</b> | <b>0.0103</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>3.3000e-004</b> | <b>3.3000e-004</b> | <b>0.0000</b>  | <b>3.0000e-004</b> | <b>3.0000e-004</b> | <b>0.0000</b> | <b>1.3629</b> | <b>1.3629</b> | <b>4.4000e-004</b> | <b>0.0000</b> | <b>1.3739</b> |

#### 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      | 2.0000e-005        | 1.0100e-003        | 1.5000e-004        | 0.0000        | 2.8000e-003   | 0.0000        | 2.8100e-003   | 2.9000e-004        | 0.0000        | 3.0000e-004        | 0.0000        | 0.3546        | 0.3546        | 2.0000e-005        | 0.0000        | 0.3552        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Worker       | 1.5000e-004        | 1.0000e-004        | 1.1300e-003        | 0.0000        | 0.0166        | 0.0000        | 0.0166        | 1.7300e-003        | 0.0000        | 1.7300e-003        | 0.0000        | 0.3441        | 0.3441        | 1.0000e-005        | 0.0000        | 0.3443        |
| <b>Total</b> | <b>1.7000e-004</b> | <b>1.1100e-003</b> | <b>1.2800e-003</b> | <b>0.0000</b> | <b>0.0194</b> | <b>0.0000</b> | <b>0.0194</b> | <b>2.0200e-003</b> | <b>0.0000</b> | <b>2.0300e-003</b> | <b>0.0000</b> | <b>0.6987</b> | <b>0.6987</b> | <b>3.0000e-005</b> | <b>0.0000</b> | <b>0.6994</b> |

**Mitigated Construction On-Site**

|               | ROG                | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|---------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category      | tons/yr            |                    |               |                    |               |                    |                    |                |                    |                    | MT/yr         |               |               |                    |               |               |
| Fugitive Dust |                    |                    |               |                    | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      | 6.9000e-004        | 6.4700e-003        | 0.0103        | 2.0000e-005        |               | 3.3000e-004        | 3.3000e-004        |                | 3.0000e-004        | 3.0000e-004        | 0.0000        | 1.3629        | 1.3629        | 4.4000e-004        | 0.0000        | 1.3739        |
| <b>Total</b>  | <b>6.9000e-004</b> | <b>6.4700e-003</b> | <b>0.0103</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>3.3000e-004</b> | <b>3.3000e-004</b> | <b>0.0000</b>  | <b>3.0000e-004</b> | <b>3.0000e-004</b> | <b>0.0000</b> | <b>1.3629</b> | <b>1.3629</b> | <b>4.4000e-004</b> | <b>0.0000</b> | <b>1.3739</b> |

**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      | 2.0000e-005        | 1.0100e-003        | 1.5000e-004        | 0.0000        | 1.7500e-003   | 0.0000        | 1.7500e-003   | 1.9000e-004        | 0.0000        | 1.9000e-004        | 0.0000        | 0.3546        | 0.3546        | 2.0000e-005        | 0.0000        | 0.3552        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Worker       | 1.5000e-004        | 1.0000e-004        | 1.1300e-003        | 0.0000        | 0.0103        | 0.0000        | 0.0103        | 1.1000e-003        | 0.0000        | 1.1000e-003        | 0.0000        | 0.3441        | 0.3441        | 1.0000e-005        | 0.0000        | 0.3443        |
| <b>Total</b> | <b>1.7000e-004</b> | <b>1.1100e-003</b> | <b>1.2800e-003</b> | <b>0.0000</b> | <b>0.0121</b> | <b>0.0000</b> | <b>0.0121</b> | <b>1.2900e-003</b> | <b>0.0000</b> | <b>1.2900e-003</b> | <b>0.0000</b> | <b>0.6987</b> | <b>0.6987</b> | <b>3.0000e-005</b> | <b>0.0000</b> | <b>0.6994</b> |

### 3.5 Site Preparation 4 - 2023

#### Unmitigated Construction On-Site

|               | ROG                | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|---------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category      | tons/yr            |                    |               |                    |               |                    |                    |                |                    |                    | MT/yr         |               |               |                    |               |               |
| Fugitive Dust |                    |                    |               |                    | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      | 6.4000e-004        | 5.7800e-003        | 0.0103        | 2.0000e-005        |               | 2.8000e-004        | 2.8000e-004        |                | 2.6000e-004        | 2.6000e-004        | 0.0000        | 1.3636        | 1.3636        | 4.4000e-004        | 0.0000        | 1.3747        |
| <b>Total</b>  | <b>6.4000e-004</b> | <b>5.7800e-003</b> | <b>0.0103</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>2.8000e-004</b> | <b>2.8000e-004</b> | <b>0.0000</b>  | <b>2.6000e-004</b> | <b>2.6000e-004</b> | <b>0.0000</b> | <b>1.3636</b> | <b>1.3636</b> | <b>4.4000e-004</b> | <b>0.0000</b> | <b>1.3747</b> |

#### 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      | 2.0000e-005        | 6.3000e-004        | 1.3000e-004        | 0.0000        | 2.8000e-003   | 0.0000        | 2.8000e-003   | 2.9000e-004        | 0.0000        | 3.0000e-004        | 0.0000        | 0.3429        | 0.3429        | 2.0000e-005        | 0.0000        | 0.3433        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Worker       | 1.4000e-004        | 9.0000e-005        | 1.0400e-003        | 0.0000        | 0.0166        | 0.0000        | 0.0166        | 1.7300e-003        | 0.0000        | 1.7300e-003        | 0.0000        | 0.3310        | 0.3310        | 1.0000e-005        | 0.0000        | 0.3312        |
| <b>Total</b> | <b>1.6000e-004</b> | <b>7.2000e-004</b> | <b>1.1700e-003</b> | <b>0.0000</b> | <b>0.0194</b> | <b>0.0000</b> | <b>0.0194</b> | <b>2.0200e-003</b> | <b>0.0000</b> | <b>2.0300e-003</b> | <b>0.0000</b> | <b>0.6739</b> | <b>0.6739</b> | <b>3.0000e-005</b> | <b>0.0000</b> | <b>0.6745</b> |



**Mitigated Construction On-Site**

|               | ROG                | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|---------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category      | tons/yr            |                    |               |                    |               |                    |                    |                |                    |                    | MT/yr         |               |               |                    |               |               |
| Fugitive Dust |                    |                    |               |                    | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      | 6.4000e-004        | 5.7800e-003        | 0.0103        | 2.0000e-005        |               | 2.8000e-004        | 2.8000e-004        |                | 2.6000e-004        | 2.6000e-004        | 0.0000        | 1.3636        | 1.3636        | 4.4000e-004        | 0.0000        | 1.3747        |
| <b>Total</b>  | <b>6.4000e-004</b> | <b>5.7800e-003</b> | <b>0.0103</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>2.8000e-004</b> | <b>2.8000e-004</b> | <b>0.0000</b>  | <b>2.6000e-004</b> | <b>2.6000e-004</b> | <b>0.0000</b> | <b>1.3636</b> | <b>1.3636</b> | <b>4.4000e-004</b> | <b>0.0000</b> | <b>1.3747</b> |

**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      | 2.0000e-005        | 6.3000e-004        | 1.3000e-004        | 0.0000        | 1.7500e-003   | 0.0000        | 1.7500e-003   | 1.9000e-004        | 0.0000        | 1.9000e-004        | 0.0000        | 0.3429        | 0.3429        | 2.0000e-005        | 0.0000        | 0.3433        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Worker       | 1.4000e-004        | 9.0000e-005        | 1.0400e-003        | 0.0000        | 0.0103        | 0.0000        | 0.0103        | 1.1000e-003        | 0.0000        | 1.1000e-003        | 0.0000        | 0.3310        | 0.3310        | 1.0000e-005        | 0.0000        | 0.3312        |
| <b>Total</b> | <b>1.6000e-004</b> | <b>7.2000e-004</b> | <b>1.1700e-003</b> | <b>0.0000</b> | <b>0.0121</b> | <b>0.0000</b> | <b>0.0121</b> | <b>1.2900e-003</b> | <b>0.0000</b> | <b>1.2900e-003</b> | <b>0.0000</b> | <b>0.6739</b> | <b>0.6739</b> | <b>3.0000e-005</b> | <b>0.0000</b> | <b>0.6745</b> |

### 3.6 Site Preparation 5 - 2024

#### Unmitigated Construction On-Site

|               | ROG                | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|---------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category      | tons/yr            |                    |               |                    |               |                    |                    |                |                    |                    | MT/yr         |               |               |                    |               |               |
| Fugitive Dust |                    |                    |               |                    | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      | 6.1000e-004        | 5.3500e-003        | 0.0103        | 2.0000e-005        |               | 2.5000e-004        | 2.5000e-004        |                | 2.3000e-004        | 2.3000e-004        | 0.0000        | 1.3642        | 1.3642        | 4.4000e-004        | 0.0000        | 1.3753        |
| <b>Total</b>  | <b>6.1000e-004</b> | <b>5.3500e-003</b> | <b>0.0103</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>2.5000e-004</b> | <b>2.5000e-004</b> | <b>0.0000</b>  | <b>2.3000e-004</b> | <b>2.3000e-004</b> | <b>0.0000</b> | <b>1.3642</b> | <b>1.3642</b> | <b>4.4000e-004</b> | <b>0.0000</b> | <b>1.3753</b> |

#### 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      | 2.0000e-005        | 6.2000e-004        | 1.3000e-004        | 0.0000        | 2.8000e-003   | 0.0000        | 2.8000e-003   | 2.9000e-004        | 0.0000        | 3.0000e-004        | 0.0000        | 0.3417        | 0.3417        | 2.0000e-005        | 0.0000        | 0.3421        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Worker       | 1.4000e-004        | 8.0000e-005        | 9.8000e-004        | 0.0000        | 0.0166        | 0.0000        | 0.0166        | 1.7300e-003        | 0.0000        | 1.7300e-003        | 0.0000        | 0.3192        | 0.3192        | 1.0000e-005        | 0.0000        | 0.3194        |
| <b>Total</b> | <b>1.6000e-004</b> | <b>7.0000e-004</b> | <b>1.1100e-003</b> | <b>0.0000</b> | <b>0.0194</b> | <b>0.0000</b> | <b>0.0194</b> | <b>2.0200e-003</b> | <b>0.0000</b> | <b>2.0300e-003</b> | <b>0.0000</b> | <b>0.6609</b> | <b>0.6609</b> | <b>3.0000e-005</b> | <b>0.0000</b> | <b>0.6614</b> |

**Mitigated Construction On-Site**

|               | ROG                | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|---------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category      | tons/yr            |                    |               |                    |               |                    |                    |                |                    |                    | MT/yr         |               |               |                    |               |               |
| Fugitive Dust |                    |                    |               |                    | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      | 6.1000e-004        | 5.3500e-003        | 0.0103        | 2.0000e-005        |               | 2.5000e-004        | 2.5000e-004        |                | 2.3000e-004        | 2.3000e-004        | 0.0000        | 1.3642        | 1.3642        | 4.4000e-004        | 0.0000        | 1.3753        |
| <b>Total</b>  | <b>6.1000e-004</b> | <b>5.3500e-003</b> | <b>0.0103</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>2.5000e-004</b> | <b>2.5000e-004</b> | <b>0.0000</b>  | <b>2.3000e-004</b> | <b>2.3000e-004</b> | <b>0.0000</b> | <b>1.3642</b> | <b>1.3642</b> | <b>4.4000e-004</b> | <b>0.0000</b> | <b>1.3753</b> |

**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      | 2.0000e-005        | 6.2000e-004        | 1.3000e-004        | 0.0000        | 1.7500e-003   | 0.0000        | 1.7500e-003   | 1.9000e-004        | 0.0000        | 1.9000e-004        | 0.0000        | 0.3417        | 0.3417        | 2.0000e-005        | 0.0000        | 0.3421        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Worker       | 1.4000e-004        | 8.0000e-005        | 9.8000e-004        | 0.0000        | 0.0103        | 0.0000        | 0.0103        | 1.1000e-003        | 0.0000        | 1.1000e-003        | 0.0000        | 0.3192        | 0.3192        | 1.0000e-005        | 0.0000        | 0.3194        |
| <b>Total</b> | <b>1.6000e-004</b> | <b>7.0000e-004</b> | <b>1.1100e-003</b> | <b>0.0000</b> | <b>0.0121</b> | <b>0.0000</b> | <b>0.0121</b> | <b>1.2900e-003</b> | <b>0.0000</b> | <b>1.2900e-003</b> | <b>0.0000</b> | <b>0.6609</b> | <b>0.6609</b> | <b>3.0000e-005</b> | <b>0.0000</b> | <b>0.6614</b> |

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**3.7 Site Preparation 6 - 2025****Unmitigated Construction On-Site**

|               | ROG                | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|---------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category      | tons/yr            |                    |               |                    |               |                    |                    |                |                    |                    | MT/yr         |               |               |                    |               |               |
| Fugitive Dust |                    |                    |               |                    | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      | 5.6000e-004        | 4.7900e-003        | 0.0103        | 2.0000e-005        |               | 2.1000e-004        | 2.1000e-004        |                | 2.0000e-004        | 2.0000e-004        | 0.0000        | 1.3649        | 1.3649        | 4.4000e-004        | 0.0000        | 1.3759        |
| <b>Total</b>  | <b>5.6000e-004</b> | <b>4.7900e-003</b> | <b>0.0103</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>2.1000e-004</b> | <b>2.1000e-004</b> | <b>0.0000</b>  | <b>2.0000e-004</b> | <b>2.0000e-004</b> | <b>0.0000</b> | <b>1.3649</b> | <b>1.3649</b> | <b>4.4000e-004</b> | <b>0.0000</b> | <b>1.3759</b> |

**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      | 2.0000e-005        | 6.1000e-004        | 1.3000e-004        | 0.0000        | 2.8000e-003   | 0.0000        | 2.8000e-003   | 2.9000e-004        | 0.0000        | 3.0000e-004        | 0.0000        | 0.3396        | 0.3396        | 2.0000e-005        | 0.0000        | 0.3400        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Worker       | 1.3000e-004        | 8.0000e-005        | 9.1000e-004        | 0.0000        | 0.0166        | 0.0000        | 0.0166        | 1.7300e-003        | 0.0000        | 1.7300e-003        | 0.0000        | 0.3064        | 0.3064        | 1.0000e-005        | 0.0000        | 0.3066        |
| <b>Total</b> | <b>1.5000e-004</b> | <b>6.9000e-004</b> | <b>1.0400e-003</b> | <b>0.0000</b> | <b>0.0194</b> | <b>0.0000</b> | <b>0.0194</b> | <b>2.0200e-003</b> | <b>0.0000</b> | <b>2.0300e-003</b> | <b>0.0000</b> | <b>0.6460</b> | <b>0.6460</b> | <b>3.0000e-005</b> | <b>0.0000</b> | <b>0.6466</b> |

**Mitigated Construction On-Site**

|               | ROG                | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|---------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category      | tons/yr            |                    |               |                    |               |                    |                    |                |                    |                    | MT/yr         |               |               |                    |               |               |
| Fugitive Dust |                    |                    |               |                    | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      | 5.6000e-004        | 4.7900e-003        | 0.0103        | 2.0000e-005        |               | 2.1000e-004        | 2.1000e-004        |                | 2.0000e-004        | 2.0000e-004        | 0.0000        | 1.3649        | 1.3649        | 4.4000e-004        | 0.0000        | 1.3759        |
| <b>Total</b>  | <b>5.6000e-004</b> | <b>4.7900e-003</b> | <b>0.0103</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>2.1000e-004</b> | <b>2.1000e-004</b> | <b>0.0000</b>  | <b>2.0000e-004</b> | <b>2.0000e-004</b> | <b>0.0000</b> | <b>1.3649</b> | <b>1.3649</b> | <b>4.4000e-004</b> | <b>0.0000</b> | <b>1.3759</b> |

**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      | 2.0000e-005        | 6.1000e-004        | 1.3000e-004        | 0.0000        | 1.7500e-003   | 0.0000        | 1.7500e-003   | 1.9000e-004        | 0.0000        | 1.9000e-004        | 0.0000        | 0.3396        | 0.3396        | 2.0000e-005        | 0.0000        | 0.3400        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Worker       | 1.3000e-004        | 8.0000e-005        | 9.1000e-004        | 0.0000        | 0.0103        | 0.0000        | 0.0103        | 1.1000e-003        | 0.0000        | 1.1000e-003        | 0.0000        | 0.3064        | 0.3064        | 1.0000e-005        | 0.0000        | 0.3066        |
| <b>Total</b> | <b>1.5000e-004</b> | <b>6.9000e-004</b> | <b>1.0400e-003</b> | <b>0.0000</b> | <b>0.0121</b> | <b>0.0000</b> | <b>0.0121</b> | <b>1.2900e-003</b> | <b>0.0000</b> | <b>1.2900e-003</b> | <b>0.0000</b> | <b>0.6460</b> | <b>0.6460</b> | <b>3.0000e-005</b> | <b>0.0000</b> | <b>0.6466</b> |

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**3.8 Site Preparation 7 - 2026****Unmitigated Construction On-Site**

|               | ROG                | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|---------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category      | tons/yr            |                    |               |                    |               |                    |                    |                |                    |                    | MT/yr         |               |               |                    |               |               |
| Fugitive Dust |                    |                    |               |                    | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      | 5.6000e-004        | 4.7900e-003        | 0.0103        | 2.0000e-005        |               | 2.1000e-004        | 2.1000e-004        |                | 2.0000e-004        | 2.0000e-004        | 0.0000        | 1.3649        | 1.3649        | 4.4000e-004        | 0.0000        | 1.3759        |
| <b>Total</b>  | <b>5.6000e-004</b> | <b>4.7900e-003</b> | <b>0.0103</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>2.1000e-004</b> | <b>2.1000e-004</b> | <b>0.0000</b>  | <b>2.0000e-004</b> | <b>2.0000e-004</b> | <b>0.0000</b> | <b>1.3649</b> | <b>1.3649</b> | <b>4.4000e-004</b> | <b>0.0000</b> | <b>1.3759</b> |

**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      | 2.0000e-005        | 6.0000e-004        | 1.3000e-004        | 0.0000        | 2.8000e-003   | 0.0000        | 2.8000e-003   | 2.9000e-004        | 0.0000        | 3.0000e-004        | 0.0000        | 0.3377        | 0.3377        | 2.0000e-005        | 0.0000        | 0.3381        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Worker       | 1.2000e-004        | 7.0000e-005        | 8.5000e-004        | 0.0000        | 0.0166        | 0.0000        | 0.0166        | 1.7300e-003        | 0.0000        | 1.7300e-003        | 0.0000        | 0.2953        | 0.2953        | 0.0000             | 0.0000        | 0.2954        |
| <b>Total</b> | <b>1.4000e-004</b> | <b>6.7000e-004</b> | <b>9.8000e-004</b> | <b>0.0000</b> | <b>0.0194</b> | <b>0.0000</b> | <b>0.0194</b> | <b>2.0200e-003</b> | <b>0.0000</b> | <b>2.0300e-003</b> | <b>0.0000</b> | <b>0.6329</b> | <b>0.6329</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>0.6335</b> |

**Mitigated Construction On-Site**

|               | ROG                | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|---------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category      | tons/yr            |                    |               |                    |               |                    |                    |                |                    |                    | MT/yr         |               |               |                    |               |               |
| Fugitive Dust |                    |                    |               |                    | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      | 5.6000e-004        | 4.7900e-003        | 0.0103        | 2.0000e-005        |               | 2.1000e-004        | 2.1000e-004        |                | 2.0000e-004        | 2.0000e-004        | 0.0000        | 1.3649        | 1.3649        | 4.4000e-004        | 0.0000        | 1.3759        |
| <b>Total</b>  | <b>5.6000e-004</b> | <b>4.7900e-003</b> | <b>0.0103</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>2.1000e-004</b> | <b>2.1000e-004</b> | <b>0.0000</b>  | <b>2.0000e-004</b> | <b>2.0000e-004</b> | <b>0.0000</b> | <b>1.3649</b> | <b>1.3649</b> | <b>4.4000e-004</b> | <b>0.0000</b> | <b>1.3759</b> |

**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      | 2.0000e-005        | 6.0000e-004        | 1.3000e-004        | 0.0000        | 1.7500e-003   | 0.0000        | 1.7500e-003   | 1.9000e-004        | 0.0000        | 1.9000e-004        | 0.0000        | 0.3377        | 0.3377        | 2.0000e-005        | 0.0000        | 0.3381        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Worker       | 1.2000e-004        | 7.0000e-005        | 8.5000e-004        | 0.0000        | 0.0103        | 0.0000        | 0.0103        | 1.1000e-003        | 0.0000        | 1.1000e-003        | 0.0000        | 0.2953        | 0.2953        | 0.0000             | 0.0000        | 0.2954        |
| <b>Total</b> | <b>1.4000e-004</b> | <b>6.7000e-004</b> | <b>9.8000e-004</b> | <b>0.0000</b> | <b>0.0121</b> | <b>0.0000</b> | <b>0.0121</b> | <b>1.2900e-003</b> | <b>0.0000</b> | <b>1.2900e-003</b> | <b>0.0000</b> | <b>0.6329</b> | <b>0.6329</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>0.6335</b> |

### 3.9 Site Preparation 8 - 2027

#### Unmitigated Construction On-Site

|               | ROG                | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|---------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category      | tons/yr            |                    |               |                    |               |                    |                    |                |                    |                    | MT/yr         |               |               |                    |               |               |
| Fugitive Dust |                    |                    |               |                    | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      | 5.6000e-004        | 4.7900e-003        | 0.0103        | 2.0000e-005        |               | 2.1000e-004        | 2.1000e-004        |                | 2.0000e-004        | 2.0000e-004        | 0.0000        | 1.3649        | 1.3649        | 4.4000e-004        | 0.0000        | 1.3759        |
| <b>Total</b>  | <b>5.6000e-004</b> | <b>4.7900e-003</b> | <b>0.0103</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>2.1000e-004</b> | <b>2.1000e-004</b> | <b>0.0000</b>  | <b>2.0000e-004</b> | <b>2.0000e-004</b> | <b>0.0000</b> | <b>1.3649</b> | <b>1.3649</b> | <b>4.4000e-004</b> | <b>0.0000</b> | <b>1.3759</b> |

#### 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      | 2.0000e-005        | 5.9000e-004        | 1.3000e-004        | 0.0000        | 2.8000e-003   | 0.0000        | 2.8000e-003   | 2.9000e-004        | 0.0000        | 3.0000e-004        | 0.0000        | 0.3360        | 0.3360        | 2.0000e-005        | 0.0000        | 0.3364        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Worker       | 1.2000e-004        | 6.0000e-005        | 7.9000e-004        | 0.0000        | 0.0166        | 0.0000        | 0.0166        | 1.7300e-003        | 0.0000        | 1.7300e-003        | 0.0000        | 0.2855        | 0.2855        | 0.0000             | 0.0000        | 0.2856        |
| <b>Total</b> | <b>1.4000e-004</b> | <b>6.5000e-004</b> | <b>9.2000e-004</b> | <b>0.0000</b> | <b>0.0194</b> | <b>0.0000</b> | <b>0.0194</b> | <b>2.0200e-003</b> | <b>0.0000</b> | <b>2.0300e-003</b> | <b>0.0000</b> | <b>0.6215</b> | <b>0.6215</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>0.6220</b> |



**Mitigated Construction On-Site**

|               | ROG                | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|---------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category      | tons/yr            |                    |               |                    |               |                    |                    |                |                    |                    | MT/yr         |               |               |                    |               |               |
| Fugitive Dust |                    |                    |               |                    | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      | 5.6000e-004        | 4.7900e-003        | 0.0103        | 2.0000e-005        |               | 2.1000e-004        | 2.1000e-004        |                | 2.0000e-004        | 2.0000e-004        | 0.0000        | 1.3649        | 1.3649        | 4.4000e-004        | 0.0000        | 1.3759        |
| <b>Total</b>  | <b>5.6000e-004</b> | <b>4.7900e-003</b> | <b>0.0103</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>2.1000e-004</b> | <b>2.1000e-004</b> | <b>0.0000</b>  | <b>2.0000e-004</b> | <b>2.0000e-004</b> | <b>0.0000</b> | <b>1.3649</b> | <b>1.3649</b> | <b>4.4000e-004</b> | <b>0.0000</b> | <b>1.3759</b> |

**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      | 2.0000e-005        | 5.9000e-004        | 1.3000e-004        | 0.0000        | 1.7500e-003   | 0.0000        | 1.7500e-003   | 1.9000e-004        | 0.0000        | 1.9000e-004        | 0.0000        | 0.3360        | 0.3360        | 2.0000e-005        | 0.0000        | 0.3364        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Worker       | 1.2000e-004        | 6.0000e-005        | 7.9000e-004        | 0.0000        | 0.0103        | 0.0000        | 0.0103        | 1.1000e-003        | 0.0000        | 1.1000e-003        | 0.0000        | 0.2855        | 0.2855        | 0.0000             | 0.0000        | 0.2856        |
| <b>Total</b> | <b>1.4000e-004</b> | <b>6.5000e-004</b> | <b>9.2000e-004</b> | <b>0.0000</b> | <b>0.0121</b> | <b>0.0000</b> | <b>0.0121</b> | <b>1.2900e-003</b> | <b>0.0000</b> | <b>1.2900e-003</b> | <b>0.0000</b> | <b>0.6215</b> | <b>0.6215</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>0.6220</b> |

### 3.10 Site Preparation 9 - 2028

#### Unmitigated Construction On-Site

|               | ROG                | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|---------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category      | tons/yr            |                    |               |                    |               |                    |                    |                |                    |                    | MT/yr         |               |               |                    |               |               |
| Fugitive Dust |                    |                    |               |                    | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      | 5.6000e-004        | 4.7900e-003        | 0.0103        | 2.0000e-005        |               | 2.1000e-004        | 2.1000e-004        |                | 2.0000e-004        | 2.0000e-004        | 0.0000        | 1.3649        | 1.3649        | 4.4000e-004        | 0.0000        | 1.3759        |
| <b>Total</b>  | <b>5.6000e-004</b> | <b>4.7900e-003</b> | <b>0.0103</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>2.1000e-004</b> | <b>2.1000e-004</b> | <b>0.0000</b>  | <b>2.0000e-004</b> | <b>2.0000e-004</b> | <b>0.0000</b> | <b>1.3649</b> | <b>1.3649</b> | <b>4.4000e-004</b> | <b>0.0000</b> | <b>1.3759</b> |

#### 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      | 2.0000e-005        | 5.8000e-004        | 1.3000e-004        | 0.0000        | 2.8000e-003   | 0.0000        | 2.8000e-003   | 2.9000e-004        | 0.0000        | 3.0000e-004        | 0.0000        | 0.3347        | 0.3347        | 2.0000e-005        | 0.0000        | 0.3351        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Worker       | 1.1000e-004        | 6.0000e-005        | 7.4000e-004        | 0.0000        | 0.0166        | 0.0000        | 0.0166        | 1.7300e-003        | 0.0000        | 1.7300e-003        | 0.0000        | 0.2770        | 0.2770        | 0.0000             | 0.0000        | 0.2771        |
| <b>Total</b> | <b>1.3000e-004</b> | <b>6.4000e-004</b> | <b>8.7000e-004</b> | <b>0.0000</b> | <b>0.0194</b> | <b>0.0000</b> | <b>0.0194</b> | <b>2.0200e-003</b> | <b>0.0000</b> | <b>2.0300e-003</b> | <b>0.0000</b> | <b>0.6117</b> | <b>0.6117</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>0.6122</b> |

**Mitigated Construction On-Site**

|               | ROG                | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|---------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category      | tons/yr            |                    |               |                    |               |                    |                    |                |                    |                    | MT/yr         |               |               |                    |               |               |
| Fugitive Dust |                    |                    |               |                    | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      | 5.6000e-004        | 4.7900e-003        | 0.0103        | 2.0000e-005        |               | 2.1000e-004        | 2.1000e-004        |                | 2.0000e-004        | 2.0000e-004        | 0.0000        | 1.3649        | 1.3649        | 4.4000e-004        | 0.0000        | 1.3759        |
| <b>Total</b>  | <b>5.6000e-004</b> | <b>4.7900e-003</b> | <b>0.0103</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>2.1000e-004</b> | <b>2.1000e-004</b> | <b>0.0000</b>  | <b>2.0000e-004</b> | <b>2.0000e-004</b> | <b>0.0000</b> | <b>1.3649</b> | <b>1.3649</b> | <b>4.4000e-004</b> | <b>0.0000</b> | <b>1.3759</b> |

**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      | 2.0000e-005        | 5.8000e-004        | 1.3000e-004        | 0.0000        | 1.7500e-003   | 0.0000        | 1.7500e-003   | 1.9000e-004        | 0.0000        | 1.9000e-004        | 0.0000        | 0.3347        | 0.3347        | 2.0000e-005        | 0.0000        | 0.3351        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Worker       | 1.1000e-004        | 6.0000e-005        | 7.4000e-004        | 0.0000        | 0.0103        | 0.0000        | 0.0103        | 1.1000e-003        | 0.0000        | 1.1000e-003        | 0.0000        | 0.2770        | 0.2770        | 0.0000             | 0.0000        | 0.2771        |
| <b>Total</b> | <b>1.3000e-004</b> | <b>6.4000e-004</b> | <b>8.7000e-004</b> | <b>0.0000</b> | <b>0.0121</b> | <b>0.0000</b> | <b>0.0121</b> | <b>1.2900e-003</b> | <b>0.0000</b> | <b>1.2900e-003</b> | <b>0.0000</b> | <b>0.6117</b> | <b>0.6117</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>0.6122</b> |

## Tequesquite Creek Maintenance Project - Riverside-South Coast County, Annual

**3.11 Site Preparation 10 - 2029****Unmitigated Construction On-Site**

|               | ROG                | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|---------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category      | tons/yr            |                    |               |                    |               |                    |                    |                |                    |                    | MT/yr         |               |               |                    |               |               |
| Fugitive Dust |                    |                    |               |                    | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      | 5.6000e-004        | 4.7900e-003        | 0.0103        | 2.0000e-005        |               | 2.1000e-004        | 2.1000e-004        |                | 2.0000e-004        | 2.0000e-004        | 0.0000        | 1.3649        | 1.3649        | 4.4000e-004        | 0.0000        | 1.3759        |
| <b>Total</b>  | <b>5.6000e-004</b> | <b>4.7900e-003</b> | <b>0.0103</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>2.1000e-004</b> | <b>2.1000e-004</b> | <b>0.0000</b>  | <b>2.0000e-004</b> | <b>2.0000e-004</b> | <b>0.0000</b> | <b>1.3649</b> | <b>1.3649</b> | <b>4.4000e-004</b> | <b>0.0000</b> | <b>1.3759</b> |

**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      | 2.0000e-005        | 5.7000e-004        | 1.4000e-004        | 0.0000        | 2.8000e-003   | 0.0000        | 2.8000e-003   | 2.9000e-004        | 0.0000        | 3.0000e-004        | 0.0000        | 0.3335        | 0.3335        | 2.0000e-005        | 0.0000        | 0.3339        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Worker       | 1.0000e-004        | 5.0000e-005        | 7.0000e-004        | 0.0000        | 0.0166        | 0.0000        | 0.0166        | 1.7300e-003        | 0.0000        | 1.7300e-003        | 0.0000        | 0.2695        | 0.2695        | 0.0000             | 0.0000        | 0.2696        |
| <b>Total</b> | <b>1.2000e-004</b> | <b>6.2000e-004</b> | <b>8.4000e-004</b> | <b>0.0000</b> | <b>0.0194</b> | <b>0.0000</b> | <b>0.0194</b> | <b>2.0200e-003</b> | <b>0.0000</b> | <b>2.0300e-003</b> | <b>0.0000</b> | <b>0.6030</b> | <b>0.6030</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>0.6035</b> |

**Mitigated Construction On-Site**

|               | ROG                | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|---------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category      | tons/yr            |                    |               |                    |               |                    |                    |                |                    |                    | MT/yr         |               |               |                    |               |               |
| Fugitive Dust |                    |                    |               |                    | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      | 5.6000e-004        | 4.7900e-003        | 0.0103        | 2.0000e-005        |               | 2.1000e-004        | 2.1000e-004        |                | 2.0000e-004        | 2.0000e-004        | 0.0000        | 1.3649        | 1.3649        | 4.4000e-004        | 0.0000        | 1.3759        |
| <b>Total</b>  | <b>5.6000e-004</b> | <b>4.7900e-003</b> | <b>0.0103</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>2.1000e-004</b> | <b>2.1000e-004</b> | <b>0.0000</b>  | <b>2.0000e-004</b> | <b>2.0000e-004</b> | <b>0.0000</b> | <b>1.3649</b> | <b>1.3649</b> | <b>4.4000e-004</b> | <b>0.0000</b> | <b>1.3759</b> |

**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      | 2.0000e-005        | 5.7000e-004        | 1.4000e-004        | 0.0000        | 1.7500e-003   | 0.0000        | 1.7500e-003   | 1.9000e-004        | 0.0000        | 1.9000e-004        | 0.0000        | 0.3335        | 0.3335        | 2.0000e-005        | 0.0000        | 0.3339        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Worker       | 1.0000e-004        | 5.0000e-005        | 7.0000e-004        | 0.0000        | 0.0103        | 0.0000        | 0.0103        | 1.1000e-003        | 0.0000        | 1.1000e-003        | 0.0000        | 0.2695        | 0.2695        | 0.0000             | 0.0000        | 0.2696        |
| <b>Total</b> | <b>1.2000e-004</b> | <b>6.2000e-004</b> | <b>8.4000e-004</b> | <b>0.0000</b> | <b>0.0121</b> | <b>0.0000</b> | <b>0.0121</b> | <b>1.2900e-003</b> | <b>0.0000</b> | <b>1.2900e-003</b> | <b>0.0000</b> | <b>0.6030</b> | <b>0.6030</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>0.6035</b> |

**Tequesquite Creek Maintenance Project**  
**Riverside-South Coast County, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses               | Size | Metric            | Lot Acreage | Floor Surface Area | Population |
|-------------------------|------|-------------------|-------------|--------------------|------------|
| User Defined Industrial | 1.00 | User Defined Unit | 0.93        | 40,510.80          | 0          |

### 1.2 Other Project Characteristics

|                             |                            |                             |       |                             |       |
|-----------------------------|----------------------------|-----------------------------|-------|-----------------------------|-------|
| Urbanization                | Rural                      | Wind Speed (m/s)            | 2.4   | Precipitation Freq (Days)   | 28    |
| Climate Zone                | 10                         |                             |       | Operational Year            | 2030  |
| Utility Company             | Southern California Edison |                             |       |                             |       |
| CO2 Intensity<br>(lb/MW hr) | 702.44                     | CH4 Intensity<br>(lb/MW hr) | 0.029 | N2O Intensity<br>(lb/MW hr) | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - Tequesquite Creek Maintenance Project. Riverside County (SCAB).

Land Use - Project site is 0.93 acre.

Construction Phase - Maintenance activity would occur once a year from 2020 to 2029.

Off-road Equipment - Equipment based project specifics. Assumed to operate 6 hours/day.

Off-road Equipment - Equipment based on project specifics. Assumed excavator and backhoe to operate 6 hours/day.

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Off-road Equipment - Equipment based on project specifics. Assumed excavator and backhoe to operate 6 hours/day.

Off-road Equipment - Equipment based on project specifics. Assumed excavator and backhoe to operate 6 hours/day.

Trips and VMT - Assumed six onsite workers (12 one-way trips) and one dump truck (10 haul trips).

On-road Fugitive Dust - Assumed 98% paved roads for worker and haul trips.

Grading -

Vehicle Trips - Modeling construction only.

Vehicle Emission Factors - Modeling construction only.

Vehicle Emission Factors - Modeling construction only.

Vehicle Emission Factors - Modeling construction only.

Road Dust - Modeling construction only.

Woodstoves - Modeling construction only.

Consumer Products - Modeling construction only.

Area Coating - Modeling construction only.

Energy Use - Modeling construction only.

Water And Wastewater - Modeling construction only.

Solid Waste - Modeling construction only.

Construction Off-road Equipment Mitigation - Water twice daily and 15 mph vehicle speeds.

[illegible]

[illegible]



[illegible]

## Tequesquite Creek Maintenance Project - Riverside-South Coast County, Summer

|                |                   |      |       |
|----------------|-------------------|------|-------|
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 10.00 |
| tblTripsAndVMT | WorkerTripNumber  | 5.00 | 12.00 |
| tblTripsAndVMT | WorkerTripNumber  | 5.00 | 12.00 |
| tblTripsAndVMT | WorkerTripNumber  | 5.00 | 12.00 |
| tblTripsAndVMT | WorkerTripNumber  | 5.00 | 12.00 |
| tblTripsAndVMT | WorkerTripNumber  | 5.00 | 12.00 |
| tblTripsAndVMT | WorkerTripNumber  | 5.00 | 12.00 |
| tblTripsAndVMT | WorkerTripNumber  | 5.00 | 12.00 |
| tblTripsAndVMT | WorkerTripNumber  | 5.00 | 12.00 |
| tblTripsAndVMT | WorkerTripNumber  | 5.00 | 12.00 |
| tblTripsAndVMT | WorkerTripNumber  | 5.00 | 12.00 |

## 2.0 Emissions Summary

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## Tequesquite Creek Maintenance Project - Riverside-South Coast County, Summer

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

|         | ROG    | NOx    | CO     | SO2         | Fugitive<br>PM10 | Exhaust<br>PM10 | PM10<br>Total | Fugitive<br>PM2.5 | Exhaust<br>PM2.5 | PM2.5<br>Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e     |
|---------|--------|--------|--------|-------------|------------------|-----------------|---------------|-------------------|------------------|----------------|----------|-----------|-----------|--------|--------|----------|
| Year    | lb/day |        |        |             |                  |                 |               |                   |                  |                | lb/day   |           |           |        |        |          |
| 2020    | 0.4270 | 3.9093 | 4.8534 | 9.5000e-003 | 8.3827           | 0.1901          | 8.5728        | 0.8719            | 0.1749           | 1.0468         | 0.0000   | 939.3252  | 939.3252  | 0.2084 | 0.0000 | 944.5345 |
| 2021    | 0.3929 | 3.5141 | 4.7882 | 9.4400e-003 | 8.3827           | 0.1645          | 8.5472        | 0.8719            | 0.1514           | 1.0233         | 0.0000   | 931.8671  | 931.8671  | 0.2076 | 0.0000 | 937.0578 |
| 2022    | 0.3508 | 3.0238 | 4.7124 | 9.3500e-003 | 8.3827           | 0.1341          | 8.5168        | 0.8719            | 0.1234           | 0.9954         | 0.0000   | 923.9103  | 923.9103  | 0.2069 | 0.0000 | 929.0824 |
| 2023    | 0.3236 | 2.5975 | 4.6616 | 9.2400e-003 | 8.3827           | 0.1152          | 8.4979        | 0.8719            | 0.1060           | 0.9779         | 0.0000   | 912.7201  | 912.7201  | 0.2049 | 0.0000 | 917.8423 |
| 2024    | 0.3083 | 2.4168 | 4.6409 | 9.1700e-003 | 8.3827           | 0.1031          | 8.4858        | 0.8719            | 0.0949           | 0.9668         | 0.0000   | 906.7508  | 906.7508  | 0.2046 | 0.0000 | 911.8662 |
| 2025    | 0.2864 | 2.1884 | 4.5990 | 9.1100e-003 | 8.3827           | 0.0869          | 8.4696        | 0.8719            | 0.0800           | 0.9519         | 0.0000   | 899.9515  | 899.9515  | 0.2043 | 0.0000 | 905.0596 |
| 2026    | 0.2835 | 2.1814 | 4.5705 | 9.0500e-003 | 8.3827           | 0.0869          | 8.4696        | 0.8719            | 0.0800           | 0.9519         | 0.0000   | 893.7333  | 893.7333  | 0.2040 | 0.0000 | 898.8327 |
| 2027    | 0.2808 | 2.1752 | 4.5453 | 9.0000e-003 | 8.3827           | 0.0868          | 8.4695        | 0.8719            | 0.0799           | 0.9518         | 0.0000   | 888.3031  | 888.3031  | 0.2036 | 0.0000 | 893.3941 |
| 2028    | 0.2781 | 2.1702 | 4.5234 | 8.9500e-003 | 8.3827           | 0.0868          | 8.4694        | 0.8719            | 0.0798           | 0.9518         | 0.0000   | 883.6246  | 883.6246  | 0.2033 | 0.0000 | 888.7081 |
| 2029    | 0.2752 | 2.1656 | 4.5029 | 8.9100e-003 | 8.3827           | 0.0867          | 8.4694        | 0.8719            | 0.0798           | 0.9517         | 0.0000   | 879.5174  | 879.5174  | 0.2031 | 0.0000 | 884.5937 |
| Maximum | 0.4270 | 3.9093 | 4.8534 | 9.5000e-003 | 8.3827           | 0.1901          | 8.5728        | 0.8719            | 0.1749           | 1.0468         | 0.0000   | 939.3252  | 939.3252  | 0.2084 | 0.0000 | 944.5345 |

**Mitigated Construction**

|         | ROG    | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e     |
|---------|--------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|----------|
| Year    | lb/day |        |        |             |               |              |            |                |               |             | lb/day   |           |           |        |        |          |
| 2020    | 0.4270 | 3.9093 | 4.8534 | 9.5000e-003 | 5.2145        | 0.1901       | 5.4045     | 0.5551         | 0.1749        | 0.7300      | 0.0000   | 939.3252  | 939.3252  | 0.2084 | 0.0000 | 944.5345 |
| 2021    | 0.3929 | 3.5141 | 4.7882 | 9.4400e-003 | 5.2145        | 0.1645       | 5.3790     | 0.5551         | 0.1514        | 0.7065      | 0.0000   | 931.8671  | 931.8671  | 0.2076 | 0.0000 | 937.0578 |
| 2022    | 0.3508 | 3.0238 | 4.7124 | 9.3500e-003 | 5.2145        | 0.1341       | 5.3486     | 0.5551         | 0.1234        | 0.6785      | 0.0000   | 923.9103  | 923.9103  | 0.2069 | 0.0000 | 929.0824 |
| 2023    | 0.3236 | 2.5975 | 4.6616 | 9.2400e-003 | 5.2145        | 0.1152       | 5.3296     | 0.5551         | 0.1060        | 0.6611      | 0.0000   | 912.7201  | 912.7201  | 0.2049 | 0.0000 | 917.8423 |
| 2024    | 0.3083 | 2.4168 | 4.6409 | 9.1700e-003 | 5.2145        | 0.1031       | 5.3176     | 0.5551         | 0.0949        | 0.6500      | 0.0000   | 906.7508  | 906.7508  | 0.2046 | 0.0000 | 911.8662 |
| 2025    | 0.2864 | 2.1884 | 4.5990 | 9.1100e-003 | 5.2145        | 0.0869       | 5.3014     | 0.5551         | 0.0800        | 0.6351      | 0.0000   | 899.9515  | 899.9515  | 0.2043 | 0.0000 | 905.0596 |
| 2026    | 0.2835 | 2.1814 | 4.5705 | 9.0500e-003 | 5.2145        | 0.0869       | 5.3013     | 0.5551         | 0.0800        | 0.6350      | 0.0000   | 893.7333  | 893.7333  | 0.2040 | 0.0000 | 898.8327 |
| 2027    | 0.2808 | 2.1752 | 4.5453 | 9.0000e-003 | 5.2145        | 0.0868       | 5.3013     | 0.5551         | 0.0799        | 0.6350      | 0.0000   | 888.3031  | 888.3031  | 0.2036 | 0.0000 | 893.3941 |
| 2028    | 0.2781 | 2.1702 | 4.5234 | 8.9500e-003 | 5.2145        | 0.0868       | 5.3012     | 0.5551         | 0.0798        | 0.6349      | 0.0000   | 883.6246  | 883.6246  | 0.2033 | 0.0000 | 888.7081 |
| 2029    | 0.2752 | 2.1656 | 4.5029 | 8.9100e-003 | 5.2145        | 0.0867       | 5.3012     | 0.5551         | 0.0798        | 0.6349      | 0.0000   | 879.5174  | 879.5174  | 0.2031 | 0.0000 | 884.5937 |
| Maximum | 0.4270 | 3.9093 | 4.8534 | 9.5000e-003 | 5.2145        | 0.1901       | 5.4045     | 0.5551         | 0.1749        | 0.7300      | 0.0000   | 939.3252  | 939.3252  | 0.2084 | 0.0000 | 944.5345 |

|                   | ROG  | NOx  | CO   | SO2  | 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 | 37.79         | 0.00         | 37.29      | 36.34          | 0.00          | 32.43       | 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 1  | Site Preparation | 9/1/2020   | 9/7/2020 | 5             | 5        |                   |
| 2            | Site Preparation 2  | Site Preparation | 9/1/2021   | 9/7/2021 | 5             | 5        |                   |
| 3            | Site Preparation 3  | Site Preparation | 9/1/2022   | 9/7/2022 | 5             | 5        |                   |
| 4            | Site Preparation 4  | Site Preparation | 9/1/2023   | 9/7/2023 | 5             | 5        |                   |
| 5            | Site Preparation 5  | Site Preparation | 9/1/2024   | 9/6/2024 | 5             | 5        |                   |
| 6            | Site Preparation 6  | Site Preparation | 9/1/2025   | 9/5/2025 | 5             | 5        |                   |
| 7            | Site Preparation 7  | Site Preparation | 9/1/2026   | 9/7/2026 | 5             | 5        |                   |
| 8            | Site Preparation 8  | Site Preparation | 9/1/2027   | 9/7/2027 | 5             | 5        |                   |
| 9            | Site Preparation 9  | Site Preparation | 9/1/2028   | 9/7/2028 | 5             | 5        |                   |
| 10           | Site Preparation 10 | Site Preparation | 9/1/2029   | 9/7/2029 | 5             | 5        |                   |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0**

#### OffRoad Equipment

| Phase Name         | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|--------------------|---------------------------|--------|-------------|-------------|-------------|
| Site Preparation 1 | Excavators                | 1      | 6.00        | 158         | 0.38        |
| Site Preparation 1 | Tractors/Loaders/Backhoes | 1      | 6.00        | 97          | 0.37        |
| Site Preparation 2 | Excavators                | 1      | 6.00        | 158         | 0.38        |
| Site Preparation 2 | Tractors/Loaders/Backhoes | 1      | 6.00        | 97          | 0.37        |
| Site Preparation 3 | Excavators                | 1      | 6.00        | 158         | 0.38        |
| Site Preparation 3 | Tractors/Loaders/Backhoes | 1      | 6.00        | 97          | 0.37        |
| Site Preparation 4 | Excavators                | 1      | 6.00        | 158         | 0.38        |
| Site Preparation 4 | Tractors/Loaders/Backhoes | 1      | 6.00        | 97          | 0.37        |

## Tequesquite Creek Maintenance Project - Riverside-South Coast County, Summer

|                     |                           |   |      |     |      |
|---------------------|---------------------------|---|------|-----|------|
| Site Preparation 5  | Excavators                | 1 | 6.00 | 158 | 0.38 |
| Site Preparation 5  | Tractors/Loaders/Backhoes | 1 | 6.00 | 97  | 0.37 |
| Site Preparation 6  | Excavators                | 1 | 6.00 | 158 | 0.38 |
| Site Preparation 6  | Tractors/Loaders/Backhoes | 1 | 6.00 | 97  | 0.37 |
| Site Preparation 7  | Excavators                | 1 | 6.00 | 158 | 0.38 |
| Site Preparation 7  | Tractors/Loaders/Backhoes | 1 | 6.00 | 97  | 0.37 |
| Site Preparation 8  | Excavators                | 1 | 6.00 | 158 | 0.38 |
| Site Preparation 8  | Tractors/Loaders/Backhoes | 1 | 6.00 | 97  | 0.37 |
| Site Preparation 9  | Excavators                | 1 | 6.00 | 158 | 0.38 |
| Site Preparation 9  | Tractors/Loaders/Backhoes | 1 | 6.00 | 97  | 0.37 |
| Site Preparation 10 | Excavators                | 1 | 6.00 | 158 | 0.38 |
| Site Preparation 10 | Tractors/Loaders/Backhoes | 1 | 6.00 | 97  | 0.37 |

**Trips and VMT**

| Phase Name          | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Site Preparation 1  | 2                       | 12.00              | 0.00               | 10.00               | 19.80              | 7.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Site Preparation 2  | 2                       | 12.00              | 0.00               | 10.00               | 19.80              | 7.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Site Preparation 3  | 2                       | 12.00              | 0.00               | 10.00               | 19.80              | 7.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Site Preparation 4  | 2                       | 12.00              | 0.00               | 10.00               | 19.80              | 7.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Site Preparation 5  | 2                       | 12.00              | 0.00               | 10.00               | 19.80              | 7.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Site Preparation 6  | 2                       | 12.00              | 0.00               | 10.00               | 19.80              | 7.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Site Preparation 7  | 2                       | 12.00              | 0.00               | 10.00               | 19.80              | 7.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Site Preparation 8  | 2                       | 12.00              | 0.00               | 10.00               | 19.80              | 7.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Site Preparation 9  | 2                       | 12.00              | 0.00               | 10.00               | 19.80              | 7.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Site Preparation 10 | 2                       | 12.00              | 0.00               | 10.00               | 19.80              | 7.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

### 3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

### 3.2 Site Preparation 1 - 2020

#### Unmitigated Construction On-Site

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category      | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |     |                 |
| Fugitive Dust |               |               |               |                    | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          |                 | 0.0000          |               |     | 0.0000          |
| Off-Road      | 0.3409        | 3.3883        | 4.1606        | 6.2000e-003        |               | 0.1875        | 0.1875        |                | 0.1725        | 0.1725        |          | 600.6652        | 600.6652        | 0.1943        |     | 605.5219        |
| <b>Total</b>  | <b>0.3409</b> | <b>3.3883</b> | <b>4.1606</b> | <b>6.2000e-003</b> | <b>0.0000</b> | <b>0.1875</b> | <b>0.1875</b> | <b>0.0000</b>  | <b>0.1725</b> | <b>0.1725</b> |          | <b>600.6652</b> | <b>600.6652</b> | <b>0.1943</b> |     | <b>605.5219</b> |

#### 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      | 0.0103        | 0.4736        | 0.0584        | 1.5200e-003        | 1.2118        | 1.5100e-003        | 1.2133        | 0.1270         | 1.4400e-003        | 0.1284        |          | 161.5535        | 161.5535        | 9.6300e-003   |     | 161.7941        |
| 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       | 0.0759        | 0.0473        | 0.6344        | 1.7800e-003        | 7.1709        | 1.0700e-003        | 7.1720        | 0.7450         | 9.8000e-004        | 0.7460        |          | 177.1066        | 177.1066        | 4.4800e-003   |     | 177.2185        |
| <b>Total</b> | <b>0.0862</b> | <b>0.5209</b> | <b>0.6928</b> | <b>3.3000e-003</b> | <b>8.3827</b> | <b>2.5800e-003</b> | <b>8.3853</b> | <b>0.8719</b>  | <b>2.4200e-003</b> | <b>0.8744</b> |          | <b>338.6600</b> | <b>338.6600</b> | <b>0.0141</b> |     | <b>339.0126</b> |

**Mitigated Construction On-Site**

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|-----|-----------------|
| Category      | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day        |                 |                 |               |     |                 |
| Fugitive Dust |               |               |               |                    | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road      | 0.3409        | 3.3883        | 4.1606        | 6.2000e-003        |               | 0.1875        | 0.1875        |                | 0.1725        | 0.1725        | 0.0000        | 600.6652        | 600.6652        | 0.1943        |     | 605.5219        |
| <b>Total</b>  | <b>0.3409</b> | <b>3.3883</b> | <b>4.1606</b> | <b>6.2000e-003</b> | <b>0.0000</b> | <b>0.1875</b> | <b>0.1875</b> | <b>0.0000</b>  | <b>0.1725</b> | <b>0.1725</b> | <b>0.0000</b> | <b>600.6652</b> | <b>600.6652</b> | <b>0.1943</b> |     | <b>605.5219</b> |

**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      | 0.0103        | 0.4736        | 0.0584        | 1.5200e-003        | 0.7553        | 1.5100e-003        | 0.7568        | 0.0813         | 1.4400e-003        | 0.0827        |          | 161.5535        | 161.5535        | 9.6300e-003   |     | 161.7941        |
| 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       | 0.0759        | 0.0473        | 0.6344        | 1.7800e-003        | 4.4592        | 1.0700e-003        | 4.4603        | 0.4738         | 9.8000e-004        | 0.4748        |          | 177.1066        | 177.1066        | 4.4800e-003   |     | 177.2185        |
| <b>Total</b> | <b>0.0862</b> | <b>0.5209</b> | <b>0.6928</b> | <b>3.3000e-003</b> | <b>5.2145</b> | <b>2.5800e-003</b> | <b>5.2171</b> | <b>0.5551</b>  | <b>2.4200e-003</b> | <b>0.5575</b> |          | <b>338.6600</b> | <b>338.6600</b> | <b>0.0141</b> |     | <b>339.0126</b> |



### 3.3 Site Preparation 2 - 2021

#### Unmitigated Construction On-Site

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category      | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |     |                 |
| Fugitive Dust |               |               |               |                    | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          |                 | 0.0000          |               |     | 0.0000          |
| Off-Road      | 0.3124        | 3.0369        | 4.1490        | 6.2100e-003        |               | 0.1622        | 0.1622        |                | 0.1492        | 0.1492        |          | 600.8190        | 600.8190        | 0.1943        |     | 605.6770        |
| <b>Total</b>  | <b>0.3124</b> | <b>3.0369</b> | <b>4.1490</b> | <b>6.2100e-003</b> | <b>0.0000</b> | <b>0.1622</b> | <b>0.1622</b> | <b>0.0000</b>  | <b>0.1492</b> | <b>0.1492</b> |          | <b>600.8190</b> | <b>600.8190</b> | <b>0.1943</b> |     | <b>605.6770</b> |

#### 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      | 9.7400e-003   | 0.4347        | 0.0572        | 1.5100e-003        | 1.2118        | 1.3200e-003        | 1.2131        | 0.1269         | 1.2700e-003        | 0.1282        |          | 159.8670        | 159.8670        | 9.2900e-003   |     | 160.0992        |
| 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       | 0.0708        | 0.0425        | 0.5820        | 1.7200e-003        | 7.1709        | 1.0400e-003        | 7.1719        | 0.7450         | 9.6000e-004        | 0.7459        |          | 171.1811        | 171.1811        | 4.0300e-003   |     | 171.2817        |
| <b>Total</b> | <b>0.0805</b> | <b>0.4772</b> | <b>0.6391</b> | <b>3.2300e-003</b> | <b>8.3827</b> | <b>2.3600e-003</b> | <b>8.3851</b> | <b>0.8719</b>  | <b>2.2300e-003</b> | <b>0.8742</b> |          | <b>331.0481</b> | <b>331.0481</b> | <b>0.0133</b> |     | <b>331.3808</b> |

**Mitigated Construction On-Site**

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|-----|-----------------|
| Category      | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day        |                 |                 |               |     |                 |
| Fugitive Dust |               |               |               |                    | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road      | 0.3124        | 3.0369        | 4.1490        | 6.2100e-003        |               | 0.1622        | 0.1622        |                | 0.1492        | 0.1492        | 0.0000        | 600.8190        | 600.8190        | 0.1943        |     | 605.6770        |
| <b>Total</b>  | <b>0.3124</b> | <b>3.0369</b> | <b>4.1490</b> | <b>6.2100e-003</b> | <b>0.0000</b> | <b>0.1622</b> | <b>0.1622</b> | <b>0.0000</b>  | <b>0.1492</b> | <b>0.1492</b> | <b>0.0000</b> | <b>600.8190</b> | <b>600.8190</b> | <b>0.1943</b> |     | <b>605.6770</b> |

**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      | 9.7400e-003   | 0.4347        | 0.0572        | 1.5100e-003        | 0.7553        | 1.3200e-003        | 0.7566        | 0.0813         | 1.2700e-003        | 0.0826        |          | 159.8670        | 159.8670        | 9.2900e-003   |     | 160.0992        |
| 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       | 0.0708        | 0.0425        | 0.5820        | 1.7200e-003        | 4.4592        | 1.0400e-003        | 4.4602        | 0.4738         | 9.6000e-004        | 0.4748        |          | 171.1811        | 171.1811        | 4.0300e-003   |     | 171.2817        |
| <b>Total</b> | <b>0.0805</b> | <b>0.4772</b> | <b>0.6391</b> | <b>3.2300e-003</b> | <b>5.2145</b> | <b>2.3600e-003</b> | <b>5.2168</b> | <b>0.5551</b>  | <b>2.2300e-003</b> | <b>0.5573</b> |          | <b>331.0481</b> | <b>331.0481</b> | <b>0.0133</b> |     | <b>331.3808</b> |

### 3.4 Site Preparation 3 - 2022

#### Unmitigated Construction On-Site

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category      | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |     |                 |
| Fugitive Dust |               |               |               |                    | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          |                 | 0.0000          |               |     | 0.0000          |
| Off-Road      | 0.2754        | 2.5895        | 4.1198        | 6.2100e-003        |               | 0.1320        | 0.1320        |                | 0.1215        | 0.1215        |          | 600.9407        | 600.9407        | 0.1944        |     | 605.7996        |
| <b>Total</b>  | <b>0.2754</b> | <b>2.5895</b> | <b>4.1198</b> | <b>6.2100e-003</b> | <b>0.0000</b> | <b>0.1320</b> | <b>0.1320</b> | <b>0.0000</b>  | <b>0.1215</b> | <b>0.1215</b> |          | <b>600.9407</b> | <b>600.9407</b> | <b>0.1944</b> |     | <b>605.7996</b> |

#### 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      | 9.1400e-003   | 0.3961        | 0.0555        | 1.4900e-003        | 1.2118        | 1.1000e-003        | 1.2129        | 0.1269         | 1.0500e-003        | 0.1280        |          | 158.0459        | 158.0459        | 8.9100e-003   |     | 158.2687        |
| 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       | 0.0663        | 0.0383        | 0.5371        | 1.6500e-003        | 7.1709        | 1.0100e-003        | 7.1719        | 0.7450         | 9.3000e-004        | 0.7459        |          | 164.9237        | 164.9237        | 3.6200e-003   |     | 165.0141        |
| <b>Total</b> | <b>0.0754</b> | <b>0.4344</b> | <b>0.5926</b> | <b>3.1400e-003</b> | <b>8.3827</b> | <b>2.1100e-003</b> | <b>8.3848</b> | <b>0.8719</b>  | <b>1.9800e-003</b> | <b>0.8739</b> |          | <b>322.9696</b> | <b>322.9696</b> | <b>0.0125</b> |     | <b>323.2828</b> |

**Mitigated Construction On-Site**

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|-----|-----------------|
| Category      | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day        |                 |                 |               |     |                 |
| Fugitive Dust |               |               |               |                    | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road      | 0.2754        | 2.5895        | 4.1198        | 6.2100e-003        |               | 0.1320        | 0.1320        |                | 0.1215        | 0.1215        | 0.0000        | 600.9407        | 600.9407        | 0.1944        |     | 605.7996        |
| <b>Total</b>  | <b>0.2754</b> | <b>2.5895</b> | <b>4.1198</b> | <b>6.2100e-003</b> | <b>0.0000</b> | <b>0.1320</b> | <b>0.1320</b> | <b>0.0000</b>  | <b>0.1215</b> | <b>0.1215</b> | <b>0.0000</b> | <b>600.9407</b> | <b>600.9407</b> | <b>0.1944</b> |     | <b>605.7996</b> |

**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      | 9.1400e-003   | 0.3961        | 0.0555        | 1.4900e-003        | 0.7553        | 1.1000e-003        | 0.7564        | 0.0813         | 1.0500e-003        | 0.0823        |          | 158.0459        | 158.0459        | 8.9100e-003   |     | 158.2687        |
| 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       | 0.0663        | 0.0383        | 0.5371        | 1.6500e-003        | 4.4592        | 1.0100e-003        | 4.4602        | 0.4738         | 9.3000e-004        | 0.4747        |          | 164.9237        | 164.9237        | 3.6200e-003   |     | 165.0141        |
| <b>Total</b> | <b>0.0754</b> | <b>0.4344</b> | <b>0.5926</b> | <b>3.1400e-003</b> | <b>5.2145</b> | <b>2.1100e-003</b> | <b>5.2166</b> | <b>0.5551</b>  | <b>1.9800e-003</b> | <b>0.5571</b> |          | <b>322.9696</b> | <b>322.9696</b> | <b>0.0125</b> |     | <b>323.2828</b> |

### 3.5 Site Preparation 4 - 2023

#### Unmitigated Construction On-Site

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category      | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |     |                 |
| Fugitive Dust |               |               |               |                    | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          |                 | 0.0000          |               |     | 0.0000          |
| Off-Road      | 0.2550        | 2.3132        | 4.1168        | 6.2100e-003        |               | 0.1137        | 0.1137        |                | 0.1046        | 0.1046        |          | 601.2616        | 601.2616        | 0.1945        |     | 606.1231        |
| <b>Total</b>  | <b>0.2550</b> | <b>2.3132</b> | <b>4.1168</b> | <b>6.2100e-003</b> | <b>0.0000</b> | <b>0.1137</b> | <b>0.1137</b> | <b>0.0000</b>  | <b>0.1046</b> | <b>0.1046</b> |          | <b>601.2616</b> | <b>601.2616</b> | <b>0.1945</b> |     | <b>606.1231</b> |

#### 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      | 6.3600e-003   | 0.2497        | 0.0489        | 1.4400e-003        | 1.2118        | 4.8000e-004        | 1.2123        | 0.1269         | 4.5000e-004        | 0.1274        |          | 152.8046        | 152.8046        | 7.1800e-003   |     | 152.9842        |
| 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       | 0.0622        | 0.0345        | 0.4959        | 1.5900e-003        | 7.1709        | 9.9000e-004        | 7.1719        | 0.7450         | 9.1000e-004        | 0.7459        |          | 158.6539        | 158.6539        | 3.2500e-003   |     | 158.7351        |
| <b>Total</b> | <b>0.0686</b> | <b>0.2842</b> | <b>0.5448</b> | <b>3.0300e-003</b> | <b>8.3827</b> | <b>1.4700e-003</b> | <b>8.3842</b> | <b>0.8719</b>  | <b>1.3600e-003</b> | <b>0.8733</b> |          | <b>311.4585</b> | <b>311.4585</b> | <b>0.0104</b> |     | <b>311.7192</b> |

**Mitigated Construction On-Site**

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|-----|-----------------|
| Category      | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day        |                 |                 |               |     |                 |
| Fugitive Dust |               |               |               |                    | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road      | 0.2550        | 2.3132        | 4.1168        | 6.2100e-003        |               | 0.1137        | 0.1137        |                | 0.1046        | 0.1046        | 0.0000        | 601.2616        | 601.2616        | 0.1945        |     | 606.1231        |
| <b>Total</b>  | <b>0.2550</b> | <b>2.3132</b> | <b>4.1168</b> | <b>6.2100e-003</b> | <b>0.0000</b> | <b>0.1137</b> | <b>0.1137</b> | <b>0.0000</b>  | <b>0.1046</b> | <b>0.1046</b> | <b>0.0000</b> | <b>601.2616</b> | <b>601.2616</b> | <b>0.1945</b> |     | <b>606.1231</b> |

**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      | 6.3600e-003   | 0.2497        | 0.0489        | 1.4400e-003        | 0.7553        | 4.8000e-004        | 0.7558        | 0.0813         | 4.5000e-004        | 0.0818        |          | 152.8046        | 152.8046        | 7.1800e-003   |     | 152.9842        |
| 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       | 0.0622        | 0.0345        | 0.4959        | 1.5900e-003        | 4.4592        | 9.9000e-004        | 4.4602        | 0.4738         | 9.1000e-004        | 0.4747        |          | 158.6539        | 158.6539        | 3.2500e-003   |     | 158.7351        |
| <b>Total</b> | <b>0.0686</b> | <b>0.2842</b> | <b>0.5448</b> | <b>3.0300e-003</b> | <b>5.2145</b> | <b>1.4700e-003</b> | <b>5.2159</b> | <b>0.5551</b>  | <b>1.3600e-003</b> | <b>0.5565</b> |          | <b>311.4585</b> | <b>311.4585</b> | <b>0.0104</b> |     | <b>311.7192</b> |

### 3.6 Site Preparation 5 - 2024

#### Unmitigated Construction On-Site

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category      | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |     |                 |
| Fugitive Dust |               |               |               |                    | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          |                 | 0.0000          |               |     | 0.0000          |
| Off-Road      | 0.2431        | 2.1383        | 4.1255        | 6.2100e-003        |               | 0.1017        | 0.1017        |                | 0.0935        | 0.0935        |          | 601.5241        | 601.5241        | 0.1946        |     | 606.3877        |
| <b>Total</b>  | <b>0.2431</b> | <b>2.1383</b> | <b>4.1255</b> | <b>6.2100e-003</b> | <b>0.0000</b> | <b>0.1017</b> | <b>0.1017</b> | <b>0.0000</b>  | <b>0.0935</b> | <b>0.0935</b> |          | <b>601.5241</b> | <b>601.5241</b> | <b>0.1946</b> |     | <b>606.3877</b> |

#### 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      | 6.4400e-003   | 0.2471        | 0.0501        | 1.4300e-003        | 1.2118        | 4.7000e-004        | 1.2123        | 0.1269         | 4.5000e-004        | 0.1274        |          | 152.2366        | 152.2366        | 7.1100e-003   |     | 152.4143        |
| 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       | 0.0587        | 0.0313        | 0.4653        | 1.5300e-003        | 7.1709        | 9.8000e-004        | 7.1719        | 0.7450         | 9.0000e-004        | 0.7459        |          | 152.9901        | 152.9901        | 2.9600e-003   |     | 153.0642        |
| <b>Total</b> | <b>0.0652</b> | <b>0.2785</b> | <b>0.5154</b> | <b>2.9600e-003</b> | <b>8.3827</b> | <b>1.4500e-003</b> | <b>8.3841</b> | <b>0.8719</b>  | <b>1.3500e-003</b> | <b>0.8733</b> |          | <b>305.2268</b> | <b>305.2268</b> | <b>0.0101</b> |     | <b>305.4785</b> |

**Mitigated Construction On-Site**

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|-----|-----------------|
| Category      | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day        |                 |                 |               |     |                 |
| Fugitive Dust |               |               |               |                    | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road      | 0.2431        | 2.1383        | 4.1255        | 6.2100e-003        |               | 0.1017        | 0.1017        |                | 0.0935        | 0.0935        | 0.0000        | 601.5241        | 601.5241        | 0.1946        |     | 606.3877        |
| <b>Total</b>  | <b>0.2431</b> | <b>2.1383</b> | <b>4.1255</b> | <b>6.2100e-003</b> | <b>0.0000</b> | <b>0.1017</b> | <b>0.1017</b> | <b>0.0000</b>  | <b>0.0935</b> | <b>0.0935</b> | <b>0.0000</b> | <b>601.5241</b> | <b>601.5241</b> | <b>0.1946</b> |     | <b>606.3877</b> |

**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      | 6.4400e-003   | 0.2471        | 0.0501        | 1.4300e-003        | 0.7553        | 4.7000e-004        | 0.7558        | 0.0813         | 4.5000e-004        | 0.0817        |          | 152.2366        | 152.2366        | 7.1100e-003   |     | 152.4143        |
| 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       | 0.0587        | 0.0313        | 0.4653        | 1.5300e-003        | 4.4592        | 9.8000e-004        | 4.4602        | 0.4738         | 9.0000e-004        | 0.4747        |          | 152.9901        | 152.9901        | 2.9600e-003   |     | 153.0642        |
| <b>Total</b> | <b>0.0652</b> | <b>0.2785</b> | <b>0.5154</b> | <b>2.9600e-003</b> | <b>5.2145</b> | <b>1.4500e-003</b> | <b>5.2159</b> | <b>0.5551</b>  | <b>1.3500e-003</b> | <b>0.5565</b> |          | <b>305.2268</b> | <b>305.2268</b> | <b>0.0101</b> |     | <b>305.4785</b> |



### 3.7 Site Preparation 6 - 2025

#### Unmitigated Construction On-Site

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category      | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |     |                 |
| Fugitive Dust |               |               |               |                    | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          |                 | 0.0000          |               |     | 0.0000          |
| Off-Road      | 0.2244        | 1.9176        | 4.1168        | 6.2200e-003        |               | 0.0855        | 0.0855        |                | 0.0787        | 0.0787        |          | 601.7953        | 601.7953        | 0.1946        |     | 606.6611        |
| <b>Total</b>  | <b>0.2244</b> | <b>1.9176</b> | <b>4.1168</b> | <b>6.2200e-003</b> | <b>0.0000</b> | <b>0.0855</b> | <b>0.0855</b> | <b>0.0000</b>  | <b>0.0787</b> | <b>0.0787</b> |          | <b>601.7953</b> | <b>601.7953</b> | <b>0.1946</b> |     | <b>606.6611</b> |

#### 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      | 6.3800e-003   | 0.2423        | 0.0504        | 1.4200e-003        | 1.2118        | 4.7000e-004        | 1.2123        | 0.1269         | 4.5000e-004        | 0.1274        |          | 151.2990        | 151.2990        | 7.0100e-003        |     | 151.4742        |
| 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       | 0.0556        | 0.0285        | 0.4319        | 1.4700e-003        | 7.1709        | 9.6000e-004        | 7.1719        | 0.7450         | 8.8000e-004        | 0.7459        |          | 146.8571        | 146.8571        | 2.6900e-003        |     | 146.9243        |
| <b>Total</b> | <b>0.0619</b> | <b>0.2708</b> | <b>0.4823</b> | <b>2.8900e-003</b> | <b>8.3827</b> | <b>1.4300e-003</b> | <b>8.3841</b> | <b>0.8719</b>  | <b>1.3300e-003</b> | <b>0.8733</b> |          | <b>298.1562</b> | <b>298.1562</b> | <b>9.7000e-003</b> |     | <b>298.3985</b> |

**Mitigated Construction On-Site**

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|-----|-----------------|
| Category      | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day        |                 |                 |               |     |                 |
| Fugitive Dust |               |               |               |                    | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road      | 0.2244        | 1.9176        | 4.1168        | 6.2200e-003        |               | 0.0855        | 0.0855        |                | 0.0787        | 0.0787        | 0.0000        | 601.7953        | 601.7953        | 0.1946        |     | 606.6611        |
| <b>Total</b>  | <b>0.2244</b> | <b>1.9176</b> | <b>4.1168</b> | <b>6.2200e-003</b> | <b>0.0000</b> | <b>0.0855</b> | <b>0.0855</b> | <b>0.0000</b>  | <b>0.0787</b> | <b>0.0787</b> | <b>0.0000</b> | <b>601.7953</b> | <b>601.7953</b> | <b>0.1946</b> |     | <b>606.6611</b> |

**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      | 6.3800e-003   | 0.2423        | 0.0504        | 1.4200e-003        | 0.7553        | 4.7000e-004        | 0.7557        | 0.0813         | 4.5000e-004        | 0.0817        |          | 151.2990        | 151.2990        | 7.0100e-003        |     | 151.4742        |
| 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       | 0.0556        | 0.0285        | 0.4319        | 1.4700e-003        | 4.4592        | 9.6000e-004        | 4.4602        | 0.4738         | 8.8000e-004        | 0.4747        |          | 146.8571        | 146.8571        | 2.6900e-003        |     | 146.9243        |
| <b>Total</b> | <b>0.0619</b> | <b>0.2708</b> | <b>0.4823</b> | <b>2.8900e-003</b> | <b>5.2145</b> | <b>1.4300e-003</b> | <b>5.2159</b> | <b>0.5551</b>  | <b>1.3300e-003</b> | <b>0.5564</b> |          | <b>298.1562</b> | <b>298.1562</b> | <b>9.7000e-003</b> |     | <b>298.3985</b> |

### 3.8 Site Preparation 7 - 2026

#### Unmitigated Construction On-Site

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category      | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |     |                 |
| Fugitive Dust |               |               |               |                    | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          |                 | 0.0000          |               |     | 0.0000          |
| Off-Road      | 0.2244        | 1.9176        | 4.1168        | 6.2200e-003        |               | 0.0855        | 0.0855        |                | 0.0787        | 0.0787        |          | 601.7953        | 601.7953        | 0.1946        |     | 606.6611        |
| <b>Total</b>  | <b>0.2244</b> | <b>1.9176</b> | <b>4.1168</b> | <b>6.2200e-003</b> | <b>0.0000</b> | <b>0.0855</b> | <b>0.0855</b> | <b>0.0000</b>  | <b>0.0787</b> | <b>0.0787</b> |          | <b>601.7953</b> | <b>601.7953</b> | <b>0.1946</b> |     | <b>606.6611</b> |

#### 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      | 6.3200e-003   | 0.2377        | 0.0506        | 1.4100e-003        | 1.2118        | 4.6000e-004        | 1.2123        | 0.1269         | 4.4000e-004        | 0.1274        |          | 150.4329        | 150.4329        | 6.8900e-003        |     | 150.6052        |
| 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       | 0.0528        | 0.0262        | 0.4031        | 1.4200e-003        | 7.1709        | 9.3000e-004        | 7.1718        | 0.7450         | 8.5000e-004        | 0.7458        |          | 141.5052        | 141.5052        | 2.4500e-003        |     | 141.5664        |
| <b>Total</b> | <b>0.0591</b> | <b>0.2638</b> | <b>0.4537</b> | <b>2.8300e-003</b> | <b>8.3827</b> | <b>1.3900e-003</b> | <b>8.3841</b> | <b>0.8719</b>  | <b>1.2900e-003</b> | <b>0.8732</b> |          | <b>291.9380</b> | <b>291.9380</b> | <b>9.3400e-003</b> |     | <b>292.1715</b> |

**Mitigated Construction On-Site**

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|-----|-----------------|
| Category      | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day        |                 |                 |               |     |                 |
| Fugitive Dust |               |               |               |                    | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road      | 0.2244        | 1.9176        | 4.1168        | 6.2200e-003        |               | 0.0855        | 0.0855        |                | 0.0787        | 0.0787        | 0.0000        | 601.7953        | 601.7953        | 0.1946        |     | 606.6611        |
| <b>Total</b>  | <b>0.2244</b> | <b>1.9176</b> | <b>4.1168</b> | <b>6.2200e-003</b> | <b>0.0000</b> | <b>0.0855</b> | <b>0.0855</b> | <b>0.0000</b>  | <b>0.0787</b> | <b>0.0787</b> | <b>0.0000</b> | <b>601.7953</b> | <b>601.7953</b> | <b>0.1946</b> |     | <b>606.6611</b> |

**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      | 6.3200e-003   | 0.2377        | 0.0506        | 1.4100e-003        | 0.7553        | 4.6000e-004        | 0.7557        | 0.0813         | 4.4000e-004        | 0.0817        |          | 150.4329        | 150.4329        | 6.8900e-003        |     | 150.6052        |
| 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       | 0.0528        | 0.0262        | 0.4031        | 1.4200e-003        | 4.4592        | 9.3000e-004        | 4.4601        | 0.4738         | 8.5000e-004        | 0.4747        |          | 141.5052        | 141.5052        | 2.4500e-003        |     | 141.5664        |
| <b>Total</b> | <b>0.0591</b> | <b>0.2638</b> | <b>0.4537</b> | <b>2.8300e-003</b> | <b>5.2145</b> | <b>1.3900e-003</b> | <b>5.2159</b> | <b>0.5551</b>  | <b>1.2900e-003</b> | <b>0.5564</b> |          | <b>291.9380</b> | <b>291.9380</b> | <b>9.3400e-003</b> |     | <b>292.1715</b> |

### 3.9 Site Preparation 8 - 2027

#### Unmitigated Construction On-Site

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category      | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |     |                 |
| Fugitive Dust |               |               |               |                    | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          |                 | 0.0000          |               |     | 0.0000          |
| Off-Road      | 0.2244        | 1.9176        | 4.1168        | 6.2200e-003        |               | 0.0855        | 0.0855        |                | 0.0787        | 0.0787        |          | 601.7953        | 601.7953        | 0.1946        |     | 606.6611        |
| <b>Total</b>  | <b>0.2244</b> | <b>1.9176</b> | <b>4.1168</b> | <b>6.2200e-003</b> | <b>0.0000</b> | <b>0.0855</b> | <b>0.0855</b> | <b>0.0000</b>  | <b>0.0787</b> | <b>0.0787</b> |          | <b>601.7953</b> | <b>601.7953</b> | <b>0.1946</b> |     | <b>606.6611</b> |

#### 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      | 6.2800e-003   | 0.2335        | 0.0510        | 1.4100e-003        | 1.2118        | 4.6000e-004        | 1.2122        | 0.1269         | 4.4000e-004        | 0.1274        |          | 149.6884        | 149.6884        | 6.7700e-003        |     | 149.8577        |
| 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       | 0.0501        | 0.0241        | 0.3776        | 1.3700e-003        | 7.1709        | 8.8000e-004        | 7.1718        | 0.7450         | 8.1000e-004        | 0.7458        |          | 136.8194        | 136.8194        | 2.2400e-003        |     | 136.8753        |
| <b>Total</b> | <b>0.0564</b> | <b>0.2576</b> | <b>0.4285</b> | <b>2.7800e-003</b> | <b>8.3827</b> | <b>1.3400e-003</b> | <b>8.3840</b> | <b>0.8719</b>  | <b>1.2500e-003</b> | <b>0.8732</b> |          | <b>286.5078</b> | <b>286.5078</b> | <b>9.0100e-003</b> |     | <b>286.7330</b> |

**Mitigated Construction On-Site**

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|-----|-----------------|
| Category      | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day        |                 |                 |               |     |                 |
| Fugitive Dust |               |               |               |                    | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road      | 0.2244        | 1.9176        | 4.1168        | 6.2200e-003        |               | 0.0855        | 0.0855        |                | 0.0787        | 0.0787        | 0.0000        | 601.7953        | 601.7953        | 0.1946        |     | 606.6611        |
| <b>Total</b>  | <b>0.2244</b> | <b>1.9176</b> | <b>4.1168</b> | <b>6.2200e-003</b> | <b>0.0000</b> | <b>0.0855</b> | <b>0.0855</b> | <b>0.0000</b>  | <b>0.0787</b> | <b>0.0787</b> | <b>0.0000</b> | <b>601.7953</b> | <b>601.7953</b> | <b>0.1946</b> |     | <b>606.6611</b> |

**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      | 6.2800e-003   | 0.2335        | 0.0510        | 1.4100e-003        | 0.7553        | 4.6000e-004        | 0.7557        | 0.0813         | 4.4000e-004        | 0.0817        |          | 149.6884        | 149.6884        | 6.7700e-003        |     | 149.8577        |
| 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       | 0.0501        | 0.0241        | 0.3776        | 1.3700e-003        | 4.4592        | 8.8000e-004        | 4.4601        | 0.4738         | 8.1000e-004        | 0.4746        |          | 136.8194        | 136.8194        | 2.2400e-003        |     | 136.8753        |
| <b>Total</b> | <b>0.0564</b> | <b>0.2576</b> | <b>0.4285</b> | <b>2.7800e-003</b> | <b>5.2145</b> | <b>1.3400e-003</b> | <b>5.2158</b> | <b>0.5551</b>  | <b>1.2500e-003</b> | <b>0.5563</b> |          | <b>286.5078</b> | <b>286.5078</b> | <b>9.0100e-003</b> |     | <b>286.7330</b> |

### 3.10 Site Preparation 9 - 2028

#### Unmitigated Construction On-Site

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category      | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |     |                 |
| Fugitive Dust |               |               |               |                    | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          |                 | 0.0000          |               |     | 0.0000          |
| Off-Road      | 0.2244        | 1.9176        | 4.1168        | 6.2200e-003        |               | 0.0855        | 0.0855        |                | 0.0787        | 0.0787        |          | 601.7953        | 601.7953        | 0.1946        |     | 606.6611        |
| <b>Total</b>  | <b>0.2244</b> | <b>1.9176</b> | <b>4.1168</b> | <b>6.2200e-003</b> | <b>0.0000</b> | <b>0.0855</b> | <b>0.0855</b> | <b>0.0000</b>  | <b>0.0787</b> | <b>0.0787</b> |          | <b>601.7953</b> | <b>601.7953</b> | <b>0.1946</b> |     | <b>606.6611</b> |

#### 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      | 6.2400e-003   | 0.2304        | 0.0513        | 1.4000e-003        | 1.2118        | 4.5000e-004        | 1.2122        | 0.1269         | 4.3000e-004        | 0.1274        |          | 149.0950        | 149.0950        | 6.6500e-003        |     | 149.2611        |
| 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       | 0.0474        | 0.0222        | 0.3553        | 1.3300e-003        | 7.1709        | 8.1000e-004        | 7.1717        | 0.7450         | 7.5000e-004        | 0.7457        |          | 132.7344        | 132.7344        | 2.0600e-003        |     | 132.7858        |
| <b>Total</b> | <b>0.0536</b> | <b>0.2526</b> | <b>0.4066</b> | <b>2.7300e-003</b> | <b>8.3827</b> | <b>1.2600e-003</b> | <b>8.3840</b> | <b>0.8719</b>  | <b>1.1800e-003</b> | <b>0.8731</b> |          | <b>281.8293</b> | <b>281.8293</b> | <b>8.7100e-003</b> |     | <b>282.0470</b> |

**Mitigated Construction On-Site**

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|-----|-----------------|
| Category      | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day        |                 |                 |               |     |                 |
| Fugitive Dust |               |               |               |                    | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road      | 0.2244        | 1.9176        | 4.1168        | 6.2200e-003        |               | 0.0855        | 0.0855        |                | 0.0787        | 0.0787        | 0.0000        | 601.7953        | 601.7953        | 0.1946        |     | 606.6611        |
| <b>Total</b>  | <b>0.2244</b> | <b>1.9176</b> | <b>4.1168</b> | <b>6.2200e-003</b> | <b>0.0000</b> | <b>0.0855</b> | <b>0.0855</b> | <b>0.0000</b>  | <b>0.0787</b> | <b>0.0787</b> | <b>0.0000</b> | <b>601.7953</b> | <b>601.7953</b> | <b>0.1946</b> |     | <b>606.6611</b> |

**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      | 6.2400e-003   | 0.2304        | 0.0513        | 1.4000e-003        | 0.7553        | 4.5000e-004        | 0.7557        | 0.0813         | 4.3000e-004        | 0.0817        |          | 149.0950        | 149.0950        | 6.6500e-003        |     | 149.2611        |
| 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       | 0.0474        | 0.0222        | 0.3553        | 1.3300e-003        | 4.4592        | 8.1000e-004        | 4.4600        | 0.4738         | 7.5000e-004        | 0.4746        |          | 132.7344        | 132.7344        | 2.0600e-003        |     | 132.7858        |
| <b>Total</b> | <b>0.0536</b> | <b>0.2526</b> | <b>0.4066</b> | <b>2.7300e-003</b> | <b>5.2145</b> | <b>1.2600e-003</b> | <b>5.2157</b> | <b>0.5551</b>  | <b>1.1800e-003</b> | <b>0.5563</b> |          | <b>281.8293</b> | <b>281.8293</b> | <b>8.7100e-003</b> |     | <b>282.0470</b> |



### 3.11 Site Preparation 10 - 2029

#### Unmitigated Construction On-Site

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category      | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |     |                 |
| Fugitive Dust |               |               |               |                    | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          |                 | 0.0000          |               |     | 0.0000          |
| Off-Road      | 0.2244        | 1.9176        | 4.1168        | 6.2200e-003        |               | 0.0855        | 0.0855        |                | 0.0787        | 0.0787        |          | 601.7953        | 601.7953        | 0.1946        |     | 606.6611        |
| <b>Total</b>  | <b>0.2244</b> | <b>1.9176</b> | <b>4.1168</b> | <b>6.2200e-003</b> | <b>0.0000</b> | <b>0.0855</b> | <b>0.0855</b> | <b>0.0000</b>  | <b>0.0787</b> | <b>0.0787</b> |          | <b>601.7953</b> | <b>601.7953</b> | <b>0.1946</b> |     | <b>606.6611</b> |

#### 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      | 6.2000e-003   | 0.2275        | 0.0516        | 1.4000e-003        | 1.2118        | 4.5000e-004        | 1.2122        | 0.1269         | 4.3000e-004        | 0.1274        |          | 148.5582        | 148.5582        | 6.5300e-003        |     | 148.7215        |
| 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       | 0.0446        | 0.0205        | 0.3345        | 1.2900e-003        | 7.1709        | 7.5000e-004        | 7.1717        | 0.7450         | 6.9000e-004        | 0.7457        |          | 129.1638        | 129.1638        | 1.8900e-003        |     | 129.2111        |
| <b>Total</b> | <b>0.0508</b> | <b>0.2480</b> | <b>0.3861</b> | <b>2.6900e-003</b> | <b>8.3827</b> | <b>1.2000e-003</b> | <b>8.3839</b> | <b>0.8719</b>  | <b>1.1200e-003</b> | <b>0.8730</b> |          | <b>277.7221</b> | <b>277.7221</b> | <b>8.4200e-003</b> |     | <b>277.9325</b> |

**Mitigated Construction On-Site**

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|-----|-----------------|
| Category      | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day        |                 |                 |               |     |                 |
| Fugitive Dust |               |               |               |                    | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road      | 0.2244        | 1.9176        | 4.1168        | 6.2200e-003        |               | 0.0855        | 0.0855        |                | 0.0787        | 0.0787        | 0.0000        | 601.7953        | 601.7953        | 0.1946        |     | 606.6611        |
| <b>Total</b>  | <b>0.2244</b> | <b>1.9176</b> | <b>4.1168</b> | <b>6.2200e-003</b> | <b>0.0000</b> | <b>0.0855</b> | <b>0.0855</b> | <b>0.0000</b>  | <b>0.0787</b> | <b>0.0787</b> | <b>0.0000</b> | <b>601.7953</b> | <b>601.7953</b> | <b>0.1946</b> |     | <b>606.6611</b> |

**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      | 6.2000e-003   | 0.2275        | 0.0516        | 1.4000e-003        | 0.7553        | 4.5000e-004        | 0.7557        | 0.0813         | 4.3000e-004        | 0.0817        |          | 148.5582        | 148.5582        | 6.5300e-003        |     | 148.7215        |
| 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       | 0.0446        | 0.0205        | 0.3345        | 1.2900e-003        | 4.4592        | 7.5000e-004        | 4.4600        | 0.4738         | 6.9000e-004        | 0.4745        |          | 129.1638        | 129.1638        | 1.8900e-003        |     | 129.2111        |
| <b>Total</b> | <b>0.0508</b> | <b>0.2480</b> | <b>0.3861</b> | <b>2.6900e-003</b> | <b>5.2145</b> | <b>1.2000e-003</b> | <b>5.2157</b> | <b>0.5551</b>  | <b>1.1200e-003</b> | <b>0.5562</b> |          | <b>277.7221</b> | <b>277.7221</b> | <b>8.4200e-003</b> |     | <b>277.9325</b> |

**Tequesquite Creek Maintenance Project**  
**Riverside-South Coast County, Winter**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses               | Size | Metric            | Lot Acreage | Floor Surface Area | Population |
|-------------------------|------|-------------------|-------------|--------------------|------------|
| User Defined Industrial | 1.00 | User Defined Unit | 0.93        | 40,510.80          | 0          |

### 1.2 Other Project Characteristics

|                             |                            |                             |       |                             |       |
|-----------------------------|----------------------------|-----------------------------|-------|-----------------------------|-------|
| Urbanization                | Rural                      | Wind Speed (m/s)            | 2.4   | Precipitation Freq (Days)   | 28    |
| Climate Zone                | 10                         |                             |       | Operational Year            | 2030  |
| Utility Company             | Southern California Edison |                             |       |                             |       |
| CO2 Intensity<br>(lb/MW hr) | 702.44                     | CH4 Intensity<br>(lb/MW hr) | 0.029 | N2O Intensity<br>(lb/MW hr) | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - Tequesquite Creek Maintenance Project. Riverside County (SCAB).

Land Use - Project site is 0.93 acre.

Construction Phase - Maintenance activity would occur once a year from 2020 to 2029.

Off-road Equipment - Equipment based project specifics. Assumed to operate 6 hours/day.

Off-road Equipment - Equipment based on project specifics. Assumed excavator and backhoe to operate 6 hours/day.

Off-road Equipment - Equipment based on project specifics. Assumed excavator and backhoe to operate 6 hours/day.

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Off-road Equipment - Equipment based on project specifics. Assumed excavator and backhoe to operate 6 hours/day.

Trips and VMT - Assumed six onsite workers (12 one-way trips) and one dump truck (10 haul trips).

On-road Fugitive Dust - Assumed 98% paved roads for worker and haul trips.

Grading -

Vehicle Trips - Modeling construction only.

Vehicle Emission Factors - Modeling construction only.

Vehicle Emission Factors - Modeling construction only.

Vehicle Emission Factors - Modeling construction only.

Road Dust - Modeling construction only.

Woodstoves - Modeling construction only.

Consumer Products - Modeling construction only.

Area Coating - Modeling construction only.

Energy Use - Modeling construction only.

Water And Wastewater - Modeling construction only.

Solid Waste - Modeling construction only.

Construction Off-road Equipment Mitigation - Water twice daily and 15 mph vehicle speeds.

[illegible]

[illegible]

[illegible]

[illegible]

## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

#### Unmitigated Construction

|         | ROG    | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e     |
|---------|--------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|----------|
| Year    | lb/day |        |        |             |               |              |            |                |               |             | lb/day   |           |           |        |        |          |
| 2020    | 0.4276 | 3.9150 | 4.7366 | 9.2700e-003 | 8.3827        | 0.1901       | 8.5728     | 0.8719         | 0.1749        | 1.0469      | 0.0000   | 916.9928  | 916.9928  | 0.2087 | 0.0000 | 922.2095 |
| 2021    | 0.3936 | 3.5185 | 4.6804 | 9.2200e-003 | 8.3827        | 0.1645       | 8.5472     | 0.8719         | 0.1514        | 1.0234      | 0.0000   | 910.1733  | 910.1733  | 0.2080 | 0.0000 | 915.3721 |
| 2022    | 0.3517 | 3.0268 | 4.6126 | 9.1400e-003 | 8.3827        | 0.1342       | 8.5169     | 0.8719         | 0.1235        | 0.9954      | 0.0000   | 902.8822  | 902.8822  | 0.2072 | 0.0000 | 908.0630 |
| 2023    | 0.3245 | 2.5971 | 4.5667 | 9.0400e-003 | 8.3827        | 0.1152       | 8.4979     | 0.8719         | 0.1060        | 0.9779      | 0.0000   | 892.5167  | 892.5167  | 0.2051 | 0.0000 | 897.6430 |
| 2024    | 0.3094 | 2.4163 | 4.5514 | 8.9900e-003 | 8.3827        | 0.1031       | 8.4858     | 0.8719         | 0.0949        | 0.9668      | 0.0000   | 887.1633  | 887.1633  | 0.2048 | 0.0000 | 892.2834 |
| 2025    | 0.2875 | 2.1876 | 4.5161 | 8.9300e-003 | 8.3827        | 0.0869       | 8.4696     | 0.8719         | 0.0800        | 0.9519      | 0.0000   | 881.0570  | 881.0570  | 0.2045 | 0.0000 | 886.1704 |
| 2026    | 0.2848 | 2.1804 | 4.4931 | 8.8700e-003 | 8.3827        | 0.0869       | 8.4696     | 0.8719         | 0.0800        | 0.9519      | 0.0000   | 875.4423  | 875.4423  | 0.2042 | 0.0000 | 880.5472 |
| 2027    | 0.2822 | 2.1740 | 4.4728 | 8.8200e-003 | 8.3827        | 0.0868       | 8.4695     | 0.8719         | 0.0799        | 0.9518      | 0.0000   | 870.5290  | 870.5290  | 0.2039 | 0.0000 | 875.6259 |
| 2028    | 0.2795 | 2.1689 | 4.4552 | 8.7800e-003 | 8.3827        | 0.0868       | 8.4695     | 0.8719         | 0.0798        | 0.9518      | 0.0000   | 866.2967  | 866.2967  | 0.2036 | 0.0000 | 871.3861 |
| 2029    | 0.2766 | 2.1641 | 4.4386 | 8.7400e-003 | 8.3827        | 0.0867       | 8.4694     | 0.8719         | 0.0798        | 0.9517      | 0.0000   | 862.5758  | 862.5758  | 0.2033 | 0.0000 | 867.6582 |
| Maximum | 0.4276 | 3.9150 | 4.7366 | 9.2700e-003 | 8.3827        | 0.1901       | 8.5728     | 0.8719         | 0.1749        | 1.0469      | 0.0000   | 916.9928  | 916.9928  | 0.2087 | 0.0000 | 922.2095 |



**Mitigated Construction**

|         | ROG    | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e     |
|---------|--------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|----------|
| Year    | lb/day |        |        |             |               |              |            |                |               |             | lb/day   |           |           |        |        |          |
| 2020    | 0.4276 | 3.9150 | 4.7366 | 9.2700e-003 | 5.2145        | 0.1901       | 5.4046     | 0.5551         | 0.1749        | 0.7300      | 0.0000   | 916.9928  | 916.9928  | 0.2087 | 0.0000 | 922.2095 |
| 2021    | 0.3936 | 3.5185 | 4.6804 | 9.2200e-003 | 5.2145        | 0.1645       | 5.3790     | 0.5551         | 0.1514        | 0.7065      | 0.0000   | 910.1733  | 910.1733  | 0.2080 | 0.0000 | 915.3721 |
| 2022    | 0.3517 | 3.0268 | 4.6126 | 9.1400e-003 | 5.2145        | 0.1342       | 5.3486     | 0.5551         | 0.1235        | 0.6786      | 0.0000   | 902.8822  | 902.8822  | 0.2072 | 0.0000 | 908.0629 |
| 2023    | 0.3245 | 2.5971 | 4.5667 | 9.0400e-003 | 5.2145        | 0.1152       | 5.3297     | 0.5551         | 0.1060        | 0.6611      | 0.0000   | 892.5167  | 892.5167  | 0.2051 | 0.0000 | 897.6430 |
| 2024    | 0.3094 | 2.4163 | 4.5514 | 8.9900e-003 | 5.2145        | 0.1031       | 5.3176     | 0.5551         | 0.0949        | 0.6500      | 0.0000   | 887.1633  | 887.1633  | 0.2048 | 0.0000 | 892.2834 |
| 2025    | 0.2875 | 2.1876 | 4.5161 | 8.9300e-003 | 5.2145        | 0.0869       | 5.3014     | 0.5551         | 0.0800        | 0.6351      | 0.0000   | 881.0570  | 881.0570  | 0.2045 | 0.0000 | 886.1704 |
| 2026    | 0.2848 | 2.1804 | 4.4931 | 8.8700e-003 | 5.2145        | 0.0869       | 5.3014     | 0.5551         | 0.0800        | 0.6351      | 0.0000   | 875.4423  | 875.4423  | 0.2042 | 0.0000 | 880.5472 |
| 2027    | 0.2822 | 2.1740 | 4.4728 | 8.8200e-003 | 5.2145        | 0.0868       | 5.3013     | 0.5551         | 0.0799        | 0.6350      | 0.0000   | 870.5290  | 870.5290  | 0.2039 | 0.0000 | 875.6259 |
| 2028    | 0.2795 | 2.1689 | 4.4552 | 8.7800e-003 | 5.2145        | 0.0868       | 5.3012     | 0.5551         | 0.0798        | 0.6349      | 0.0000   | 866.2967  | 866.2967  | 0.2036 | 0.0000 | 871.3861 |
| 2029    | 0.2766 | 2.1641 | 4.4386 | 8.7400e-003 | 5.2145        | 0.0867       | 5.3012     | 0.5551         | 0.0798        | 0.6349      | 0.0000   | 862.5758  | 862.5758  | 0.2033 | 0.0000 | 867.6582 |
| Maximum | 0.4276 | 3.9150 | 4.7366 | 9.2700e-003 | 5.2145        | 0.1901       | 5.4046     | 0.5551         | 0.1749        | 0.7300      | 0.0000   | 916.9928  | 916.9928  | 0.2087 | 0.0000 | 922.2095 |

|                   | ROG  | NOx  | CO   | SO2  | 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 | 37.79         | 0.00         | 37.29      | 36.34          | 0.00          | 32.43       | 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 1  | Site Preparation | 9/1/2020   | 9/7/2020 | 5             | 5        |                   |
| 2            | Site Preparation 2  | Site Preparation | 9/1/2021   | 9/7/2021 | 5             | 5        |                   |
| 3            | Site Preparation 3  | Site Preparation | 9/1/2022   | 9/7/2022 | 5             | 5        |                   |
| 4            | Site Preparation 4  | Site Preparation | 9/1/2023   | 9/7/2023 | 5             | 5        |                   |
| 5            | Site Preparation 5  | Site Preparation | 9/1/2024   | 9/6/2024 | 5             | 5        |                   |
| 6            | Site Preparation 6  | Site Preparation | 9/1/2025   | 9/5/2025 | 5             | 5        |                   |
| 7            | Site Preparation 7  | Site Preparation | 9/1/2026   | 9/7/2026 | 5             | 5        |                   |
| 8            | Site Preparation 8  | Site Preparation | 9/1/2027   | 9/7/2027 | 5             | 5        |                   |
| 9            | Site Preparation 9  | Site Preparation | 9/1/2028   | 9/7/2028 | 5             | 5        |                   |
| 10           | Site Preparation 10 | Site Preparation | 9/1/2029   | 9/7/2029 | 5             | 5        |                   |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0**

#### OffRoad Equipment

| Phase Name         | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|--------------------|---------------------------|--------|-------------|-------------|-------------|
| Site Preparation 1 | Excavators                | 1      | 6.00        | 158         | 0.38        |
| Site Preparation 1 | Tractors/Loaders/Backhoes | 1      | 6.00        | 97          | 0.37        |
| Site Preparation 2 | Excavators                | 1      | 6.00        | 158         | 0.38        |
| Site Preparation 2 | Tractors/Loaders/Backhoes | 1      | 6.00        | 97          | 0.37        |
| Site Preparation 3 | Excavators                | 1      | 6.00        | 158         | 0.38        |
| Site Preparation 3 | Tractors/Loaders/Backhoes | 1      | 6.00        | 97          | 0.37        |
| Site Preparation 4 | Excavators                | 1      | 6.00        | 158         | 0.38        |
| Site Preparation 4 | Tractors/Loaders/Backhoes | 1      | 6.00        | 97          | 0.37        |

## Tequesquite Creek Maintenance Project - Riverside-South Coast County, Winter

|                     |                           |   |      |     |      |
|---------------------|---------------------------|---|------|-----|------|
| Site Preparation 5  | Excavators                | 1 | 6.00 | 158 | 0.38 |
| Site Preparation 5  | Tractors/Loaders/Backhoes | 1 | 6.00 | 97  | 0.37 |
| Site Preparation 6  | Excavators                | 1 | 6.00 | 158 | 0.38 |
| Site Preparation 6  | Tractors/Loaders/Backhoes | 1 | 6.00 | 97  | 0.37 |
| Site Preparation 7  | Excavators                | 1 | 6.00 | 158 | 0.38 |
| Site Preparation 7  | Tractors/Loaders/Backhoes | 1 | 6.00 | 97  | 0.37 |
| Site Preparation 8  | Excavators                | 1 | 6.00 | 158 | 0.38 |
| Site Preparation 8  | Tractors/Loaders/Backhoes | 1 | 6.00 | 97  | 0.37 |
| Site Preparation 9  | Excavators                | 1 | 6.00 | 158 | 0.38 |
| Site Preparation 9  | Tractors/Loaders/Backhoes | 1 | 6.00 | 97  | 0.37 |
| Site Preparation 10 | Excavators                | 1 | 6.00 | 158 | 0.38 |
| Site Preparation 10 | Tractors/Loaders/Backhoes | 1 | 6.00 | 97  | 0.37 |

**Trips and VMT**

| Phase Name          | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Site Preparation 1  | 2                       | 12.00              | 0.00               | 10.00               | 19.80              | 7.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Site Preparation 2  | 2                       | 12.00              | 0.00               | 10.00               | 19.80              | 7.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Site Preparation 3  | 2                       | 12.00              | 0.00               | 10.00               | 19.80              | 7.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Site Preparation 4  | 2                       | 12.00              | 0.00               | 10.00               | 19.80              | 7.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Site Preparation 5  | 2                       | 12.00              | 0.00               | 10.00               | 19.80              | 7.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Site Preparation 6  | 2                       | 12.00              | 0.00               | 10.00               | 19.80              | 7.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Site Preparation 7  | 2                       | 12.00              | 0.00               | 10.00               | 19.80              | 7.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Site Preparation 8  | 2                       | 12.00              | 0.00               | 10.00               | 19.80              | 7.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Site Preparation 9  | 2                       | 12.00              | 0.00               | 10.00               | 19.80              | 7.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Site Preparation 10 | 2                       | 12.00              | 0.00               | 10.00               | 19.80              | 7.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

### 3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

### 3.2 Site Preparation 1 - 2020

#### Unmitigated Construction On-Site

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category      | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |     |                 |
| Fugitive Dust |               |               |               |                    | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          |                 | 0.0000          |               |     | 0.0000          |
| Off-Road      | 0.3409        | 3.3883        | 4.1606        | 6.2000e-003        |               | 0.1875        | 0.1875        |                | 0.1725        | 0.1725        |          | 600.6652        | 600.6652        | 0.1943        |     | 605.5219        |
| <b>Total</b>  | <b>0.3409</b> | <b>3.3883</b> | <b>4.1606</b> | <b>6.2000e-003</b> | <b>0.0000</b> | <b>0.1875</b> | <b>0.1875</b> | <b>0.0000</b>  | <b>0.1725</b> | <b>0.1725</b> |          | <b>600.6652</b> | <b>600.6652</b> | <b>0.1943</b> |     | <b>605.5219</b> |

#### 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      | 0.0108        | 0.4777        | 0.0684        | 1.4800e-003        | 1.2118        | 1.5300e-003        | 1.2133        | 0.1270         | 1.4600e-003        | 0.1284        |          | 157.5116        | 157.5116        | 0.0105        |     | 157.7750        |
| 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       | 0.0760        | 0.0490        | 0.5075        | 1.5900e-003        | 7.1709        | 1.0700e-003        | 7.1720        | 0.7450         | 9.8000e-004        | 0.7460        |          | 158.8160        | 158.8160        | 3.8700e-003   |     | 158.9126        |
| <b>Total</b> | <b>0.0868</b> | <b>0.5267</b> | <b>0.5760</b> | <b>3.0700e-003</b> | <b>8.3827</b> | <b>2.6000e-003</b> | <b>8.3853</b> | <b>0.8719</b>  | <b>2.4400e-003</b> | <b>0.8744</b> |          | <b>316.3276</b> | <b>316.3276</b> | <b>0.0144</b> |     | <b>316.6876</b> |

**Mitigated Construction On-Site**

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|-----|-----------------|
| Category      | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day        |                 |                 |               |     |                 |
| Fugitive Dust |               |               |               |                    | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road      | 0.3409        | 3.3883        | 4.1606        | 6.2000e-003        |               | 0.1875        | 0.1875        |                | 0.1725        | 0.1725        | 0.0000        | 600.6652        | 600.6652        | 0.1943        |     | 605.5219        |
| <b>Total</b>  | <b>0.3409</b> | <b>3.3883</b> | <b>4.1606</b> | <b>6.2000e-003</b> | <b>0.0000</b> | <b>0.1875</b> | <b>0.1875</b> | <b>0.0000</b>  | <b>0.1725</b> | <b>0.1725</b> | <b>0.0000</b> | <b>600.6652</b> | <b>600.6652</b> | <b>0.1943</b> |     | <b>605.5219</b> |

**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      | 0.0108        | 0.4777        | 0.0684        | 1.4800e-003        | 0.7553        | 1.5300e-003        | 0.7568        | 0.0813         | 1.4600e-003        | 0.0828        |          | 157.5116        | 157.5116        | 0.0105        |     | 157.7750        |
| 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       | 0.0760        | 0.0490        | 0.5075        | 1.5900e-003        | 4.4592        | 1.0700e-003        | 4.4603        | 0.4738         | 9.8000e-004        | 0.4748        |          | 158.8160        | 158.8160        | 3.8700e-003   |     | 158.9126        |
| <b>Total</b> | <b>0.0868</b> | <b>0.5267</b> | <b>0.5760</b> | <b>3.0700e-003</b> | <b>5.2145</b> | <b>2.6000e-003</b> | <b>5.2171</b> | <b>0.5551</b>  | <b>2.4400e-003</b> | <b>0.5576</b> |          | <b>316.3276</b> | <b>316.3276</b> | <b>0.0144</b> |     | <b>316.6876</b> |

### 3.3 Site Preparation 2 - 2021

#### Unmitigated Construction On-Site

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category      | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |     |                 |
| Fugitive Dust |               |               |               |                    | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          |                 | 0.0000          |               |     | 0.0000          |
| Off-Road      | 0.3124        | 3.0369        | 4.1490        | 6.2100e-003        |               | 0.1622        | 0.1622        |                | 0.1492        | 0.1492        |          | 600.8190        | 600.8190        | 0.1943        |     | 605.6770        |
| <b>Total</b>  | <b>0.3124</b> | <b>3.0369</b> | <b>4.1490</b> | <b>6.2100e-003</b> | <b>0.0000</b> | <b>0.1622</b> | <b>0.1622</b> | <b>0.0000</b>  | <b>0.1492</b> | <b>0.1492</b> |          | <b>600.8190</b> | <b>600.8190</b> | <b>0.1943</b> |     | <b>605.6770</b> |

#### 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      | 0.0102        | 0.4377        | 0.0667        | 1.4700e-003        | 1.2118        | 1.3400e-003        | 1.2131        | 0.1269         | 1.2800e-003        | 0.1282        |          | 155.8504        | 155.8504        | 0.0102        |     | 156.1044        |
| 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       | 0.0710        | 0.0440        | 0.4647        | 1.5400e-003        | 7.1709        | 1.0400e-003        | 7.1719        | 0.7450         | 9.6000e-004        | 0.7459        |          | 153.5038        | 153.5038        | 3.4800e-003   |     | 153.5908        |
| <b>Total</b> | <b>0.0812</b> | <b>0.4816</b> | <b>0.5313</b> | <b>3.0100e-003</b> | <b>8.3827</b> | <b>2.3800e-003</b> | <b>8.3851</b> | <b>0.8719</b>  | <b>2.2400e-003</b> | <b>0.8742</b> |          | <b>309.3542</b> | <b>309.3542</b> | <b>0.0136</b> |     | <b>309.6951</b> |

**Mitigated Construction On-Site**

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|-----|-----------------|
| Category      | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day        |                 |                 |               |     |                 |
| Fugitive Dust |               |               |               |                    | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road      | 0.3124        | 3.0369        | 4.1490        | 6.2100e-003        |               | 0.1622        | 0.1622        |                | 0.1492        | 0.1492        | 0.0000        | 600.8190        | 600.8190        | 0.1943        |     | 605.6770        |
| <b>Total</b>  | <b>0.3124</b> | <b>3.0369</b> | <b>4.1490</b> | <b>6.2100e-003</b> | <b>0.0000</b> | <b>0.1622</b> | <b>0.1622</b> | <b>0.0000</b>  | <b>0.1492</b> | <b>0.1492</b> | <b>0.0000</b> | <b>600.8190</b> | <b>600.8190</b> | <b>0.1943</b> |     | <b>605.6770</b> |

**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      | 0.0102        | 0.4377        | 0.0667        | 1.4700e-003        | 0.7553        | 1.3400e-003        | 0.7566        | 0.0813         | 1.2800e-003        | 0.0826        |          | 155.8504        | 155.8504        | 0.0102        |     | 156.1044        |
| 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       | 0.0710        | 0.0440        | 0.4647        | 1.5400e-003        | 4.4592        | 1.0400e-003        | 4.4602        | 0.4738         | 9.6000e-004        | 0.4748        |          | 153.5038        | 153.5038        | 3.4800e-003   |     | 153.5908        |
| <b>Total</b> | <b>0.0812</b> | <b>0.4816</b> | <b>0.5313</b> | <b>3.0100e-003</b> | <b>5.2145</b> | <b>2.3800e-003</b> | <b>5.2169</b> | <b>0.5551</b>  | <b>2.2400e-003</b> | <b>0.5574</b> |          | <b>309.3542</b> | <b>309.3542</b> | <b>0.0136</b> |     | <b>309.6951</b> |

### 3.4 Site Preparation 3 - 2022

#### Unmitigated Construction On-Site

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category      | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |     |                 |
| Fugitive Dust |               |               |               |                    | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          |                 | 0.0000          |               |     | 0.0000          |
| Off-Road      | 0.2754        | 2.5895        | 4.1198        | 6.2100e-003        |               | 0.1320        | 0.1320        |                | 0.1215        | 0.1215        |          | 600.9407        | 600.9407        | 0.1944        |     | 605.7996        |
| <b>Total</b>  | <b>0.2754</b> | <b>2.5895</b> | <b>4.1198</b> | <b>6.2100e-003</b> | <b>0.0000</b> | <b>0.1320</b> | <b>0.1320</b> | <b>0.0000</b>  | <b>0.1215</b> | <b>0.1215</b> |          | <b>600.9407</b> | <b>600.9407</b> | <b>0.1944</b> |     | <b>605.7996</b> |

#### 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      | 9.6300e-003   | 0.3978        | 0.0645        | 1.4500e-003        | 1.2118        | 1.1100e-003        | 1.2129        | 0.1269         | 1.0700e-003        | 0.1280        |          | 154.0416        | 154.0416        | 9.7400e-003   |     | 154.2852        |
| 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       | 0.0667        | 0.0396        | 0.4282        | 1.4800e-003        | 7.1709        | 1.0100e-003        | 7.1719        | 0.7450         | 9.3000e-004        | 0.7459        |          | 147.9000        | 147.9000        | 3.1300e-003   |     | 147.9782        |
| <b>Total</b> | <b>0.0763</b> | <b>0.4374</b> | <b>0.4928</b> | <b>2.9300e-003</b> | <b>8.3827</b> | <b>2.1200e-003</b> | <b>8.3848</b> | <b>0.8719</b>  | <b>2.0000e-003</b> | <b>0.8739</b> |          | <b>301.9416</b> | <b>301.9416</b> | <b>0.0129</b> |     | <b>302.2634</b> |



**Mitigated Construction On-Site**

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|-----|-----------------|
| Category      | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day        |                 |                 |               |     |                 |
| Fugitive Dust |               |               |               |                    | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road      | 0.2754        | 2.5895        | 4.1198        | 6.2100e-003        |               | 0.1320        | 0.1320        |                | 0.1215        | 0.1215        | 0.0000        | 600.9407        | 600.9407        | 0.1944        |     | 605.7996        |
| <b>Total</b>  | <b>0.2754</b> | <b>2.5895</b> | <b>4.1198</b> | <b>6.2100e-003</b> | <b>0.0000</b> | <b>0.1320</b> | <b>0.1320</b> | <b>0.0000</b>  | <b>0.1215</b> | <b>0.1215</b> | <b>0.0000</b> | <b>600.9407</b> | <b>600.9407</b> | <b>0.1944</b> |     | <b>605.7996</b> |

**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      | 9.6300e-003   | 0.3978        | 0.0645        | 1.4500e-003        | 0.7553        | 1.1100e-003        | 0.7564        | 0.0813         | 1.0700e-003        | 0.0824        |          | 154.0416        | 154.0416        | 9.7400e-003   |     | 154.2852        |
| 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       | 0.0667        | 0.0396        | 0.4282        | 1.4800e-003        | 4.4592        | 1.0100e-003        | 4.4602        | 0.4738         | 9.3000e-004        | 0.4747        |          | 147.9000        | 147.9000        | 3.1300e-003   |     | 147.9782        |
| <b>Total</b> | <b>0.0763</b> | <b>0.4374</b> | <b>0.4928</b> | <b>2.9300e-003</b> | <b>5.2145</b> | <b>2.1200e-003</b> | <b>5.2166</b> | <b>0.5551</b>  | <b>2.0000e-003</b> | <b>0.5571</b> |          | <b>301.9416</b> | <b>301.9416</b> | <b>0.0129</b> |     | <b>302.2634</b> |

### 3.5 Site Preparation 4 - 2023

#### Unmitigated Construction On-Site

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category      | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |     |                 |
| Fugitive Dust |               |               |               |                    | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          |                 | 0.0000          |               |     | 0.0000          |
| Off-Road      | 0.2550        | 2.3132        | 4.1168        | 6.2100e-003        |               | 0.1137        | 0.1137        |                | 0.1046        | 0.1046        |          | 601.2616        | 601.2616        | 0.1945        |     | 606.1231        |
| <b>Total</b>  | <b>0.2550</b> | <b>2.3132</b> | <b>4.1168</b> | <b>6.2100e-003</b> | <b>0.0000</b> | <b>0.1137</b> | <b>0.1137</b> | <b>0.0000</b>  | <b>0.1046</b> | <b>0.1046</b> |          | <b>601.2616</b> | <b>601.2616</b> | <b>0.1945</b> |     | <b>606.1231</b> |

#### 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      | 6.6900e-003   | 0.2481        | 0.0550        | 1.4000e-003        | 1.2118        | 4.8000e-004        | 1.2123        | 0.1269         | 4.6000e-004        | 0.1274        |          | 148.9701        | 148.9701        | 7.7800e-003   |     | 149.1647        |
| 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       | 0.0628        | 0.0357        | 0.3949        | 1.4300e-003        | 7.1709        | 9.9000e-004        | 7.1719        | 0.7450         | 9.1000e-004        | 0.7459        |          | 142.2849        | 142.2849        | 2.8100e-003   |     | 142.3553        |
| <b>Total</b> | <b>0.0695</b> | <b>0.2838</b> | <b>0.4499</b> | <b>2.8300e-003</b> | <b>8.3827</b> | <b>1.4700e-003</b> | <b>8.3842</b> | <b>0.8719</b>  | <b>1.3700e-003</b> | <b>0.8733</b> |          | <b>291.2551</b> | <b>291.2551</b> | <b>0.0106</b> |     | <b>291.5199</b> |

**Mitigated Construction On-Site**

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|-----|-----------------|
| Category      | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day        |                 |                 |               |     |                 |
| Fugitive Dust |               |               |               |                    | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road      | 0.2550        | 2.3132        | 4.1168        | 6.2100e-003        |               | 0.1137        | 0.1137        |                | 0.1046        | 0.1046        | 0.0000        | 601.2616        | 601.2616        | 0.1945        |     | 606.1231        |
| <b>Total</b>  | <b>0.2550</b> | <b>2.3132</b> | <b>4.1168</b> | <b>6.2100e-003</b> | <b>0.0000</b> | <b>0.1137</b> | <b>0.1137</b> | <b>0.0000</b>  | <b>0.1046</b> | <b>0.1046</b> | <b>0.0000</b> | <b>601.2616</b> | <b>601.2616</b> | <b>0.1945</b> |     | <b>606.1231</b> |

**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      | 6.6900e-003   | 0.2481        | 0.0550        | 1.4000e-003        | 0.7553        | 4.8000e-004        | 0.7558        | 0.0813         | 4.6000e-004        | 0.0818        |          | 148.9701        | 148.9701        | 7.7800e-003   |     | 149.1647        |
| 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       | 0.0628        | 0.0357        | 0.3949        | 1.4300e-003        | 4.4592        | 9.9000e-004        | 4.4602        | 0.4738         | 9.1000e-004        | 0.4747        |          | 142.2849        | 142.2849        | 2.8100e-003   |     | 142.3553        |
| <b>Total</b> | <b>0.0695</b> | <b>0.2838</b> | <b>0.4499</b> | <b>2.8300e-003</b> | <b>5.2145</b> | <b>1.4700e-003</b> | <b>5.2159</b> | <b>0.5551</b>  | <b>1.3700e-003</b> | <b>0.5565</b> |          | <b>291.2551</b> | <b>291.2551</b> | <b>0.0106</b> |     | <b>291.5199</b> |

### 3.6 Site Preparation 5 - 2024

#### Unmitigated Construction On-Site

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category      | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |     |                 |
| Fugitive Dust |               |               |               |                    | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          |                 | 0.0000          |               |     | 0.0000          |
| Off-Road      | 0.2431        | 2.1383        | 4.1255        | 6.2100e-003        |               | 0.1017        | 0.1017        |                | 0.0935        | 0.0935        |          | 601.5241        | 601.5241        | 0.1946        |     | 606.3877        |
| <b>Total</b>  | <b>0.2431</b> | <b>2.1383</b> | <b>4.1255</b> | <b>6.2100e-003</b> | <b>0.0000</b> | <b>0.1017</b> | <b>0.1017</b> | <b>0.0000</b>  | <b>0.0935</b> | <b>0.0935</b> |          | <b>601.5241</b> | <b>601.5241</b> | <b>0.1946</b> |     | <b>606.3877</b> |

#### 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      | 6.7700e-003   | 0.2456        | 0.0561        | 1.4000e-003        | 1.2118        | 4.8000e-004        | 1.2123        | 0.1269         | 4.6000e-004        | 0.1274        |          | 148.4548        | 148.4548        | 7.6900e-003   |     | 148.6471        |
| 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       | 0.0595        | 0.0324        | 0.3698        | 1.3800e-003        | 7.1709        | 9.8000e-004        | 7.1719        | 0.7450         | 9.0000e-004        | 0.7459        |          | 137.1845        | 137.1845        | 2.5700e-003   |     | 137.2487        |
| <b>Total</b> | <b>0.0662</b> | <b>0.2780</b> | <b>0.4259</b> | <b>2.7800e-003</b> | <b>8.3827</b> | <b>1.4600e-003</b> | <b>8.3842</b> | <b>0.8719</b>  | <b>1.3600e-003</b> | <b>0.8733</b> |          | <b>285.6392</b> | <b>285.6392</b> | <b>0.0103</b> |     | <b>285.8957</b> |

**Mitigated Construction On-Site**

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|-----|-----------------|
| Category      | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day        |                 |                 |               |     |                 |
| Fugitive Dust |               |               |               |                    | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road      | 0.2431        | 2.1383        | 4.1255        | 6.2100e-003        |               | 0.1017        | 0.1017        |                | 0.0935        | 0.0935        | 0.0000        | 601.5241        | 601.5241        | 0.1946        |     | 606.3877        |
| <b>Total</b>  | <b>0.2431</b> | <b>2.1383</b> | <b>4.1255</b> | <b>6.2100e-003</b> | <b>0.0000</b> | <b>0.1017</b> | <b>0.1017</b> | <b>0.0000</b>  | <b>0.0935</b> | <b>0.0935</b> | <b>0.0000</b> | <b>601.5241</b> | <b>601.5241</b> | <b>0.1946</b> |     | <b>606.3877</b> |

**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      | 6.7700e-003   | 0.2456        | 0.0561        | 1.4000e-003        | 0.7553        | 4.8000e-004        | 0.7558        | 0.0813         | 4.6000e-004        | 0.0818        |          | 148.4548        | 148.4548        | 7.6900e-003   |     | 148.6471        |
| 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       | 0.0595        | 0.0324        | 0.3698        | 1.3800e-003        | 4.4592        | 9.8000e-004        | 4.4602        | 0.4738         | 9.0000e-004        | 0.4747        |          | 137.1845        | 137.1845        | 2.5700e-003   |     | 137.2487        |
| <b>Total</b> | <b>0.0662</b> | <b>0.2780</b> | <b>0.4259</b> | <b>2.7800e-003</b> | <b>5.2145</b> | <b>1.4600e-003</b> | <b>5.2159</b> | <b>0.5551</b>  | <b>1.3600e-003</b> | <b>0.5565</b> |          | <b>285.6392</b> | <b>285.6392</b> | <b>0.0103</b> |     | <b>285.8957</b> |

### 3.7 Site Preparation 6 - 2025

#### Unmitigated Construction On-Site

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category      | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |     |                 |
| Fugitive Dust |               |               |               |                    | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          |                 | 0.0000          |               |     | 0.0000          |
| Off-Road      | 0.2244        | 1.9176        | 4.1168        | 6.2200e-003        |               | 0.0855        | 0.0855        |                | 0.0787        | 0.0787        |          | 601.7953        | 601.7953        | 0.1946        |     | 606.6611        |
| <b>Total</b>  | <b>0.2244</b> | <b>1.9176</b> | <b>4.1168</b> | <b>6.2200e-003</b> | <b>0.0000</b> | <b>0.0855</b> | <b>0.0855</b> | <b>0.0000</b>  | <b>0.0787</b> | <b>0.0787</b> |          | <b>601.7953</b> | <b>601.7953</b> | <b>0.1946</b> |     | <b>606.6611</b> |

#### 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      | 6.7100e-003   | 0.2406        | 0.0563        | 1.3900e-003        | 1.2118        | 4.8000e-004        | 1.2123        | 0.1269         | 4.5000e-004        | 0.1274        |          | 147.5686        | 147.5686        | 7.5700e-003        |     | 147.7579        |
| 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       | 0.0564        | 0.0295        | 0.3430        | 1.3200e-003        | 7.1709        | 9.6000e-004        | 7.1719        | 0.7450         | 8.8000e-004        | 0.7459        |          | 131.6931        | 131.6931        | 2.3300e-003        |     | 131.7514        |
| <b>Total</b> | <b>0.0631</b> | <b>0.2701</b> | <b>0.3993</b> | <b>2.7100e-003</b> | <b>8.3827</b> | <b>1.4400e-003</b> | <b>8.3841</b> | <b>0.8719</b>  | <b>1.3300e-003</b> | <b>0.8733</b> |          | <b>279.2617</b> | <b>279.2617</b> | <b>9.9000e-003</b> |     | <b>279.5093</b> |

**Mitigated Construction On-Site**

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|-----|-----------------|
| Category      | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day        |                 |                 |               |     |                 |
| Fugitive Dust |               |               |               |                    | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road      | 0.2244        | 1.9176        | 4.1168        | 6.2200e-003        |               | 0.0855        | 0.0855        |                | 0.0787        | 0.0787        | 0.0000        | 601.7953        | 601.7953        | 0.1946        |     | 606.6611        |
| <b>Total</b>  | <b>0.2244</b> | <b>1.9176</b> | <b>4.1168</b> | <b>6.2200e-003</b> | <b>0.0000</b> | <b>0.0855</b> | <b>0.0855</b> | <b>0.0000</b>  | <b>0.0787</b> | <b>0.0787</b> | <b>0.0000</b> | <b>601.7953</b> | <b>601.7953</b> | <b>0.1946</b> |     | <b>606.6611</b> |

**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      | 6.7100e-003   | 0.2406        | 0.0563        | 1.3900e-003        | 0.7553        | 4.8000e-004        | 0.7558        | 0.0813         | 4.5000e-004        | 0.0817        |          | 147.5686        | 147.5686        | 7.5700e-003        |     | 147.7579        |
| 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       | 0.0564        | 0.0295        | 0.3430        | 1.3200e-003        | 4.4592        | 9.6000e-004        | 4.4602        | 0.4738         | 8.8000e-004        | 0.4747        |          | 131.6931        | 131.6931        | 2.3300e-003        |     | 131.7514        |
| <b>Total</b> | <b>0.0631</b> | <b>0.2701</b> | <b>0.3993</b> | <b>2.7100e-003</b> | <b>5.2145</b> | <b>1.4400e-003</b> | <b>5.2159</b> | <b>0.5551</b>  | <b>1.3300e-003</b> | <b>0.5564</b> |          | <b>279.2617</b> | <b>279.2617</b> | <b>9.9000e-003</b> |     | <b>279.5093</b> |

### 3.8 Site Preparation 7 - 2026

#### Unmitigated Construction On-Site

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category      | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |     |                 |
| Fugitive Dust |               |               |               |                    | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          |                 | 0.0000          |               |     | 0.0000          |
| Off-Road      | 0.2244        | 1.9176        | 4.1168        | 6.2200e-003        |               | 0.0855        | 0.0855        |                | 0.0787        | 0.0787        |          | 601.7953        | 601.7953        | 0.1946        |     | 606.6611        |
| <b>Total</b>  | <b>0.2244</b> | <b>1.9176</b> | <b>4.1168</b> | <b>6.2200e-003</b> | <b>0.0000</b> | <b>0.0855</b> | <b>0.0855</b> | <b>0.0000</b>  | <b>0.0787</b> | <b>0.0787</b> |          | <b>601.7953</b> | <b>601.7953</b> | <b>0.1946</b> |     | <b>606.6611</b> |

#### 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      | 6.6500e-003   | 0.2359        | 0.0565        | 1.3800e-003        | 1.2118        | 4.7000e-004        | 1.2123        | 0.1269         | 4.5000e-004        | 0.1274        |          | 146.7514        | 146.7514        | 7.4400e-003        |     | 146.9374        |
| 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       | 0.0538        | 0.0270        | 0.3198        | 1.2700e-003        | 7.1709        | 9.3000e-004        | 7.1718        | 0.7450         | 8.5000e-004        | 0.7458        |          | 126.8955        | 126.8955        | 2.1300e-003        |     | 126.9487        |
| <b>Total</b> | <b>0.0604</b> | <b>0.2629</b> | <b>0.3763</b> | <b>2.6500e-003</b> | <b>8.3827</b> | <b>1.4000e-003</b> | <b>8.3841</b> | <b>0.8719</b>  | <b>1.3000e-003</b> | <b>0.8732</b> |          | <b>273.6470</b> | <b>273.6470</b> | <b>9.5700e-003</b> |     | <b>273.8861</b> |



**Mitigated Construction On-Site**

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|-----|-----------------|
| Category      | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day        |                 |                 |               |     |                 |
| Fugitive Dust |               |               |               |                    | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road      | 0.2244        | 1.9176        | 4.1168        | 6.2200e-003        |               | 0.0855        | 0.0855        |                | 0.0787        | 0.0787        | 0.0000        | 601.7953        | 601.7953        | 0.1946        |     | 606.6611        |
| <b>Total</b>  | <b>0.2244</b> | <b>1.9176</b> | <b>4.1168</b> | <b>6.2200e-003</b> | <b>0.0000</b> | <b>0.0855</b> | <b>0.0855</b> | <b>0.0000</b>  | <b>0.0787</b> | <b>0.0787</b> | <b>0.0000</b> | <b>601.7953</b> | <b>601.7953</b> | <b>0.1946</b> |     | <b>606.6611</b> |

**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      | 6.6500e-003   | 0.2359        | 0.0565        | 1.3800e-003        | 0.7553        | 4.7000e-004        | 0.7557        | 0.0813         | 4.5000e-004        | 0.0817        |          | 146.7514        | 146.7514        | 7.4400e-003        |     | 146.9374        |
| 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       | 0.0538        | 0.0270        | 0.3198        | 1.2700e-003        | 4.4592        | 9.3000e-004        | 4.4601        | 0.4738         | 8.5000e-004        | 0.4747        |          | 126.8955        | 126.8955        | 2.1300e-003        |     | 126.9487        |
| <b>Total</b> | <b>0.0604</b> | <b>0.2629</b> | <b>0.3763</b> | <b>2.6500e-003</b> | <b>5.2145</b> | <b>1.4000e-003</b> | <b>5.2159</b> | <b>0.5551</b>  | <b>1.3000e-003</b> | <b>0.5564</b> |          | <b>273.6470</b> | <b>273.6470</b> | <b>9.5700e-003</b> |     | <b>273.8861</b> |

### 3.9 Site Preparation 8 - 2027

#### Unmitigated Construction On-Site

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category      | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |     |                 |
| Fugitive Dust |               |               |               |                    | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          |                 | 0.0000          |               |     | 0.0000          |
| Off-Road      | 0.2244        | 1.9176        | 4.1168        | 6.2200e-003        |               | 0.0855        | 0.0855        |                | 0.0787        | 0.0787        |          | 601.7953        | 601.7953        | 0.1946        |     | 606.6611        |
| <b>Total</b>  | <b>0.2244</b> | <b>1.9176</b> | <b>4.1168</b> | <b>6.2200e-003</b> | <b>0.0000</b> | <b>0.0855</b> | <b>0.0855</b> | <b>0.0000</b>  | <b>0.0787</b> | <b>0.0787</b> |          | <b>601.7953</b> | <b>601.7953</b> | <b>0.1946</b> |     | <b>606.6611</b> |

#### 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      | 6.6000e-003   | 0.2316        | 0.0568        | 1.3700e-003        | 1.2118        | 4.6000e-004        | 1.2123        | 0.1269         | 4.4000e-004        | 0.1274        |          | 146.0450        | 146.0450        | 7.3000e-003        |     | 146.2275        |
| 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       | 0.0511        | 0.0248        | 0.2992        | 1.2300e-003        | 7.1709        | 8.8000e-004        | 7.1718        | 0.7450         | 8.1000e-004        | 0.7458        |          | 122.6887        | 122.6887        | 1.9400e-003        |     | 122.7373        |
| <b>Total</b> | <b>0.0577</b> | <b>0.2565</b> | <b>0.3560</b> | <b>2.6000e-003</b> | <b>8.3827</b> | <b>1.3400e-003</b> | <b>8.3840</b> | <b>0.8719</b>  | <b>1.2500e-003</b> | <b>0.8732</b> |          | <b>268.7337</b> | <b>268.7337</b> | <b>9.2400e-003</b> |     | <b>268.9648</b> |

**Mitigated Construction On-Site**

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|-----|-----------------|
| Category      | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day        |                 |                 |               |     |                 |
| Fugitive Dust |               |               |               |                    | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road      | 0.2244        | 1.9176        | 4.1168        | 6.2200e-003        |               | 0.0855        | 0.0855        |                | 0.0787        | 0.0787        | 0.0000        | 601.7953        | 601.7953        | 0.1946        |     | 606.6611        |
| <b>Total</b>  | <b>0.2244</b> | <b>1.9176</b> | <b>4.1168</b> | <b>6.2200e-003</b> | <b>0.0000</b> | <b>0.0855</b> | <b>0.0855</b> | <b>0.0000</b>  | <b>0.0787</b> | <b>0.0787</b> | <b>0.0000</b> | <b>601.7953</b> | <b>601.7953</b> | <b>0.1946</b> |     | <b>606.6611</b> |

**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      | 6.6000e-003   | 0.2316        | 0.0568        | 1.3700e-003        | 0.7553        | 4.6000e-004        | 0.7557        | 0.0813         | 4.4000e-004        | 0.0817        |          | 146.0450        | 146.0450        | 7.3000e-003        |     | 146.2275        |
| 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       | 0.0511        | 0.0248        | 0.2992        | 1.2300e-003        | 4.4592        | 8.8000e-004        | 4.4601        | 0.4738         | 8.1000e-004        | 0.4746        |          | 122.6887        | 122.6887        | 1.9400e-003        |     | 122.7373        |
| <b>Total</b> | <b>0.0577</b> | <b>0.2565</b> | <b>0.3560</b> | <b>2.6000e-003</b> | <b>5.2145</b> | <b>1.3400e-003</b> | <b>5.2158</b> | <b>0.5551</b>  | <b>1.2500e-003</b> | <b>0.5564</b> |          | <b>268.7337</b> | <b>268.7337</b> | <b>9.2400e-003</b> |     | <b>268.9648</b> |

### 3.10 Site Preparation 9 - 2028

#### Unmitigated Construction On-Site

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category      | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |     |                 |
| Fugitive Dust |               |               |               |                    | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          |                 | 0.0000          |               |     | 0.0000          |
| Off-Road      | 0.2244        | 1.9176        | 4.1168        | 6.2200e-003        |               | 0.0855        | 0.0855        |                | 0.0787        | 0.0787        |          | 601.7953        | 601.7953        | 0.1946        |     | 606.6611        |
| <b>Total</b>  | <b>0.2244</b> | <b>1.9176</b> | <b>4.1168</b> | <b>6.2200e-003</b> | <b>0.0000</b> | <b>0.0855</b> | <b>0.0855</b> | <b>0.0000</b>  | <b>0.0787</b> | <b>0.0787</b> |          | <b>601.7953</b> | <b>601.7953</b> | <b>0.1946</b> |     | <b>606.6611</b> |

#### 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      | 6.5600e-003   | 0.2285        | 0.0571        | 1.3700e-003        | 1.2118        | 4.6000e-004        | 1.2122        | 0.1269         | 4.4000e-004        | 0.1274        |          | 145.4842        | 145.4842        | 7.1600e-003        |     | 145.6631        |
| 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       | 0.0485        | 0.0229        | 0.2812        | 1.1900e-003        | 7.1709        | 8.1000e-004        | 7.1717        | 0.7450         | 7.5000e-004        | 0.7457        |          | 119.0172        | 119.0172        | 1.7900e-003        |     | 119.0619        |
| <b>Total</b> | <b>0.0550</b> | <b>0.2513</b> | <b>0.3384</b> | <b>2.5600e-003</b> | <b>8.3827</b> | <b>1.2700e-003</b> | <b>8.3840</b> | <b>0.8719</b>  | <b>1.1900e-003</b> | <b>0.8731</b> |          | <b>264.5014</b> | <b>264.5014</b> | <b>8.9500e-003</b> |     | <b>264.7250</b> |

**Mitigated Construction On-Site**

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|-----|-----------------|
| Category      | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day        |                 |                 |               |     |                 |
| Fugitive Dust |               |               |               |                    | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road      | 0.2244        | 1.9176        | 4.1168        | 6.2200e-003        |               | 0.0855        | 0.0855        |                | 0.0787        | 0.0787        | 0.0000        | 601.7953        | 601.7953        | 0.1946        |     | 606.6611        |
| <b>Total</b>  | <b>0.2244</b> | <b>1.9176</b> | <b>4.1168</b> | <b>6.2200e-003</b> | <b>0.0000</b> | <b>0.0855</b> | <b>0.0855</b> | <b>0.0000</b>  | <b>0.0787</b> | <b>0.0787</b> | <b>0.0000</b> | <b>601.7953</b> | <b>601.7953</b> | <b>0.1946</b> |     | <b>606.6611</b> |

**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      | 6.5600e-003   | 0.2285        | 0.0571        | 1.3700e-003        | 0.7553        | 4.6000e-004        | 0.7557        | 0.0813         | 4.4000e-004        | 0.0817        |          | 145.4842        | 145.4842        | 7.1600e-003        |     | 145.6631        |
| 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       | 0.0485        | 0.0229        | 0.2812        | 1.1900e-003        | 4.4592        | 8.1000e-004        | 4.4600        | 0.4738         | 7.5000e-004        | 0.4746        |          | 119.0172        | 119.0172        | 1.7900e-003        |     | 119.0619        |
| <b>Total</b> | <b>0.0550</b> | <b>0.2513</b> | <b>0.3384</b> | <b>2.5600e-003</b> | <b>5.2145</b> | <b>1.2700e-003</b> | <b>5.2157</b> | <b>0.5551</b>  | <b>1.1900e-003</b> | <b>0.5563</b> |          | <b>264.5014</b> | <b>264.5014</b> | <b>8.9500e-003</b> |     | <b>264.7250</b> |

### 3.11 Site Preparation 10 - 2029

#### Unmitigated Construction On-Site

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category      | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |     |                 |
| Fugitive Dust |               |               |               |                    | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          |                 | 0.0000          |               |     | 0.0000          |
| Off-Road      | 0.2244        | 1.9176        | 4.1168        | 6.2200e-003        |               | 0.0855        | 0.0855        |                | 0.0787        | 0.0787        |          | 601.7953        | 601.7953        | 0.1946        |     | 606.6611        |
| <b>Total</b>  | <b>0.2244</b> | <b>1.9176</b> | <b>4.1168</b> | <b>6.2200e-003</b> | <b>0.0000</b> | <b>0.0855</b> | <b>0.0855</b> | <b>0.0000</b>  | <b>0.0787</b> | <b>0.0787</b> |          | <b>601.7953</b> | <b>601.7953</b> | <b>0.1946</b> |     | <b>606.6611</b> |

#### 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      | 6.5200e-003   | 0.2255        | 0.0574        | 1.3600e-003        | 1.2118        | 4.5000e-004        | 1.2122        | 0.1269         | 4.3000e-004        | 0.1274        |          | 144.9766        | 144.9766        | 7.0200e-003        |     | 145.1522        |
| 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       | 0.0457        | 0.0211        | 0.2644        | 1.1600e-003        | 7.1709        | 7.5000e-004        | 7.1717        | 0.7450         | 6.9000e-004        | 0.7457        |          | 115.8039        | 115.8039        | 1.6400e-003        |     | 115.8449        |
| <b>Total</b> | <b>0.0522</b> | <b>0.2466</b> | <b>0.3218</b> | <b>2.5200e-003</b> | <b>8.3827</b> | <b>1.2000e-003</b> | <b>8.3839</b> | <b>0.8719</b>  | <b>1.1200e-003</b> | <b>0.8730</b> |          | <b>260.7805</b> | <b>260.7805</b> | <b>8.6600e-003</b> |     | <b>260.9971</b> |

**Mitigated Construction On-Site**

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|-----|-----------------|
| Category      | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day        |                 |                 |               |     |                 |
| Fugitive Dust |               |               |               |                    | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road      | 0.2244        | 1.9176        | 4.1168        | 6.2200e-003        |               | 0.0855        | 0.0855        |                | 0.0787        | 0.0787        | 0.0000        | 601.7953        | 601.7953        | 0.1946        |     | 606.6611        |
| <b>Total</b>  | <b>0.2244</b> | <b>1.9176</b> | <b>4.1168</b> | <b>6.2200e-003</b> | <b>0.0000</b> | <b>0.0855</b> | <b>0.0855</b> | <b>0.0000</b>  | <b>0.0787</b> | <b>0.0787</b> | <b>0.0000</b> | <b>601.7953</b> | <b>601.7953</b> | <b>0.1946</b> |     | <b>606.6611</b> |

**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      | 6.5200e-003   | 0.2255        | 0.0574        | 1.3600e-003        | 0.7553        | 4.5000e-004        | 0.7557        | 0.0813         | 4.3000e-004        | 0.0817        |          | 144.9766        | 144.9766        | 7.0200e-003        |     | 145.1522        |
| 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       | 0.0457        | 0.0211        | 0.2644        | 1.1600e-003        | 4.4592        | 7.5000e-004        | 4.4600        | 0.4738         | 6.9000e-004        | 0.4745        |          | 115.8039        | 115.8039        | 1.6400e-003        |     | 115.8449        |
| <b>Total</b> | <b>0.0522</b> | <b>0.2466</b> | <b>0.3218</b> | <b>2.5200e-003</b> | <b>5.2145</b> | <b>1.2000e-003</b> | <b>5.2157</b> | <b>0.5551</b>  | <b>1.1200e-003</b> | <b>0.5562</b> |          | <b>260.7805</b> | <b>260.7805</b> | <b>8.6600e-003</b> |     | <b>260.9971</b> |





APPENDIX B  
*Biological Habitat Assessment*





## INFORMATION SUMMARY

- A. Report Date: May 18<sup>th</sup>, 2018 (Updated March 26<sup>th</sup> 2019)
- B. Report Title: General MSHCP Habitat Assessment and Consistency Analysis for the City of Riverside Public Works Department Annual Tequesquite Creek Maintenance Project, City of Riverside, Western Riverside County, California.
- C. Case #: N/A
- D. APNs#: Portion of 187-090-001
- E. Project Location: Located within and adjacent to Tequesquite Creek downstream of Ryan Bonamimio Park – USGS West Riverside Quadrangle, T2S, R5W, Sec 28.
- F. Applicant: City of Riverside Public Works Department  
3900 Main Street, 4<sup>th</sup> Floor  
Riverside, California 92522  
Contact: Mike Roberts
- G. MOU Principal: Cadre Environmental  
701 Palomar Airport Road,  
Suite 300, Carlsbad, CA. 92011  
Contact: Ruben S. Ramirez, Jr. (949) 300-0212  
USFWS permit #TE780566-14, CDFW 002243
- H. Date of Survey: March 6<sup>th</sup>, 2018.
- I. Summary: The City of Riverside Public Works Department Tequesquite Creek Annual Maintenance Project 0.93-acre study area is dominated by ruderal/disturbed, disturbed willow scrub, coastal and valley freshwater marsh and streambed channel (Tequesquite Creek) vegetation communities. All annual maintenance and temporary project related staging will occur within the 0.93-acre study area. Specifically, annual maintenance will occur within the 0.66-acre active channel/adjacent slopes and staging will occur within the adjacent disturbed habitats (access roads).

The study area is located within the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Cities of Riverside/Norco Area Plan (SU1-Santa Ana River South), partially within Criteria Area 443, outside of a linkage area. Specifically, a total of 0.63-acre of the study area is located within Criteria Area 443. Therefore, a Habitat Evaluation and Acquisition Negotiation Strategy (HANS) and Joint Project Review (JPR) will be required for the 0.63-acre portion of the study area located within Criteria Area 443.

The study area is located immediately east of Public/Quasi-Public (PQP) Conserved Lands owned and managed by the Riverside-Corona Resource Conservation District (RCA GIS Data Downloads 2018).

The MSHCP has determined that all of the sensitive species potentially occurring onsite have been adequately covered (MSHCP Table 2-2 Species Considered for Conservation Under the MSHCP Since 1999, 2004). However, additional surveys may be required for narrow endemic plants, criteria area species, and specific wildlife species if suitable habitat is documented onsite and/or if the property is located within a predetermined “Survey Area” (MSHCP 2004).

The study area occurs partially within a predetermined Survey Area for three (3) MSHCP Narrow Endemic Plant Species: San Diego ambrosia (*Ambrosia pumila*), Brand’s phacelia (*Phacelia stellaris*), and San Miguel savory (*Satureja chandleri*). No suitable vegetation communities associated with these species is present onsite. These sensitive plant species are not expected to occur onsite due to the extensive disturbed nature of the vegetation communities, disturbed soils and historic maintenance activities conduction within this man-made reach of Tequesquite Creek. No additional surveys are required.

The study area does not occur within a predetermined Survey Area for MSHCP criteria area species (RCA GIS Data Downloads 2018). No additional surveys are required.

The study area does not occur within a predetermined Survey Area for amphibian or mammal species (RCA GIS Data Downloads 2018). No additional surveys are required.

The study area occurs partially within a predetermined Survey Area for the burrowing owl (*Athene cunicularia*). No suitable burrows were documented within or immediately adjacent to the study area during the habitat assessment conducted in accordance with the

Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan (RCA 2006). In the event conditions change, at a minimum a 30-day MSHCP preconstruction survey will be required immediately prior to the initiation of maintenance activities to ensure protection for this species and compliance with the conservation goals as outlined in the MSHCP.

No suitable habitat for the southwestern willow flycatcher (*Empidonax traillii extimus*) or western yellow-billed cuckoo (*Coccyzus americanus*) was detected within the study area. No additional surveys are required.

The low-quality disturbed willow scrub (saplings) habitat is not expected to be utilized for breeding by the least Bell's vireo as illustrated in attachments in Attachments D and E, *Current Study Area Photographs*. To ensure that the species is not directly or indirectly impacted as a result of annual maintenance activities, all work will be conducted outside of the breeding season (April 10<sup>th</sup> to July 31<sup>st</sup>). No additional surveys are required. In the event maintenance activities are proposed to occur during the breeding season, focused USFWS protocol surveys will be conducted within and adjacent to the Study Area to ensure potential direct and/or indirect impacts do not occur to the species.

The highly disturbed lower channelized reach of Tequesquite Creek located within the Study Area is not expected to currently represent suitable spawning or foraging habitat for the Santa Ana sucker (*Catostomus santaanae*). As illustrated in photograph 1 Attachment D, *Current Study Area Photographs*, the disturbed soils, extensive urban waste, and presence of exotic fish (mosquitofish) documented onsite are expected to contribute to conditions unsuitable for the species. The proposed action is expected to improve conditions downstream of the Study Area within Tequesquite Creek for the species by increasing annual scouring and maintaining potential dispersal routes to potential spawning areas downstream of the Study Area. The Study Area does not represent a dispersal route to potential upstream resources for the species. The proposed action would not result in a direct or indirect impact (sediment discharge) to the Santa Ana sucker.

The active channel (coastal and valley freshwater marsh and Tequesquite Creek) and adjacent slopes (ruderal and disturbed willow scrub) are subject to the jurisdiction of the California Department of Fish and Wildlife (CDFW) (Cadre Environmental 2018). Those areas designated as CDFW regulated resources are

also classified as Western Riverside County MSHCP Section 6.1.2 riverine/riparian resources. A MSHCP Determination of Biologically Equivalent or Superior Preservation (DBESP) will be prepared to address all impacts to these resources.

## **SUBJECT**

### **General MSHCP Habitat Assessment and Consistency Analysis for the 0.93-Acre Annual Tequesquite Creek Maintenance Project, City of Riverside, Western Riverside County, California**

This report presents the findings of a general biological habitat assessment and consistency analysis for the 0.93-acre City of Riverside Public Works Department Annual Tequesquite Creek Maintenance Project study area “Study Area”, portion of APN 187-090-001. The purpose of this study, conducted by Cadre Environmental, is to document the existing biological resources, identify general vegetation types, and assess the potential biological impacts associated with the proposed development within the Study Area as outlined by the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP).

The Study Area is located within and adjacent to a channelized reach of Tequesquite Creek which drains into the Santa Ana River. Specifically, the Study Area is located downstream of Ryan Bonamimio Park within the United States Geological Survey (USGS) West Riverside Quadrangle, T2S, R5W, Sec 28, in the City of Riverside, Western Riverside County, California as illustrated in Attachment A, *Regional Location Map*, and Attachment B, *MSHCP Relationship Map*.

The Study Area is located within the Western Riverside County MSHCP Cities of Riverside/Norco Area Plan (SU1-Santa Ana River South), partially within Criteria Area 443, outside of a linkage area as illustrated in Attachment B, *MSHCP Relationship Map*. Specifically, a total of 0.63-acre of the Study Area is located within Criteria Area 443. A Habitat Evaluation and Acquisition Negotiation Strategy (HANS) and Joint Project Review (JPR) will be required for the 0.63-acre portion of the Study Area located within Criteria Area 443.

This report incorporates the findings of an extensive literature review, compilation of existing documentation, field reconnaissance conducted on March 6<sup>th</sup>, 2018. This documentation is consistent with accepted scientific and technical standards, the requirements of the United States Fish and Wildlife Service (USFWS), and the California Department of Fish and Wildlife (CDFW). When appropriate, general biological resources are described in summary form in an effort to provide the reader with adequate background information. However, the report focuses on documenting those resources considered to be significant and/or sensitive as outlined by the California Environmental Quality Act (CEQA) and the Western Riverside County MSHCP.

Accordingly, this report provides an overview of MSHCP riparian/riverine/vernal pool jurisdictional resources, habitat assessment for species that may require additional focused surveys as outlined by the MSHCP, and initial summary of compliance with MSHCP guidelines.

## **METHODS OF STUDY**

Prior to visiting the Study Area, a review of all available and relevant data on the biological characteristics, sensitive habitats, and species potentially present on or adjacent to the Study Area was conducted. Additionally, aerial photography, and USGS topographic map were examined. After reviewing the available information, Cadre Environmental conducted a physical site assessment.

As required by the MSHCP, and during the initial property assessment process, all Study Area APN's were searched using the Regional Conservation Authority (RCA) GIS Database Downloads to determine if the property falls within a "Criteria Area" and if additional surveys for endemic plant species or wildlife not adequately covered by the MSHCP may be required.

During the initial survey, the Study Area's habitat was characterized, preliminary vegetative communities and primary topographic features potentially subject to MSHCP jurisdiction mapped, and the potential to support sensitive species as required by the guidelines of the MSHCP evaluated. Data, which contain digital images derived from aerial photography with orthographic projection properties, were used in conjunction with Cadre Environmental's in-house geographic information system (GIS) database as an important base layer to identify vegetation communities, drainage features, and USFWS designated critical habitat boundaries. Vegetation communities were then "ground-truthed" during field observations to obtain characteristic descriptions.

### **Literature Review**

The study was initiated with a review of relevant literature and previous environmental documents describing the biological resources of the Study Area and vicinity. The MSHCP list of covered species potentially occurring onsite was also examined (MSHCP Table 2-2 Species Considered for Conservation Under the MSHCP Since 1999, 2004). In addition, federal register listings, protocols, and species data provided by USFWS were reviewed in conjunction with anticipated federally listed species potentially occurring at the Study Area. The California Natural Diversity Database (CNDDB),<sup>1</sup> a review of the California Native Plant Society sixth inventory (Tibor 2001), and Roberts et al. (2004) were also reviewed for pertinent information regarding the location of known occurrences of sensitive species in the vicinity of the property. In addition, numerous regional floral and faunal field guides were utilized in the identification of species and suitable habitats. Documents consulted regarding potential onsite biological conditions are listed in the references section at the end of this report.

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<sup>1</sup> California Natural Diversity Data Base, Department of Fish and Wildlife. March 2018. Natural Heritage Program: RareFind, West Riverside Quadrangle.



## **Field Investigation**

The Study Area was surveyed on March 6<sup>th</sup>, 2018. The survey included complete coverage of the Study Area, with special attention focused toward sensitive species or those habitats potentially supporting sensitive flora or fauna that would be essential to efficiently implementing the terms and conditions of the Western Riverside County MSHCP, and drainage/depression features potentially subject to MSHCP jurisdiction. Aerial photography of the Study Area and vicinity was utilized to accurately locate and survey the property including offsite impact areas. General plant communities were preliminarily mapped directly on the aerial photo using visible landmarks in the field, which are depicted in Attachment C, *Biological Resources Map*. Representative photographs of the Study Area's natural resources were taken during the field survey as illustrated in Attachments D-E, *Current Study Area Photographs*.

## **Plant Community/Habitat Classification and Mapping**

Plant communities were preliminarily mapped with the aid of an aerial photograph using the MSHCP uncollapsed vegetation communities classification system. When a vegetation community could not be accurately characterized using this classification system, an updated community classification code was developed to more accurately represent onsite habitat types.

## **General Plant Inventory**

A general plant survey was conducted throughout the Study Area during the initial reconnaissance in a collective effort to identify all species occurring onsite.

All plants observed during the survey efforts were either identified in the field or collected and later identified using taxonomic keys. Plant taxonomy and nomenclatural changes follow Baldwin et al. (2012) or the Jepson Flora Project (2018). Common names used in this report generally follow Roberts et al. (2004) or Baldwin et al. (2012). Scientific names are included only at the first mention of a species; thereafter, common names alone are used.

## **General Wildlife Inventory**

All animals identified during the reconnaissance survey by sight, call, tracks, scat, or other characteristic sign were recorded onto a 1:200 scale orthorectified color aerial photograph or documented using a global positioning system (GPS). In addition to species actually detected, expected use of the site by other wildlife was derived from the analysis of habitats on the site, combined with known habitat preferences of regionally occurring wildlife species.

Vertebrate taxonomy followed in this report is according to the Center for North American Herpetology (2018 for amphibians and reptiles), the American Ornithologists'

Union (1988 and supplemental) for birds, and Baker et al. (2003) for mammals. Both common and scientific names are used during the first mention of a species; common names only are used in the remainder of the text.

### **Regional Connectivity/Wildlife Movement Corridor Assessment**

The analysis of wildlife movement corridors associated with the Study Area and its immediate vicinity is based on information compiled from literature, input from wildlife agency personnel, analysis of the aerial photograph, and direct observations made in the field during the site visit.

A literature review was conducted that included documents on island biogeography (studies of fragmented and isolated habitat “islands”), reports on wildlife home range sizes and migration patterns, and studies on wildlife dispersal. Wildlife movement studies conducted in southern California were also reviewed. Use of field-verified digital aerial data, in conjunction with the GIS database, allowed proper identification of vegetation communities and drainage features. This information was crucial to assessing the relationship of the property to large open space areas in the immediate vicinity and was also evaluated in terms of connectivity and habitat linkages. Relative to corridor issues, the discussions in this report are intended to focus on wildlife movement associated with the property and the immediate vicinity.

A review of MSHCP designated Habitat Blocks and Linkage Areas was also conducted.

### **MSHCP Narrow Endemic Plant Species Habitat Assessment**

The Study Area occurs within a predetermined Survey Area for three (3) narrow endemic plant species including:

- San Diego ambrosia (*Ambrosia pumila*) [Federal endangered, CNPS CRPR 1B.1];
- Brand’s phacelia (*Phacelia stellaris*) [CRPR 1B.1];
- San Miguel savory (*Satureja chandleri*) [CRPR 1B.2];

Habitat assessments were conducted for all three (3) species including a review of soils maps and CDFW and USFWS databases.

### **MSHCP Burrowing Owl Habitat Assessment**

Step 1 of the MSHCP habitat assessment for burrowing owls consists of a walking survey to determine if suitable habitat is present on site. Cadre Environmental conducted the habitat assessment concurrently with the general biological habitat assessment in accordance with the Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan (RCA 2006). Upon arrival at the Study Area, and prior to initiating the assessment survey, Cadre Environmental used binoculars to scan all suitable habitats on and adjacent to the property, including perch locations, to ascertain owl presence, status and habitat suitability. All suitable burrow

structures were mapped and investigated for signs of owl occupation, such as feathers, tracks, or pellets, and carefully observed to determine if burrowing owl utilize these features.

## **EXISTING CONDITIONS**

The majority of the Study Area is characterized as a channelized/earthen bottom reach of Tequesquite Creek including flanking slopes and access/maintenance roads with elevations ranging from 760 feet above mean sea level (AMSL) and 750 feet AMSL. The Study Area is primarily characterized as ruderal/disturbed, disturbed willow scrub, coastal and valley freshwater marsh and streambed channel (Tequesquite Creek) vegetation communities.

## **SOILS**

The Soil Survey of Western Riverside Area has the following soils mapped within the boundary of the property as shown on Attachment F, *Soil Associations Map*:

- **Du – Domino silt loam**
- Gob – Grangeville loamy fine sand, drained, 0 to 5 percent slopes
- TvC – Tujunga loamy sand, channeled, 0 to 8 percent slopes

Domino soil types (Bold) are classified as sensitive substrates considered important for the conservation of certain plant species and vernal pool resources in the region (MSHCP 2004). The soils documented onsite are characterized as well drained (drainage class).

## **PLANT COMMUNITY/HABITAT CLASSIFICATION**

The following section provides general vegetation descriptions for habitat types documented within the Study Area as shown in Table 1, *Vegetation Communities*. Representative distribution and photographs of these habitat types are illustrated in Attachment C, *Biological Resources Map* and Attachment D-E, *Current Study Area Photographs*.

**Table 1, Vegetation Communities**

| <b>Vegetation Communities</b>       | <b>Study Area<br/>(ac)</b> | <b>Study Area<br/>located within<br/>Criteria Area 443<br/>(ac)</b> |
|-------------------------------------|----------------------------|---|
| Ruderal                             | 0.46                       | 0.30  |
| Disturbed                           | 0.27                       | 0.18  |
| Coastal and Valley Freshwater Marsh | 0.12                       | 0.11  |
| Stream Channel                      | 0.05                       | 0.03  |
| Disturbed Willow Scrub              | 0.03                       | 0.01  |
| <b>TOTAL</b>                        | <b>0.93</b>                | <b>0.63</b>   |

\*Cadre Environmental 2018.

### **Ruderal:**

A total of 0.46-acre of ruderal (**RUD**) non-native vegetation was documented within the Study Area.

Ruderal is not recognized as a native plant community by Holland (1986). Nonetheless, it is a distinct vegetation association in Southern California. Ruderal habitat consists of predominately non-native plant species where native habitat recovery is improbable. This habitat varies in the composition of non-native species. Commonly, ruderal habitat is documented to contain such forbs as black mustard (*Brassica nigra*), star thistle (*Centaurea melitensis*), filaree (*Erodium cicutarium*) and sweet-fennel (*Foeniculum vulgare*).

The banks of the channel and areas surrounding the channel contains ruderal habitat. Dominant species present include castorbean, black mustard, prickly Russian thistle (*Salsola tragus*), orchard nettle (*Urtica urens*), and bull thistle (*Cirsium vulgare*).

### **Disturbed (Access Roads):**

Tequesquite Creek is flanked by a total of 0.27-acre of disturbed (**DIS**) unvegetated dirt access roads.

### **Coastal and Valley Freshwater Marsh:**

A total of 0.12-acre of coastal and valley freshwater marsh (**FWM**) vegetation was documented within the Study Area.

Coastal and valley freshwater marsh is a wetland habitat composed of areas with slow-moving streams and prolonged saturation. This vegetation community is typically dominated by bulrush (*Scirpus* sp.) and cattail (*Typha* sp.) plants.

This vegetation makes up the streambed of Tequesquite Creek that runs through the Study Area. The bed of the channel has a meandering stream and vegetation dominated by tall flatsedge (*Cyperus eragrostis*), broadleaf cattail (*Typha latifolia*), water speedwell (*Veronica anagallis-aquatica*), and clustered dock (*Rumex conglomeratus*).

### **Stream Channel:**

A total of 0.05-acre of unvegetated stream channel (**SC**) was documented within the Study Area.

Stream channel refers to ephemeral and intermittent stream channels that are barren or sparsely vegetated, and thus do not fit into other wetland habitat categories. Tequesquite Creek is an earthen channel that runs through the Study Area. The bed of the channel is largely vegetated, but a low-flow channel meanders through the center of the streambed that is completely unvegetated and had water present at the time of the survey.

### **Disturbed Willow Scrub:**

A total of 0.03-acre of disturbed willow scrub (**dWS**) vegetation was documented within the Study Area.

Disturbed willow scrub is composed of areas consisting of remnant patches of willows, mulefat, and a few other native species, with most of the area containing either urban development or mechanical disturbance that has led to a significant alteration to hydrology.

There is one area on site that is mapped as disturbed willow scrub. A swath of vegetation on the southern side of the channel contains this vegetation community (Figure 3). Dominant species within this community included Goodding's willow (*Salix gooddingii*), tree tobacco (*Nicotiana glauca*), castor bean (*Ricinus communis*), Washington fan palm (*Washingtonia robusta*), and tree of heaven (*Ailanthus altissima*).

### **WILDLIFE POPULATIONS**

General wildlife species documented onsite include but are not limited to western mosquitofish (*Gambusia affinis*), side-blotched lizard (*Uta stansburiana*), red-tailed hawk (*Buteo jamaicensis*), mallard (*Anas platyrhynchos*), snowy egret (*Egretta thula*), rock dove (*Columba livia*), mourning dove (*Zenaida macroura*), black phoebe (*Sayornis nigricans*), Say's phoebe (*Sayornis saya*), common yellowthroat (*Geothlypis trichas*), American crow (*Corvus brachyrhynchos*), northern mockingbird (*Mimus polyglottos*), European starling (*Sturnus vulgaris*), house finch (*Haemorhous mexicanus*), lesser goldfinch (*Spinus psaltria*), and raccoon (*Procyon lotor*).

### **REGIONAL CONNECTIVITY/WILDLIFE MOVEMENT**

#### **Overview**

Wildlife corridors link together areas of suitable habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization creates isolated "islands" of wildlife habitat. In the absence of habitat linkages that allow movement to adjoining open space areas, various studies have concluded that some wildlife species, especially the larger and more mobile mammals, will not likely persist over time in fragmented or isolated habitat areas because they prohibit the infusion of new individuals and genetic information (MacArthur and Wilson 1967, Soule 1987, Harris and Gallagher 1989, Bennett 1990). Corridors effectively act as links between different populations of a species. A group of smaller populations (termed "demes") linked together via a system of corridors is termed a "metapopulation." The long-term health of each deme within the metapopulation is dependent upon its size and the frequency of interchange of individuals (immigration vs. emigration). The smaller the deme, the more important immigration becomes, because prolonged inbreeding with the same individuals can reduce genetic variability.

Immigrant individuals that move into the deme from adjoining demes mate with individuals and supply that deme with new genes and gene combinations that increases overall genetic diversity. An increase in a population's genetic variability is generally associated with an increase in a population's health.

Corridors mitigate the effects of habitat fragmentation by (1) allowing animals to move between remaining habitats, which allows depleted populations to be replenished and promotes genetic diversity; (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk that catastrophic events (such as fires or disease) will result in population or local species extinction; and (3) serving as travel routes for individual animals as they move within their home ranges in search of food, water, mates, and other needs. Wildlife movement activities usually fall into one of three movement categories: (1) dispersal (e.g., juvenile animals from natal areas, individuals extending range distributions); (2) seasonal migration; and (3) movements related to home range activities (foraging for food or water, defending territories, searching for mates, breeding areas, or cover). A number of terms have been used in various wildlife movement studies, such as "wildlife corridor", "travel route", "habitat linkage", and "wildlife crossing" to refer to areas in which wildlife moves from one area to another. To clarify the meaning of these terms and facilitate the discussion on wildlife movement in this study, these terms are defined as follows:

**Travel Route:** A landscape feature (such as a ridge line, drainage, canyon, or riparian strip) within a larger natural habitat area that is used frequently by animals to facilitate movement and provide access to necessary resources (e.g., water, food, cover, den sites). The travel route is generally preferred because it provides the least amount of topographic resistance in moving from one area to another; it contains adequate food, water, and/or cover while moving between habitat areas; and provides a relatively direct link between target habitat areas.

**Wildlife Corridor:** A piece of habitat, usually linear in nature, that connects two or more habitat patches that would otherwise be fragmented or isolated from one another. Wildlife corridors are usually bounded by urban land areas or other areas unsuitable for wildlife. The corridor generally contains suitable cover, food, and/or water to support species and facilitate movement while in the corridor. Larger, landscape-level corridors (often referred to as "habitat or landscape linkages") can provide both transitory and resident habitat for a variety of species.

**Wildlife Crossing:** A small, narrow area, relatively short in length and generally constricted in nature, that allows wildlife to pass under or through an obstacle or barrier that otherwise hinders or prevents movement. Crossings typically are manmade and include culverts, underpasses, drainage pipes, and tunnels to provide access across or

under roads, highways, pipelines, or other physical obstacles. These are often “choke points” along a movement corridor.

### **Wildlife Movement within the Study Area**

The Study Area does not represent a wildlife movement corridor and extends east to an existing concrete channelized and subsurface flood control channel. The eastern region of the Study Area is located adjacent to the extensively developed/urbanized region of the City of Riverside. The Study Area is not located within an MSHCP core or linkage area.

## **SENSITIVE BIOLOGICAL RESOURCES**

### **OVERVIEW OF CLASSIFICATIONS**

The following discussion describes the plant and wildlife species present, or potentially present within the property boundaries, that have been afforded special recognition by federal, state, or local resource conservation agencies and organizations, principally due to the species’ declining or limited population sizes, usually resulting from habitat loss. Also discussed are habitats that are unique, of relatively limited distribution, or of particular value to wildlife. Protected sensitive species are classified by either state or federal resource management agencies, or both, as threatened or endangered, under provisions of the state and federal Endangered Species Acts. Vulnerable or “at-risk” species that are proposed for listing as threatened or endangered (and thereby for protected status) are categorized administratively as “candidates” by the USFWS. CDFW uses various terminology and classifications to describe vulnerable species. There are additional sensitive species classifications applicable in California. These are described below.

Sensitive biological resources are habitats or individual species that have special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, or rare. The CDFW, the USFWS, and special groups like the California Native Plant Society (CNPS) maintain watch lists of such resources. For the purpose of this assessment sources used to determine the sensitive status of biological resources are:

**Plants:** USFWS (2018), CDFW (2018b, 2018c), CNDDDB (2018a), and CNPS (Skinner and Pavlik 1994).

**Wildlife:** California Wildlife Habitat Relationships Database System (CWHRDS 1991), USFWS (2018), CDFW (2017a, 2017b), CNDDDB (2018a).

**Habitats:** CNDDDB (2018a).

## Federal Protection and Classifications

The Federal Endangered Species Act of 1973 (FESA) defines an endangered species as “any species that is in danger of extinction throughout all or a significant portion of its range...” Threatened species are defined as “any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.” Under provisions of Section 9(a)(1)(B) of the FESA it is unlawful to “take” any listed species. “Take” is defined as follows in Section 3(18) of the FESA: “...harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Further, the USFWS, through regulation, has interpreted the terms “harm” and “harass” to include certain types of habitat modification as forms of a “take.” These interpretations, however, are generally considered and applied on a case-by-case basis and often vary from species to species. In a case where a property owner seeks permission from a federal agency for an action that could affect a federally listed plant and animal species, the property owner and agency are required to consult with USFWS. Section 9(a)(2)(b) of the FESA addresses the protections afforded to listed plants. Recently, the USFWS instituted changes in the listing status of former candidate species. Former C1 (candidate) species are now referred to simply as candidate species and represent the only candidates for listing. Former C2 species (for which the USFWS had insufficient evidence to warrant listing at this time) and C3 species (either extinct, no longer a valid taxon or more abundant than was formerly believed) are no longer considered as candidate species. Therefore, these species are no longer maintained in list form by the USFWS, nor are they formally protected. However, some USFWS field offices have issued memoranda stating that former C2 species are henceforth to be considered Federal Species of Concern. This term is employed in this document, but carries no official protections. All references to federally protected species in this report (whether listed, proposed for listing or candidate) include the most current published status or candidate category to which each species has been assigned by USFWS. For purposes of this assessment, the following acronyms are used for federal status species:

|     |                               |
|-----|-------------------------------|
| FE  | Federal Endangered            |
| FT  | Federal Threatened            |
| FPE | Federal Proposed Endangered   |
| FPT | Federal Proposed Threatened   |
| FC  | Federal Candidate for Listing |

## State of California Protection and Classifications

California's Endangered Species Act (CESA) defines an endangered species as “...a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which



is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.” The State defines a threatened species as “...a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the commission as rare on or before January 1, 1985 is a threatened species.” Candidate species are defined as “...a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the commission has formally noticed as being under review by the department for addition to either the list of endangered species or the list of threatened species, or a species for which the commission has published a notice of proposed regulation to add the species to either list.” Candidate species may be afforded temporary protection as though they were already listed as threatened or endangered at the discretion of the Fish and Game Commission. Unlike the federal ESA, CESA does not include listing provisions for invertebrate species.

Article 3, Sections 2080 through 2085, of the California Endangered Species Act addresses the taking of threatened or endangered species by stating “No person shall import into this state, export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the commission determines to be an endangered species or a threatened species, or attempt any of those acts, except as otherwise provided...” Under the California Endangered Species Act, “take” is defined as “...hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” Exceptions authorized by the state to allow “take” require “...permits or memorandums of understanding...” and can be authorized for “...endangered species, threatened species, or candidate species for scientific, educational, or management purposes.” Sections 1901 and 1913 of the California Fish and Game Code provide that notification is required prior to disturbance.

Additionally, some sensitive mammals and birds are protected by the State as Fully Protected Mammals or Fully Protected Birds, as described in the California Fish and Game Code, Sections 4700 and 3511, respectively. California Species of Special Concern (“special” animals and plants) listings include special status species, including all state and federal protected and candidate taxa, Bureau of Land Management and U.S. Forest Service sensitive species, species considered to be declining or rare by the CNPS or National Audubon Society, and a selection of species which are considered to be under population stress but are not formally proposed for listing. This list is primarily a working document for the CDFW's CNDDDB project. Informally listed taxa are not protected per se, but warrant consideration in the preparation of biotic assessments. For some species, the CNDDDB is only concerned with specific portions of the life history, such as roosts, rookeries, or nest sites. For the purposes of this assessment, the following acronyms are used for state status species:

|     |                                       |
|-----|---------------------------------------|
| SE  | State Endangered                      |
| ST  | State Threatened                      |
| SCE | State Candidate Endangered            |
| SCT | State Candidate Threatened            |
| SFP | State Fully Protected                 |
| SP  | State Protected                       |
| SR  | State Rare                            |
| SSC | California Species of Special Concern |

### California Native Plant Society

The California Native Plant Society is a private plant conservation organization dedicated to the monitoring and protection of sensitive species in the State. This organization has compiled an inventory comprised of the information focusing on geographic distribution and qualitative characterization of rare, threatened, or endangered vascular plant species of California (Tibor 2001). The list serves as the candidate list for listing as threatened and endangered by CDFW. The CNPS has developed five categories of rarity (California Rare Plant Rank (CRPR):

|         |  |
|---------|--|
| CRPR 1A | Presumed extinct in California.  |
| CRPR 1B | Rare, threatened, or endangered in California and elsewhere.   |
| CRPR 2  | Rare, threatened, or endangered in California, but more common elsewhere.  |
| CRPR 3  | Plants about which we need more information – a review list.   |
| CRPR 4  | Species of limited distribution in California (i.e., naturally rare in the wild), but whose existence does not appear to be susceptible to threat. |

As stated by the CNPS:

*“Threat Rank is an extension added onto the California Rare Plant Rank and designates the level of endangerment by a 1 to 3 ranking with 1 being the most endangered and 3 being the least endangered. A Threat Rank is present for all California Rare Plant Rank 1B's, 2's, 4's, and the majority of California Rare Plant Rank 3's. California Rare Plant Rank 4 plants are seldom assigned a Threat Rank of 0.1, as they generally have large enough populations to not have significant threats to their continued existence in California; however, certain conditions exist to make the plant a species of concern and hence be assigned a California Rare Plant Rank. In addition, all California Rare Plant Rank 1A (presumed extinct in California), and some California Rare Plant Rank 3 (need more*

*information) plants, which lack threat information, do not have a Threat Rank extension.” (CNPS 2012, <http://www.rareplants.cnps.org/>)*

|     |   |
|-----|---|
| 0.1 | Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)                       |
| 0.2 | Fairly threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)                           |
| 0.3 | Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known) |

## POTENTIALLY SENSITIVE SPECIES/RESOURCES

### Sensitive Plant Species

The MSHCP has determined that all of the sensitive species potentially occurring onsite have been adequately covered (MSHCP Table 2-2 Species Considered for Conservation Under the MSHCP Since 1999, 2004). However, additional surveys may be required for narrow endemic plants and/or criteria area species if suitable habitat is documented onsite and/or if the property is located within a predetermined “Survey Area” (MSHCP 2004).

The Study Area occurs partially within a predetermined Survey Area for three (3) narrow endemic plant species including (Attachment B, *MSHCP Relationship Map*):

- San Diego ambrosia (*Ambrosia pumila*) [Federal endangered, CNPS CRPR 1B.1];
- Brand’s phacelia (*Phacelia stellaris*) [CRPR 1B.1];
- San Miguel savory (*Satureja chandleri*) [CRPR 1B.2];

Table 1, *Sensitive Plant Species Habitat Assessment*, presents the results of the analysis to determine the potential presence/absence of the species within the Study Area.

**Table 1, Sensitive Plant Species Habitat Assessment**

| Species Name<br>( <i>Scientific Name</i> )  | Habitat Description  | Comments   |
|---|--|--|
| Status  |  |  |
| San Diego ambrosia<br>( <i>Ambrosia pumila</i> )<br><br>FE<br>CRPR List 1B.1<br>MSHCP NEPSA | San Diego ambrosia is known from Baja California, Mexico, and San Diego and Riverside counties in the United States. It blooms May to September. San Diego ambrosia occurs primarily on upper terraces of rivers and drainages as well as in open grasslands, openings in coastal sage scrub, and occasionally in areas adjacent to vernal pools. As stated in the MSHCP “For the purpose of the conservation analysis, potential habitat for San Diego ambrosia is considered to be grasslands and playas/vernal pools in the Riverside Lowlands Bioregion” (MSHCP 2004). | No grasslands, playas or vernal pool habitats/resources as characterized by the MSHCP are present within or adjacent to the Study Area. In addition to a lack of suitable habitat no soils associated with playas and vernal pools were documented onsite.<br><br>The species is not expected to occur onsite due to the extensive disturbed nature of the vegetation communities, soils and historic maintenance activities conducted within this constructed reach of Tequesquite Creek. |
| Brand’s phacelia<br>( <i>Phacelia stellaris</i> )<br><br>CRPR List 1B.1<br>MSHCP NEPSA      | Brand’s phacelia is an annual herb. It blooms March to June. This species occurs in coastal sage scrub and dune habitats.  | No coastal sage scrub or dune habitats are located within or adjacent to the Study Area.<br><br>The species is not expected to occur onsite due to lack of suitable soils, vegetation communities, the extensive disturbed nature of the vegetation communities, and historic maintenance activities conducted within this constructed reach of Tequesquite Creek.   |

| Species Name<br>( <i>Scientific Name</i> )  | Habitat Description  | Comments   |
|---|--|--|
| <b>Status</b><br>San Miquel savory<br>( <i>Satureja chandleri</i> )<br><br>FT/SE<br>CRPR List 1B.2<br>MSHCP NEPSA | San Miquel savory is a perennial shrub that blooms from March to July. This species occurs in rocky habitats within chaparral, coastal scrub, riparian woodland, and grassland habitats. | No chaparral, foothill woodland, coastal sage scrub, valley grassland in association with rocky substrates are located within or adjacent to the Study Area.<br><br>The species is not expected to occur onsite due to lack of suitable soils, vegetation communities, the extensive disturbed nature of the vegetation communities, and historic maintenance activities conducted within this constructed reach of Tequesquite Creek. |

These three (3) sensitive plant species are not expected to occur onsite due to the extensive disturbed nature of the vegetation communities, disturbed soils and historic maintenance activities conducted within this man-made reach of Tequesquite Creek. The Study Area also does not provide suitable vegetation communities or soils generally associated with the target species. No additional surveys are required.

The Study Area does not occur within a predetermined Survey Area for MSHCP criteria area species. No additional surveys are required.

### **Oak Tree and Plant Protection and Management**

No oak trees were documented within or adjacent to the Study Area.

### **Sensitive Wildlife Species**

The MSHCP has determined that all of the sensitive species potentially occurring onsite have been adequately covered (MSHCP Table 2-2 Species Considered for Conservation Under the MSHCP Since 1999, 2004). However, additional surveys may be required for criteria area species and specific wildlife species if suitable habitat is documented onsite and/or if the property is located within a predetermined “Survey Area” (MSHCP 2004).

The Study Area does not occur within a predetermined Survey Area for amphibians or mammals (RCA GIS Data Downloads 2018). No additional surveys are required.

The Study Area occurs approximately 50ft. upstream and adjacent to USFWS designated critical habitat for the Santa Ana sucker (*Catostomus santaanae*), Santa

Ana River, Subunit 1 and 1,800ft. (0.34-mile) upstream from the confluence with the Santa Ana River. As stated by the MSHCP:

*“For the purpose of the conservation analysis, potential habitat for the Santa Ana sucker includes the open water channels and emergent vegetation (freshwater marsh) areas in higher gradient stream sections for the entire length of the Santa Ana River within the Plan Area. A variety of wetland vegetation types adjacent to the streams essential to maintaining the ecological integrity of the freshwater systems were included as buffer habitat including riparian scrub, forest and woodland. Additional habitats that may be within the streambank or buffer adjacent to the Santa Ana River include Riversidean alluvial fan sage scrub, grassland, coastal sage scrub and agricultural lands. These habitats were included in the analysis for a width of approximately 1,300 feet centered on the channel of the Santa Ana River. Also included in the area conserved for the Santa Ana sucker are the main tributaries that are important for the species for a distance of at least 0.5 mile upstream from the confluence of the tributary with the Santa Ana River. These tributaries include Sunnyslope Creek, Mount Rubidoux Creek, Arroyo Tequesquite, Anza Park Drain, Evans Lake Drain, Temescal Creek and Aliso Creek.” (MSHCP 2004)*

The highly disturbed lower channelized reach of Tequesquite Creek located within the Study Area is not expected to currently represent suitable spawning or foraging habitat for the Santa Ana sucker. As illustrated in photograph 1 Attachment D, *Current Study Area Photographs*, the disturbed soils, extensive urban waste, and exotic fish species (mosquitofish) documented onsite are expected to contribute to conditions unsuitable for the species. The proposed action is expected to improve conditions downstream of the Study Area within Tequesquite Creek for the species by increasing annual scouring and maintaining potential dispersal routes to potential spawning areas downstream of the Study Area. The Study Area does not represent a dispersal route to potential upstream resources for the species.

The Study Area occurs partially within a predetermined Survey Area for the burrowing owl (*Athene cunicularia*) (Attachment B, *MSHCP Relationship Map*). No suitable burrows were documented within or immediately adjacent to the Study Area during the habitat assessment conducted in accordance with the Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan (RCA 2006). In the event conditions change onsite, at a minimum a 30-day MSHCP preconstruction survey will be required immediately prior to the initiation of maintenance activities to ensure protection for this species and compliance with the conservation goals as outlined in the MSHCP.

No suitable habitat for the southwestern willow flycatcher (*Empidonax traillii extimus*) or western yellow-billed cuckoo (*Coccyzus americanus*) was detected within the Study Area. No additional surveys are required.

The low-quality disturbed willow scrub (saplings) habitat is not expected to be utilized for breeding by the least Bell's vireo as illustrated in attachments in Attachments D and E, *Current Study Area Photographs*. To ensure that the species is not directly and/or indirectly impacted as a result of annual maintenance activities, all work will be conducted outside of the breeding season (April 10<sup>th</sup> to July 31<sup>st</sup>).

Proposed maintenance activities will be conducted outside of the least Bell's vireo nesting season or focused USFWS protocol surveys will be conducted within and adjacent to the Study Area to ensure potential direct or indirect impacts do not occur based on the presence of low quality habitat onsite and the proximity to suitable habitat located within the adjacent Riverside-Corona Resource Conservation District (RCRCD) Tequesquite Conserved Land, Attachment G, *Biological Resources Impact Map*.

No vernal pools, road ruts or other inundated features representing suitable habitat for fairy shrimp were documented within or adjacent to the Study Area. The active channel of Tequesquite Creek does not represent suitable fairy shrimp habitat. No additional surveys are required.

### **MSHCP Riparian, Riverine, Vernal Pool Resources**

The active channel (coastal and valley freshwater marsh/Tequesquite Creek) and adjacent slopes (ruderal and disturbed willow scrub) are subject to the jurisdiction of the California Department of Fish and Wildlife (CDFW). Those areas designated as CDFW regulated resources are also classified as Western Riverside County MSHCP Section 6.1.2 riverine/riparian resources. A MSHCP Determination of Biologically Equivalent or Superior Preservation (DBESP) will be prepared to address all direct and/or indirect impacts to these resources.

No vernal pools were documented within or adjacent to the Study Area.

### **SUMMARY OF CONSISTENCY WITH MSHCP POLICIES**

The purpose of this report is to document the existing biological resources, identify general vegetation types, and assess the potential biological and regulatory constraints associated with the proposed development within the Study Area as outlined by the Western Riverside County MSHCP. Specifically, the report is intended to assist the City of Riverside and MSHCP wildlife regulatory agencies during the MSHCP Consistency Analysis. The following sections summarize the Study Area's relationship to MSHCP compliance guidelines.

### **CRITERIA AREAS**

The Study Area is located within the Western Riverside County Multiple Species Habitat Conservation Plan Cities of Riverside/Norco Area Plan (SU1-Santa Ana River South), partially within Criteria Area 443, outside of a linkage area. Specifically, a total of 0.63-acre of the Study Area is located within Criteria Area 443. A HANS and JPR will be required for the 0.63-acre portion of the Study Area located within Criteria Area 443.

As stated in the MSHCP:

*“Conservation within this Cell will contribute to assembly of Existing Core A. Conservation within this Cell will focus on Riversidean alluvial fan sage scrub, riparian scrub, woodland and forest habitat along the Santa Ana River. Areas conserved within this Cell will be connected to existing conserved wetland habitat along the Santa Ana River in Cell #534 to the southwest. Conservation within this Cell will be approximately 5% of the Cell focusing in the western portion of the Cell.”*

The City of Riverside Public Works Department Tequesquite Creek Maintenance Project is proposed to be conducted annually. The proposed annual maintenance activities would improve the functions and values of the channel through improved hydraulic capacity, reduction of potential pollutants, and removal of non-native vegetation. All annual maintenance and temporary project related staging will occur within the 0.93-acre Study Area. Specifically, annual maintenance will occur within the 0.66-acre active channel/adjacent slopes and temporary staging will occur within the adjacent disturbed habitats (access roads).

The proposed annual maintenance action would not conflict with the MSHCP Conservation goals for Criteria Cell 443.

#### **CRITERIA AREA SPECIES SURVEY AREA**

The Study Area does not occur within a predetermined Survey Area for MSHCP criteria area species. No additional surveys are required.

The project is consistent with MSHCP Section 6.3.2.

#### **NARROW ENDEMIC PLANT SPECIES SURVEY AREA**

The Study Area occurs partially within a predetermined Survey Area for three (3) narrow endemic plant species including, San Diego ambrosia, Brand's phacelia, and San Miguel savory. These sensitive plant species are not expected to occur onsite due to the extensive disturbed nature of the vegetation communities, disturbed soils and historic maintenance activities conduction within this man-made reach of Tequesquite Creek. No additional surveys are required.

The project is consistent with MSHCP Section 6.3.2.

#### **AMPHIBIAN SPECIES SURVEY AREA**

The Study Area is not located within the Amphibian Species Survey Area; therefore, no surveys were required (RCA GIS Data Downloads 2018).

The project is consistent with MSHCP Section 6.3.2.



## **MAMMAL SPECIES SURVEY AREA**

The Study Area is not located within the Mammal Species Survey Area; therefore, no surveys were required (RCA GIS Data Downloads 2018).

The project is consistent with MSHCP Section 6.3.2.

## **BURROWING OWL SURVEY AREA**

The Study Area occurs partially within a predetermined Survey Area for the burrowing owl. No suitable burrows were documented within or immediately adjacent to the Study Area during the habitat assessment conducted in accordance with the Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan (RCA 2006). In the event conditions change, at a minimum a 30-day MSHCP preconstruction survey will be required immediately prior to the initiation of maintenance activities to ensure protection for this species and compliance with the conservation goals as outlined in the MSHCP. If burrowing owls are detected onsite during the 30-day preconstruction survey, a burrowing owl relocation plan will be developed for the passive or active translocation of individuals.

The project will be consistent with MSHCP Section 6.3.2 following completion and City approval of the MSHCP 30-Day Burrowing Owl Preconstruction Survey.

## **RIPARIAN/RIVERINE AREAS AND VERNAL POOLS**

The active channel (coastal and valley freshwater marsh/Tequesquite Creek) and adjacent slopes (ruderal and disturbed willow scrub) are subject to the jurisdiction of the CDFW. Those areas designated as CDFW regulated resources are also classified as Western Riverside County MSHCP Section 6.1.2 riverine/riparian resources as shown in Attachment G, *Biological Resources Impact Map*. As outlined in Table 2, MSHCP Riverine & Riparian Impacts, the proposed City of Riverside Public Works Department Annual Tequesquite Creek Maintenance Project would result in permanent impacts to 0.66-acre of resources characterized as MSHCP Section 6.1.2 riverine/riparian. The annual proposed maintenance activities would improve the functions and values of the channel through improved hydraulic capacity, reduction of potential pollutants, and removal of non-native vegetation.

**Table 2, MSHCP Riverine & Riparian Impacts**

| <b>Vegetation Communities</b>       | <b>Study Area (ac)</b> | <b>MSHCP Riparian/Riverine Permanent Impacts within Criteria Area 443 (ac)</b> | <b>Total MSHCP Riparian/Riverine Permanent Impacts (ac)</b> |
|-------------------------------------|------------------------|--|---|
| Ruderal                             | 0.46                   | 0.30   | 0.46  |
| Disturbed                           | 0.27                   | 0.00   | 0.00  |
| Coastal and Valley Freshwater Marsh | 0.12                   | 0.11   | 0.12  |
| Stream Channel                      | 0.05                   | 0.03   | 0.05  |
| Disturbed Willow Scrub              | 0.03                   | 0.01   | 0.03  |
| <b>TOTAL</b>                        | <b>0.93</b>            | <b>0.45</b>  | <b>0.66</b>   |

\*Cadre Environmental 2018.

No suitable habitat for the southwestern willow flycatcher or western yellow-billed cuckoo was detected within the Study Area. No additional surveys are required.

The low-quality disturbed willow scrub (saplings) habitat is not expected to be utilized for breeding by the least Bell's vireo as illustrated in attachments in Attachments D and E, *Current Study Area Photographs*. To ensure that the species is not directly and/or indirectly impacted as a result of annual maintenance activities, all work will be conducted outside of the breeding season (April 10<sup>th</sup> to July 31<sup>st</sup>).

Proposed maintenance activities will be conducted outside of the least Bell's vireo nesting season or focused USFWS protocol surveys will be conducted within and adjacent to the Study Area to ensure potential direct or indirect impacts do not occur based on the presence of low quality habitat onsite and the proximity to suitable habitat located within the adjacent Riverside-Corona Resource Conservation District (RCRCD) Tequesquite Conserved Land, Attachment G, *Biological Resources Impact Map*.

No vernal pools, road ruts or other inundated features representing suitable habitat for fairy shrimp were documented within or adjacent to the Study Area. The active channel of Tequesquite Creek does not represent suitable fairy shrimp habitat. No additional surveys are required.

The highly disturbed lower channelized reach of Tequesquite Creek located within the Study Area is not expected to currently represent suitable spawning or foraging habitat for the Santa Ana sucker. As illustrated in photograph 1 Attachment D, *Current Study Area Photographs*, the disturbed soils, extensive urban waste and presence of exotic fish (mosquitofish) documented onsite are expected to contribute to conditions unsuitable for the species. The proposed action is expected to improve conditions downstream of the Study Area within Tequesquite Creek for the species by increasing annual scouring and maintaining potential dispersal routes to potential spawning areas downstream of the Study Area. The Study Area does not represent a dispersal route to

potential upstream resources for the species. The proposed action would not result in a direct or indirect (sediment discharge) to the Santa Ana sucker.

A MSHCP Determination of Biologically Equivalent or Superior Preservation (DBESP) will be prepared to address all direct and/or indirect permanent impacts to resources characterized as MSHCP riverine and riparian.

The project will be consistent with MSHCP Section 6.1.2 by adhering to the requirements of the DBESP.

## **URBAN/WILDLANDS INTERFACE**

The Study Area is located immediately east of Public/Quasi-Public (PQP) Conserved Lands (Riverside-Corona Resource Conservation District, CE), as shown in Attachment B, *MSHCP Relationship Map*.

The guidelines pertaining to the Urban/Wildlands Interface guidelines presented in Section 6.1.4 of the MSHCP are intended to address indirect effects associated with locating commercial, mixed uses and residential developments in proximity to a MSHCP Conservation Area. The City of Riverside Public Works Department Annual Tequesquite Creek Maintenance Project would not conflict with Urban/Wildlands Interface guidelines. The annual proposed maintenance activities would improve the functions and values of the channel through improved hydraulic capacity, reduction of potential pollutants, and removal of non-native vegetation.

Compliance with all the following MSHCP Urban/Wildlands Interface guidelines will ensure that the proposed project will not result in indirect impacts to Riverside-Corona Resource Conservation District conservation area or resources within the Santa Ana River floodprone area.

### **Drainage**

Applicable Best Management Practices (BMPs) will be implemented during annual maintenance activities. The proposed City of Riverside Public Works Department Annual Tequesquite Creek Maintenance project includes the removal of native and non-native vegetation.

### **Toxics**

The proposed annual maintenance activities would not result in the release of toxins, chemicals, petroleum products, exotic plant material, or other elements that could degrade or harm downstream biological or aquatic resources. All staging and fueling activities (as needed) would be conducted outside of the active channel within the disturbed habitat (access roads). The proposed City of Riverside Public Works Department Annual Tequesquite Creek Maintenance project only includes the removal of native and non-native vegetation, reduction of potential pollutants for purposes of

improving hydraulic capacity and contributing to an overall improvement in the functions and values of the channel.

### **Lighting**

No night work would occur as a result of the proposed City of Riverside Public Works Department Annual Tequesquite Creek Maintenance project.

### **Noise**

Short-term maintenance-related noise impacts will be reduced by the implementation of the following:

- The maintenance crews shall equip all equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards. The maintenance crews shall place all stationary equipment so that emitted noise is directed away from sensitive receptors nearest the Study Area.
- The maintenance crews shall locate equipment staging in areas that will create the greatest distance between noise sources and noise sensitive receptors nearest the Study Area.

### **Invasives**

No landscaping is proposed. The proposed City of Riverside Public Works Department Annual Tequesquite Creek Maintenance project includes the removal of native and non-native vegetation.

### **Barriers**

No barriers are proposed to be constructed as a result of the annual maintenance activities.

### **Grading/Land Development**

No grading or development activities are proposed to be constructed as a result of the annual maintenance activities. The proposed City of Riverside Public Works Department Annual Tequesquite Creek Maintenance project includes the removal of native and non-native vegetation

Implementation of all Urban/Wildlands Interface guidelines will minimize adverse project indirect impacts and is consistent with MSHCP Section 6.1.4.

The project is consistent with MSHCP Section 6.1.4.

## **FUELS MANAGEMENT**

The fuels management guidelines presented in Section 6.4 of the MSHCP are intended to address brush management activities around new development within or adjacent to MSHCP Conservation Areas. The City of Riverside Public Works Department Annual Tequesquite Creek Maintenance Project would not conflict with Fuels Management Guidelines.

The project is consistent with MSHCP Section 6.4.

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## **ATTACHMENTS**

A – Regional Location Map

B – MSHCP Relationship Map

C – Biological Resources Map

D – Current Study Area Photographs

E – Current Study Area Photographs


F – Soil Associations Map

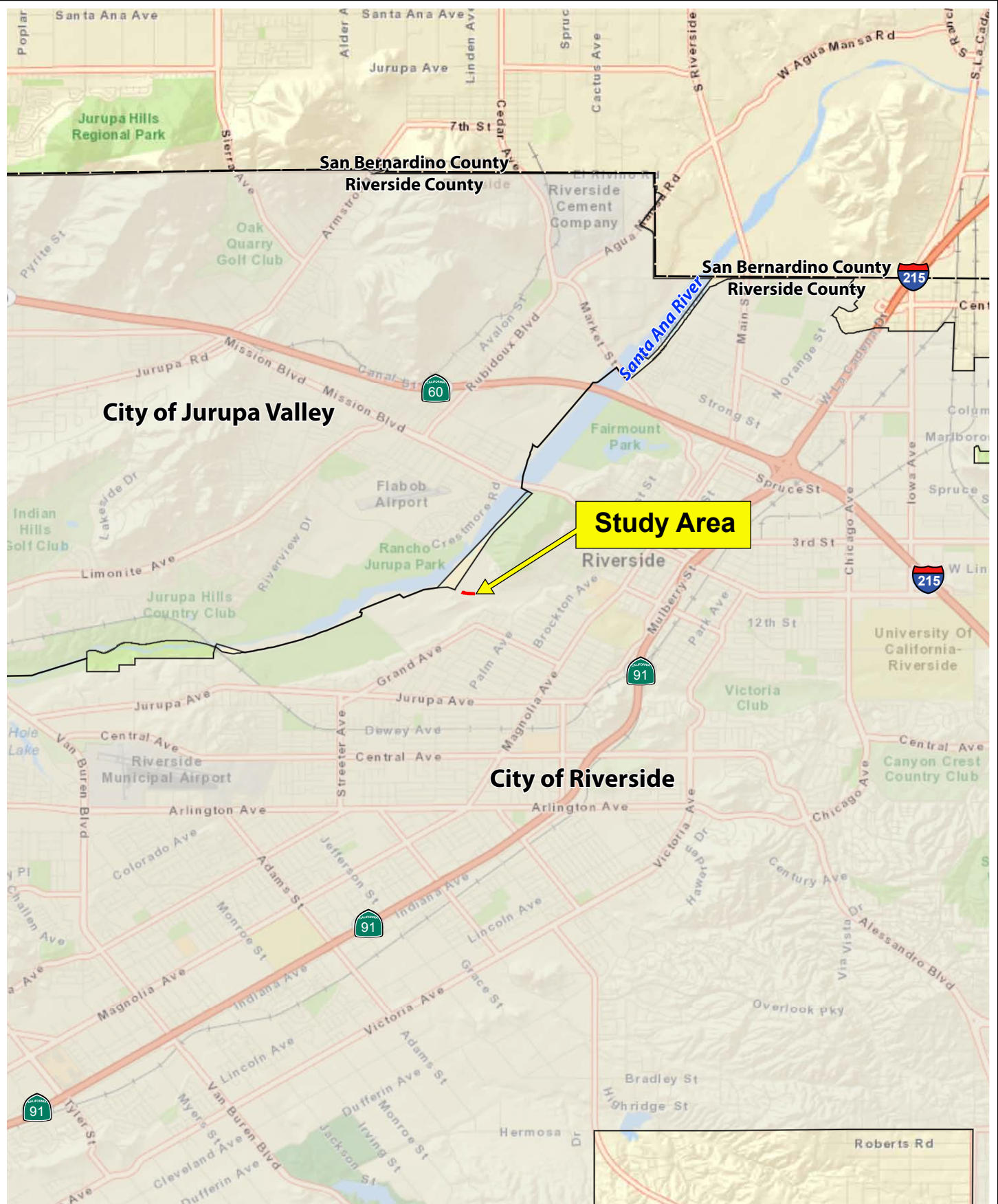
G – Biological Resources Impact Map

## **Certification**

*"I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief."*

Author:  Date: March 26<sup>th</sup>, 2019

Fieldwork Performed By:  Date: March 26<sup>th</sup>, 2019



Partially within APN 187-090-001

**Attachment A Regional Location Map**  
*Tequesquite Creek Maintenance Project*  
*City of Riverside, California*





MSHCP Burrowing Owl & Narrow Endemic Plants  
Survey Area (white hatch)

Criteria Cell 443  
Subunit 1 - Santa Ana River South

RCRCD Tequesquite CE  
Conserved Land

Study Area Boundary

Tequesquite Creek

Tequesquite Creek

Criteria Cell 534  
Subunit 1 - Santa Ana River South

Partially within APN 187-090-001

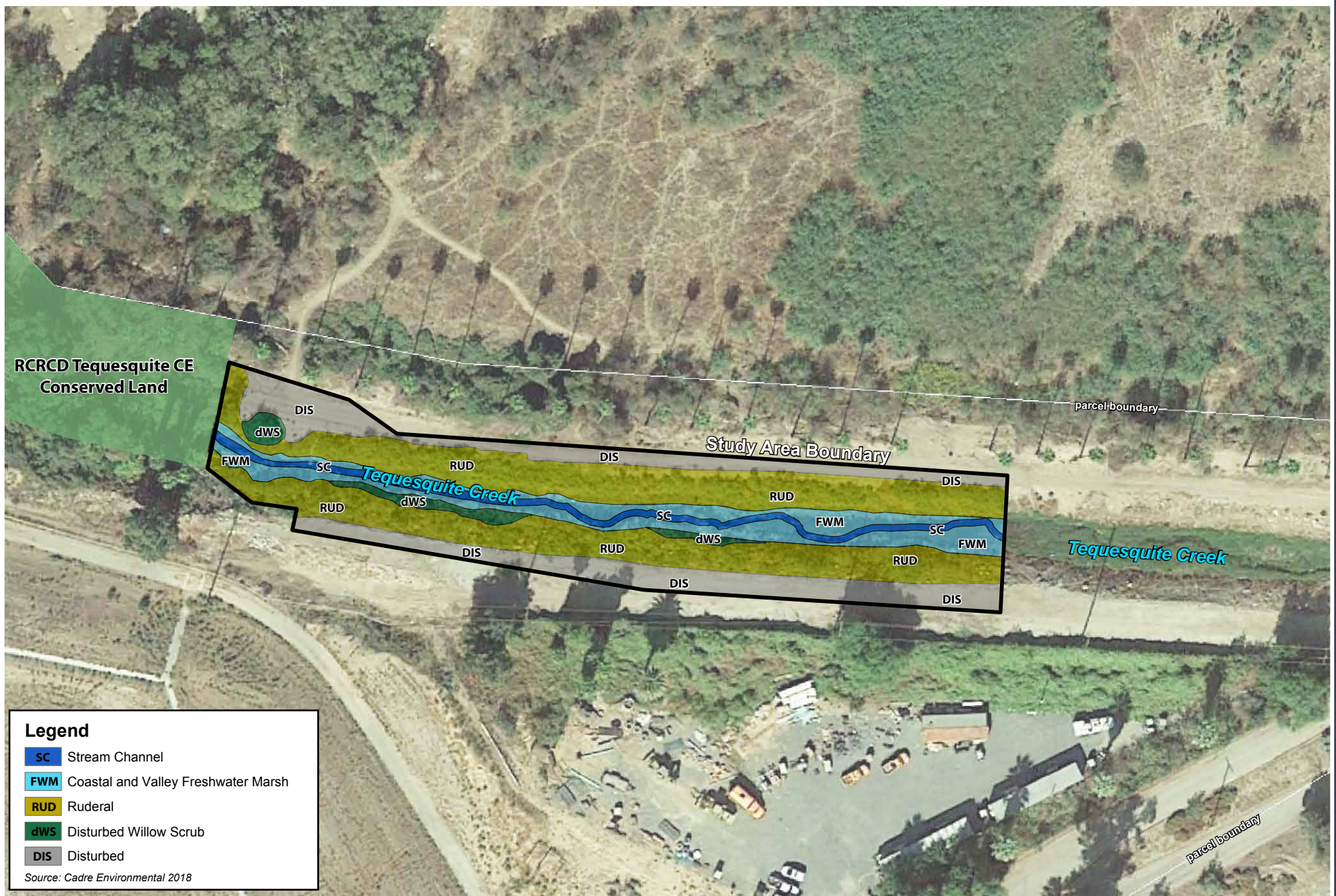
**Attachment B** MSHCP Relationship Map  
*Tequesquite Creek Maintenance Project*  
City of Riverside, California

**CADRE**  
Environmental



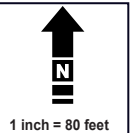
1 inch = 80 feet





Partially within APN 187-090-001

**Attachment C** Biological Resources Map  
*Tequesquite Creek Maintenance Project*  
 City of Riverside, California







PHOTOGRAPH 1 - Westward view of Tequesquite Creek from the eastern Study Area boundary.



PHOTOGRAPH 2 - Westward view of Study Area from the north central region. The Study Area is bordered by disturbed dirt access roads and the within channel banks are dominated by ruderal/non-native vegetation.



PHOTOGRAPH 3 - Eastward view of Tequesquite Creek from the western Study Area boundary.



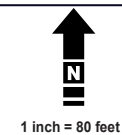
PHOTOGRAPH 4 - Westward view of upper reach of Study Area - A small patch of disturbed willow scrub occurs along the north-facing bank.



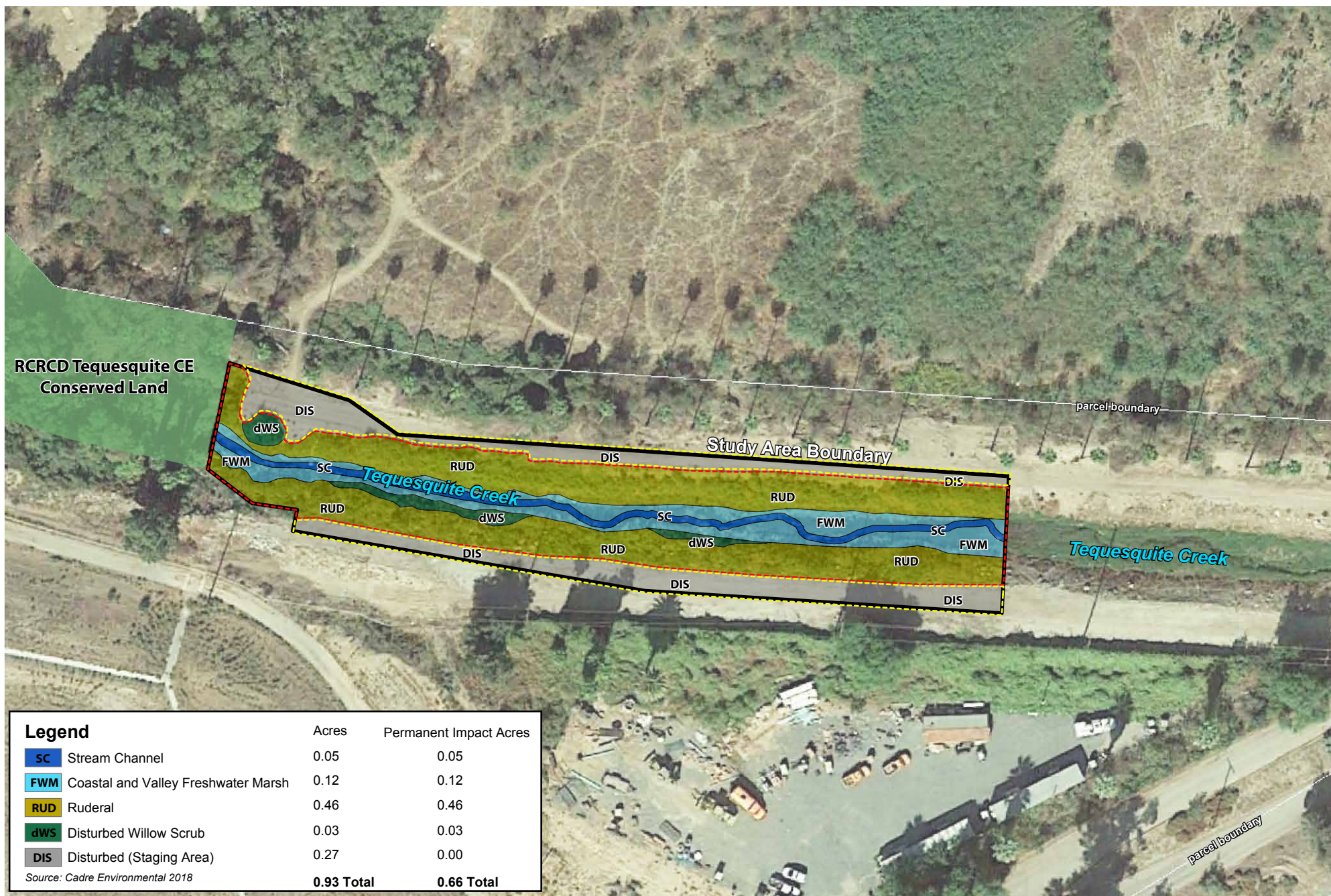


Partially within APN 187-090-001

**Attachment F**   **Soil Associations Map**  
*Tequesquite Creek Maintenance Project*  
*City of Riverside, California*







Partially within APN 187-090-001

--- Maintenance Area

--- Staging Area

**Attachment G** Biological Resources Impact Map  
*Tequesquite Creek Maintenance Project*  
 City of Riverside, California



APPENDIX C  
*Jurisdictional Delineation Report*





December 6, 2019

10448

Mike Roberts  
Environmental Services Coordinator  
City of Riverside Public Works Department  
3900 Main Street, 4th Floor  
Riverside, California 92522

**Subject:** *Delineation of Jurisdictional Waters Update for Tequesquite Creek, City of Riverside, California*

Dear Mr. Roberts:

This letter report documents the results of an update to a jurisdictional waters delineation for the Tequesquite Creek Maintenance Project (project), within the City of Riverside, California. Due to changes in the proposed project footprint, this letter report provides an update to the jurisdictional delineation prepared in 2014 and 2017. The review area consists of the proposed project, totaling approximately 0.93 acre.

This letter report update is intended to (1) describe the existing conditions of jurisdictional waters within the review area, and (2) quantify impacts to jurisdictional waters that would result from implementation of the proposed project.

## 1 Project Location and Background

The review area is within the Tequesquite Creek downstream of Bonaminio Park in the City of Riverside (Figure 1, Vicinity Map; all figures are provided in Attachment A). It is situated in Section 28 of Township 2 South, Range 5 West of the West Riverside 7.5-minute U.S. Geological Survey quadrangle (Figure 2, USGS Topo Map). To access the site, from the State Route 91, exit on 14th Street and turn (northwest to continue onto 14th Street). Head northwest for approximately 0.3 mile and turn left onto Palm Avenue. Head south approximately 0.2 mile and turn right onto Tequesquite Avenue and continue approximately 0.4 mile and the review area will be on the right to the north. The centroid of the project site is located at 33.975925, -117.400422.

It is our understanding that in January 2016, the City of Riverside (City) Public Works Department made emergency maintenance and repairs, consisting primarily of vegetation removal, within approximately 0.2 acres of the project site as a part of an emergency maintenance project. Authorization of the emergency work was coordinated with the resource agencies.

## 2 Regulatory Background

### 2.1 Federal Statutes and Regulations – U.S. Army Corps of Engineers

Pursuant to Section 404 of the Clean Water Act, any person or public agency proposing to discharge dredged or fill material into waters of the United States, including jurisdictional wetlands, must obtain a permit from the U.S. Army Corps of Engineers (ACOE). Title 33 of the Code of Federal Regulations, Part 328.3, defines waters of the United States as follows:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. All interstate waters, including interstate wetlands;
3. The territorial seas;
4. All impoundments of waters otherwise identified as water of the United States under this section;
5. All tributaries, as defined in this section;
6. All waters adjacent to a water identified in 1 through 5 above;
7. Additional waters (as defined in the section) where they are determined, on a case-specific basis, to have a significant nexus to a water in 1 through 3 above.

For non-tidal waters of the United States, the lateral limits of ACOE jurisdiction extend to the ordinary high water mark (OHWM) when no adjacent wetlands are present. As defined in 33 Code of Federal Regulations 328.3(c)(6), the OHWM is “that line on the shore established by the fluctuations of water and indicated by physical characteristics such as [a] clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.” If adjacent wetlands are present, the jurisdiction extends to the limit of the wetlands.

Wetlands are “those areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 CFR 328.3). Wetlands are jurisdictional if they meet this definition, as well as the definition of waters of the United States. The following three criteria must be satisfied to classify an area as a wetland under ACOE jurisdiction: (1) a predominance of plant life that is adapted to life in wet conditions (hydrophytic vegetation); (2) soils that saturate, flood, or pond long enough during the growing season to develop anaerobic conditions in the upper part (hydric soils); and (3) permanent or periodic inundation or soils saturation, at least seasonally (wetland hydrology). The ACOE uses the methodology in the Regional Supplements to the Corps of Engineers Wetland Delineation Manual to determine whether an area meets these three criteria. In the project area, the supplement for the Arid West Region (ACOE 2008a) is used.

### **ACOE-Regulated Activities**

Under Section 404 of the Clean Water Act, the ACOE regulates activities that involve a discharge of dredged or fill material, including but not limited to grading, placing riprap for erosion control, pouring concrete, laying sod, and stockpiling excavated material into waters of the United States. Activities that generally do not involve a regulated discharge (if performed specifically in a manner to avoid discharges) include driving pilings, providing some drainage channel maintenance activities, and excavating without stockpiling.

## **2.2 State Statutes and Regulations – Regional Water Quality Control Board**

The State of California has concurrent jurisdiction with the federal government over Section 401 Water Quality Certification for jurisdictional waters and wetlands of the United States. Where isolated waters and wetlands (not subject to federal jurisdiction) are involved, the state will exert independent jurisdiction via the Porter-Cologne Water Quality Control Act.

## Section 401 of the Clean Water Act

Section 401 of the Clean Water Act requires that any applicant for a federal permit for activities that involve a discharge to waters of the United States shall provide the federal permitting agency a certification from the state in which the discharge is proposed that states that the discharge will comply with the applicable provisions under the federal Clean Water Act. Therefore, in California, before the ACOE will issue a Section 404 permit, applicants must apply for and receive a Section 401 Water Quality Certification or waiver from the Regional Water Quality Control Board (RWQCB).

Under Section 401 of the Clean Water Act, the RWQCB regulates at the state level all activities that are regulated at the federal level by ACOE.

## Porter-Cologne Water Quality Control Act

The RWQCB regulates actions that would involve “discharging waste, or proposing to discharge waste, within any region that could affect the quality of the waters of the state” (California Water Code, Section 13260[a]), pursuant to provisions of the state Porter-Cologne Water Quality Control Act. “Waters of the state” are defined as “any surface water or groundwater, including saline waters, within the boundaries of the state” (California Water Code, Section 13050[e]).

Under the Porter-Cologne Water Quality Control Act, the RWQCB regulates all such activities—as well as dredging, filling, or discharging materials into waters of the state—that are not regulated by the ACOE due to a lack of connectivity with a navigable water body.

## 2.3 State Statutes and Regulations – California Department of Fish and Wildlife

Sections 1600–1616 of the California Fish and Game Code mandate that “it is unlawful for any person to substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds, without first notifying the department of such activity.”

California Department of Fish and Wildlife (CDFW) jurisdiction includes ephemeral, intermittent, and perennial watercourses (including dry washes) and lakes characterized by the presence of (1) definable bed and banks, and (2) existing fish or wildlife resources. Furthermore, CDFW jurisdiction extends to riparian habitat and may include oak woodlands in canyon bottoms. Historical court cases have further extended CDFW jurisdiction to include watercourses that seemingly disappear, but reemerge elsewhere. Under the CDFW definition, a watercourse need not exhibit evidence of an OHWM to be claimed as jurisdictional. The CDFW does not have jurisdiction over ocean or shoreline resources.

Under California Fish and Game Code, Sections 1600–1616, the CDFW has the authority to regulate work that will substantially divert or obstruct the natural flow of, or substantially change or use any material from, the bed, channel, or bank of any river, stream, or lake. The CDFW also has the authority to regulate work that will deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. This regulation takes the form of a requirement for a Lake or Streambed Alteration Agreement and is applicable to all projects.

## 3 Methods

### 3.1 Literature Review

The 2014 *Delineation of Jurisdictional Waters and Vegetation Mapping for the City of Riverside – Public Works Department in the City of Riverside* (Dudek 2014) and 2017 *Delineation of Jurisdictional Waters and Vegetation Mapping in Tequesquite Creek* (Dudek 2017) were reviewed and relied upon for background and existing conditions information. In addition, a *General MSHCP Habitat Assessment and Consistency Analysis for the City of Riverside Public Works Department Tequesquite Creek Maintenance Project* was reviewed and relied upon for updated vegetation mapping (Cadre Environmental 2018).

### 3.2 Jurisdictional Delineation

On June 14, 2017, Dudek biologist Anna Cassady conducted a formal jurisdictional waters delineation within the review area. A jurisdictional delineation for the proposed project site was conducted on June 14, 2017 by Dudek biologists Anna Cassady (Table 1).

**Table 1. Schedule of the Jurisdictional Delineation Conducted for the Tequesquite Creek Project**

| Date       | Hours     | Personnel | Conditions                      |
|------------|-----------|-----------|---------------------------------|
| 06/14/2017 | 0912–1130 | APC       | 76°F–78°F, 0% cc, 0–1 mph winds |

**Notes:** °F = degrees Fahrenheit; cc = cloud cover; mph = miles per hour.

The review area was surveyed on foot where potential jurisdictional features were observed and was surveyed for the following types of features:

- Waters of the United States, including wetlands, under the jurisdiction of the ACOE, pursuant to Section 404 of the federal Clean Water Act
- Waters of the state under the jurisdiction of the California RWQCB, pursuant to Section 401 of the federal Clean Water Act and the Porter-Cologne Water Quality Control Act, as wetlands or drainages
- Streambeds under the jurisdiction of the CDFW, pursuant to Section 1602 of the California Fish and Game Code

Non-wetland waters of the United States were delineated based on the presence of an OHWM, as determined using the methodology in A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (ACOE 2008b). Pursuant to the federal Clean Water Act, wetland waters of the United States include those supporting all three wetlands criteria described in the ACOE Wetland Delineation Manual (ACOE 1987): hydric soils, hydrology, and hydrophytic vegetation.

Areas regulated by the RWQCB are generally coincident with waters of the United States regulated by the ACOE, but can also include isolated waters of the state that have evidence of surface water inundation pursuant to the state Porter-Cologne Water Quality Control Act. Isolated features are delineated at the OHWM, at the outer limits of hydrophytic vegetation, or at the outer rim of depressional features, if relevant. The State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (SWRCB 2019) also implements the three parameters criteria (i.e., hydric soils, hydrology, and hydrophytic vegetation) for delineating wetland waters of the state.

Streambeds are typically delineated from top of bank to top of bank or the extent of associated riparian vegetation beyond the top of bank. For shallow drainages and washes that do not support riparian vegetation, the top-of-bank measurement may be the same as the OHWM measurement.

Photos of the jurisdictional features were taken in accordance with ACOE guidelines and are provided in Attachment B. To aid in the delineation, wetland determination data forms were completed at three sampling points (WPD-1, WPD-2, and WPD-3) to determine the status of three wetland criteria (vegetation, soils, and hydrology). Wetland determination data forms are included as Attachment C.

## 4 Environmental Setting

### 4.1 Land Uses

The review area consists of Tequesquite Creek, which bisects the review area from east to west. The general vicinity surrounding the review area is a mix of developed and undeveloped land. Adjacent to the north is undeveloped land owned by the City of Riverside that is within the 100-year floodplain of the Santa Ana River. Mount Rubidoux Park lies approximately 0.35 miles northeast from the project site. To the east is the concrete portion of the flood control channel and Ryan Bonaminio Park. South of the review area is the Santa Ana River Trail and Tequesquite Arroyo River, and to the west is the Santa Ana River Regional Park. Multifamily residential development occurs within 0.15 miles to the south and east of the review area.

### 4.2 Climate

The climate of the Santa Ana watershed, within which the review area is located, has a Mediterranean climate characterized by hot, dry summers and mild, wet winters (Santa Ana RWQCB 2019). Average temperatures near Riverside range from approximately 49°F to 80°F. Lows in the winter reach 39°F, while highs in the summer can reach 94°F. The area generally receives an average rainfall of approximately 10 inches per year (WRCC 2019), with precipitation occurring primarily from November through March (Santa Ana RWQCB 2019).

The delineation was conducted during the summer, with the last recorded rain event on May 7, 2017. Prior to the site visit, a total of 8.47 inches of rain had fallen on Riverside in 2017 (AgACIS 2019).

### 4.3 Soils

Three soil types are mapped within the review area: Grangeville loamy fine sand, drained, 0% to 5% slopes, Domino silt loam, Tujunga loamy sand, channeled, 0% to 8% slopes (defined further below). The spatial distribution of these soils is depicted in Figure 3, NRCS Soils Map. There are no hydric soils within the review area (USDA 2019).

- **Grangeville Family Series** consists of deep, somewhat poorly drained soils that form in moderate coarse textured alluvium dominantly from granitic rock sources. Grangeville soils are on floodplains and alluvial fans at elevations up to 1,800 feet above mean sea level. These soils have negligible to very slow runoff and moderately rapid permeability. These soils are not considered hydric (USDA 2019).

- **Domino Family Series** consists of well-drained soils over lime-cemented hardpans. Domino soils are on basin areas and toes of alluvial fans at elevations of 1,000 feet above mean sea level to 1,800 feet above mean sea level. These soils have slow runoff and slow permeability. These soils are not considered hydric (USDA 2019).
- **Tujunga Family Series** consists of very deep, somewhat excessively drained soils that form in alluvium from granitic sources. Tujunga soils are on alluvial fans and floodplains up to elevations of 1,968 feet above mean sea level. These soils have negligible to slow runoff and high-saturated hydraulic conductivity. These soils are not considered hydric (USDA 2019).

#### 4.4 Vegetation

The review area is disturbed and is composed primarily of a streambed channel with dirt access roads running parallel on either side. There is a chain-link fence along the outer sides of the access roads. The streambed is heavily vegetated with coastal and valley freshwater marsh and a couple patches of disturbed willow scrub with a meandering stream running through the length. Directly upstream, the channel is maintained by the Riverside County Flood Control and Water Conservation District. The channel banks and surrounding area are comprised of ruderal vegetation.

#### 4.5 Topography

The review area is located in Tequesquite Arroyo, just south of the Santa Ana River, within Riverside. The review area is generally bounded by the Jurupa Mountains to the north and Santa Ana Mountains to the south and west. Elevations within the review area gradually slope from east to west and range from approximately 750 to 765 feet above mean sea level.

#### 4.6 Hydrology

The review area is located within the Riverside Hydrologic Subarea of the Middle Santa Ana River (Split) Hydrologic Area within the Santa Ana River Hydrologic Unit (Figure 4, National Wetlands Inventory and Hydrologic Unit Map). The Santa Ana River is the major drainage course within this watershed. According to the Water Quality Control Plan for the Santa Ana River Basin (Santa Ana RWQCB 2019), the Santa Ana Region contains a group of interconnected inland basins and open coastal basins that are drained by surface streams flowing generally southwesterly to the Pacific Ocean.

There are two major waterways in the vicinity: the Santa Ana River is approximately 0.25 miles north of the review area and Tequesquite Arroyo is immediately east and south of the review area (Figure 2). The Santa Ana River continues southwest, ultimately ending at the Pacific Ocean. The Tequesquite Arroyo runs east to west through the City of Riverside and joins with the Santa Ana River less than a mile west of the review area.

Beneficial uses for inland surface streams for the middle Santa Ana River basin include municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply (Santa Ana RWQCB 2019).



## 5 Results of Survey

### 5.1 Jurisdictional Delineation

As further described below, the survey identified one feature (Tequesquite Creek) within the review area as wetland and non-wetland waters of the United States under the jurisdiction of ACOE, RWQCB, and streambed under the jurisdiction of CDFW. No other potentially jurisdictional waters were observed within the review area. The limits of jurisdictional waters are provided in Figures 5a and 5b, Jurisdictional Waters Delineation Map. Photos of the jurisdictional features were taken in accordance with ACOE guidelines and are provided in Attachment B. Wetland determination data forms are included as Attachment C.

#### NWW-1

The main jurisdictional feature is Tequesquite Creek that runs east to west through the review area. Tequesquite Creek enters the review area as an earthen maintained flood control channel. It originates just east of the review area from a culvert at Tequesquite Avenue. The channel then continues to flow west and confluences with the Santa Ana River approximately 0.3 mile west of the review area. Tequesquite Creek contained an OHWM characterized by defined bed and bank, surface water, change in vegetation, and drift deposits that ranges from 8 to 23 feet in width. An unvegetated low flow channel meanders through the center of the channel. Due to the presence of an OHWM and connectivity to the Santa Ana River, which ultimately connects to the Pacific Ocean, Tequesquite Creek is a non-wetland waters of the United States. Based on the presence of a defined bed and bank and riparian resources, Tequesquite Creek is a streambed under the jurisdiction of CDFW.

#### W-1

The channel contained vegetation dominated by tall flatsedge (FACW), water speedwell (OBL), and seep monkey flower (*Mimulus guttatus*; OBL). Hydric soils were also determined based on the presence of a hydrogen sulfide odor. Based on the dominance of hydrophytic vegetation and the presence of wetland hydrology and hydric soils, the vegetated portion of the channel was determined to support wetland waters of the United States.

### 5.2 Wetland Delineation Summary

As described above, hydrology, vegetation, and soils were assessed at three data station locations to determine the presence or absence of wetlands field indicators (Figure 5a). Two data stations within the review area contained all three wetland parameters, as shown in Table 2. Results of the three data stations are summarized in Table 2 and the data collected at each data station are included in Attachment C, on the ACOE's Wetland Determination Data Forms for the Arid West Region.

**Table 2. Data Station Point Summary**

| Data Station | Wetland Determination Field Indicators |              |           | Dominant Vegetation                 | Determination | Jurisdiction      |
|--------------|--|--------------|-----------|-------------------------------------|---------------|-------------------|
|              | Vegetation                             | Hydric Soils | Hydrology |                                     |               |                   |
| WDP-1        | ✓                                      | ✓            | ✓         | Coastal and Valley Freshwater Marsh | Wetland       | ACOE/ RWQCB/ CDFW |

Table 2. Data Station Point Summary

| Data Station | Wetland Determination Field Indicators |              |           | Dominant Vegetation                 | Determination | Jurisdiction      |
|--------------|--|--------------|-----------|-------------------------------------|---------------|-------------------|
|              | Vegetation                             | Hydric Soils | Hydrology |                                     |               |                   |
| WDP-2        | ✓                                      | ✓            | ✓         | Coastal and Valley Freshwater Marsh | Wetland       | ACOE/ RWQCB/ CDFW |
| WDP-3        | None                                   | None         | None      | Upland                              | Upland        | None              |

**Notes:** ACOE = U.S. Army Corps of Engineers; RWQCB = Regional Water Quality Control Board; CDFW = California Department of Fish and Wildlife.

Data station 1 is located within the OHWM and contained evidence of wetland hydrology including surface water present at 0.2 inches, hydrogen sulfide odor, and water table present at 8 inches depth. Hydrophytic vegetation was present and dominated by tall flatsedge (FACW), yellow nutsedge (*Cyperus esculentus*; FACW), and water speedwell (OBL). Soils data collected indicated that hydric soils (hydrogen sulfide odor) were present. Due to the presence of all three indicators, this data point is within a wetland under the jurisdiction of ACOE, RWQCB, and CDFW.

Data station 2 is located within the OHWM and contained evidence of wetland hydrology including surface water present at 0.2 inches, hydrogen sulfide odor, and water table present at 8 inches depth. Hydrophytic vegetation is present and dominated by black willow (FACW), yellow nutsedge (FACW), and water speedwell (OBL). Soils data collected indicated that hydric soils (hydrogen sulfide odor) were present. Due to the presence of all three indicators, this data point is within a wetland under the jurisdiction of ACOE, RWQCB, and CDFW.

Data station 3 is located outside of the OHWM along the upper banks of Tequesquite Creek. Due to the lack of hydrophytic vegetation, hydrology, and hydric soils, this data point is not within a wetland.

### 5.3 Jurisdictional Delineation Conclusion

Tequesquite Creek supports an OHWM and connects to the Santa Ana River, which ultimately drains to the Pacific Ocean; therefore, it meets the definition of waters of the United States under the jurisdiction of the ACOE and RWQCB. Tequesquite Creek supports wetland waters of the United States. The drainage feature also has a clear bed and bank; therefore, it is a streambed under the jurisdiction of CDFW.

The results of the jurisdictional delineation concluded there are approximately 0.14 acre of wetland waters and 0.05 acre of non-wetland waters of the United States under the jurisdiction of ACOE and the RWQCB, and a streambed under the jurisdiction of CDFW, totaling 0.66 acre. Table 3 and Table 4 summarize the total acreage of these features within the review area. The features are depicted on Figure 5a and 5b, Jurisdictional Waters.



**Table 3. Wetland and Non-Wetland Waters of the United States (ACOE/RWQCB) within the Review Area**

| Feature | Total Acres/Linear Feet | Cowardin Type | OHWM Indicators   | Dominant Vegetation                 | Latitude/Longitude     |
|---------|-------------------------|---------------|---|-------------------------------------|------------------------|
| NWW-1   | 0.14/504                | Riverine      | Defined bed and bank, surface water, change in vegetation | Stream Channel                      | 33.975826, -117.400693 |
| W-1     | 0.05/517                | Riverine      | Defined bed and bank, change in vegetation                | Coastal and Valley Freshwater Marsh | 33.975795, -117.400705 |

**Notes:** ACOE = U.S. Army Corps of Engineers; RWQCB = Regional Water Quality Control Board; OHWM = Original High Water Mark.

**Table 4. Jurisdictional Streambed (CDFW) within the Review Area**

| Feature   | Total (Acres) |
|-----------|---------------|
| Streambed | 0.66          |
| Total     | 0.66          |

**Notes:** CDFW = California Department of Fish and Wildlife.

## 6 Impacts

Maintenance activities would result in permanent impacts to vegetation with 0.14 acre of wetland waters of the United States and 0.05 acre of non-wetland waters of the United States, under the jurisdiction of the ACOE and RWQCB. The streambed also supports 0.66 acre of jurisdictional streambed subject to CDFW jurisdiction. The channel would remain earthen following maintenance activities; however, vegetation will be removed annually over a 10-year period and therefore impacts to habitat would be considered permanent.

The impacts to jurisdictional waters are summarized in Table 5 and Table 6, and depicted on Figures 6a and 6b, Impacts to Jurisdictional Waters.

**Table 5. Impacts to Wetland and Non-Wetland Waters of the United States (ACOE/RWQCB)**

| Feature | Permanent Impacts (Acres/Linear Feet) <sup>1</sup> | Temporary Impacts (Acres/Linear Feet) |
|---------|--|---------------------------------------|
| NWW-1   | 0.14/504   | 0.00/00                               |
| W-1     | 0.05/517   | 0.00/00                               |

**Notes:** ACOE = U.S. Army Corps of Engineers; RWQCB = Regional Water Quality Control Board.

<sup>1</sup> Impacts are permanent to vegetation only.

**Table 6. Impacts to Jurisdictional Streambed (CDFW)**

| Feature   | Permanent Impacts (Acres) <sup>1</sup> | Temporary Impacts (Acres) |
|-----------|--|---------------------------|
| Streambed | 0.66                                   | 0.00                      |

**Notes:** CDFW = California Department of Fish and Wildlife.

<sup>1</sup> Impacts are permanent to vegetation only.

## 7 Conclusion

Maintenance of the Tequesquite Creek Channel would result in permanent impacts to vegetation within approximately 0.66 acre of jurisdictional streambed (including 0.14 acre of wetland waters of the United States and 0.05 acre of non-wetland waters of the United States). Maintenance activities would improve the functions and values of the channel through improved hydraulic capacity, reduction of potential pollutants and removal of non-native vegetation.

Should you have any questions regarding this jurisdictional delineation, please do not hesitate to contact me at 951.300.2184 or at sriggs@dudek.com.

Sincerely,



Shelah Riggs  
Senior Regulatory Specialist

Attachments:   A: Figures  
                      B: Photo Documentation  
                      C: Wetland Determination Data Forms and Ordinary High Water Mark Forms

## 8 References

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# Attachment A

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Figures





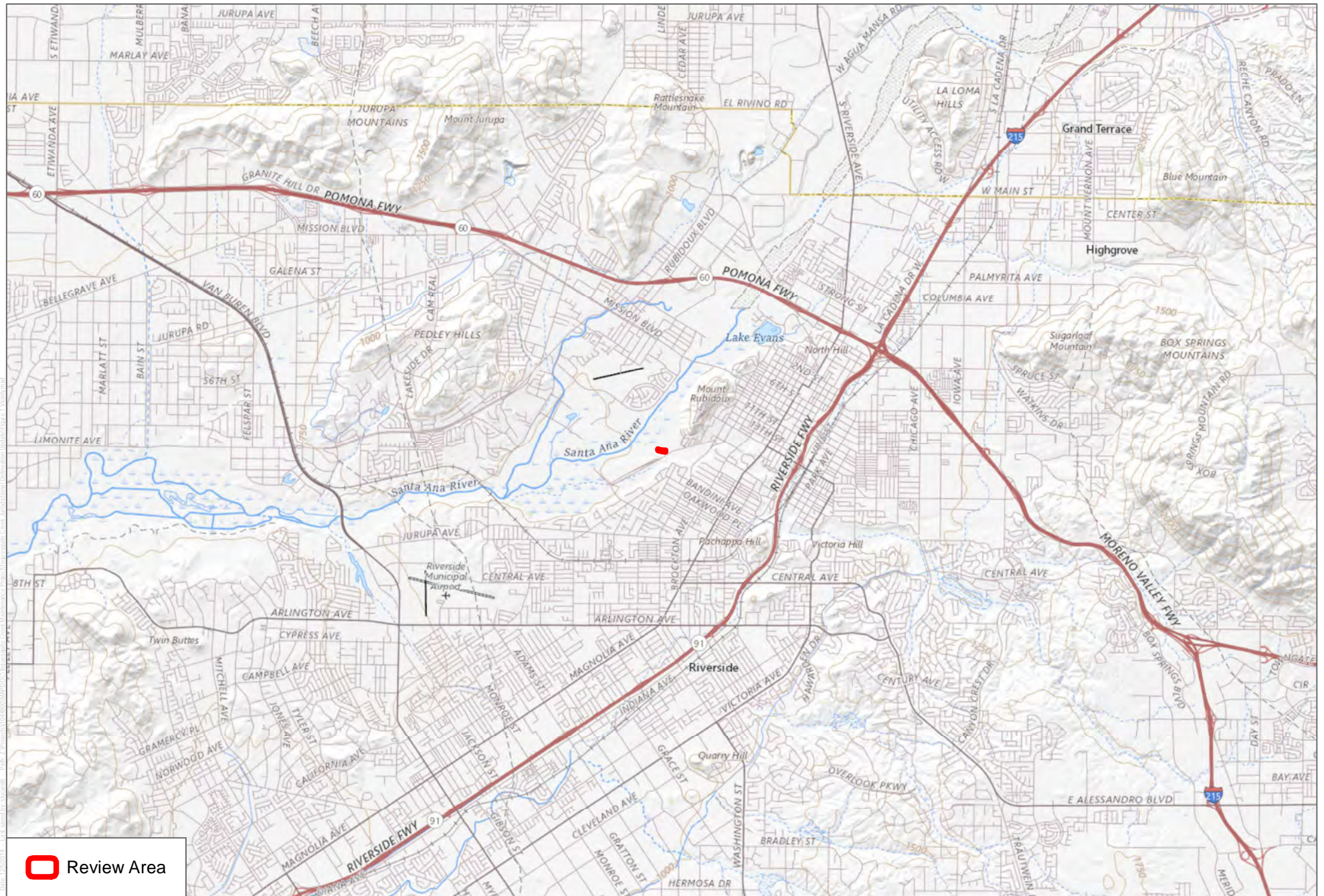
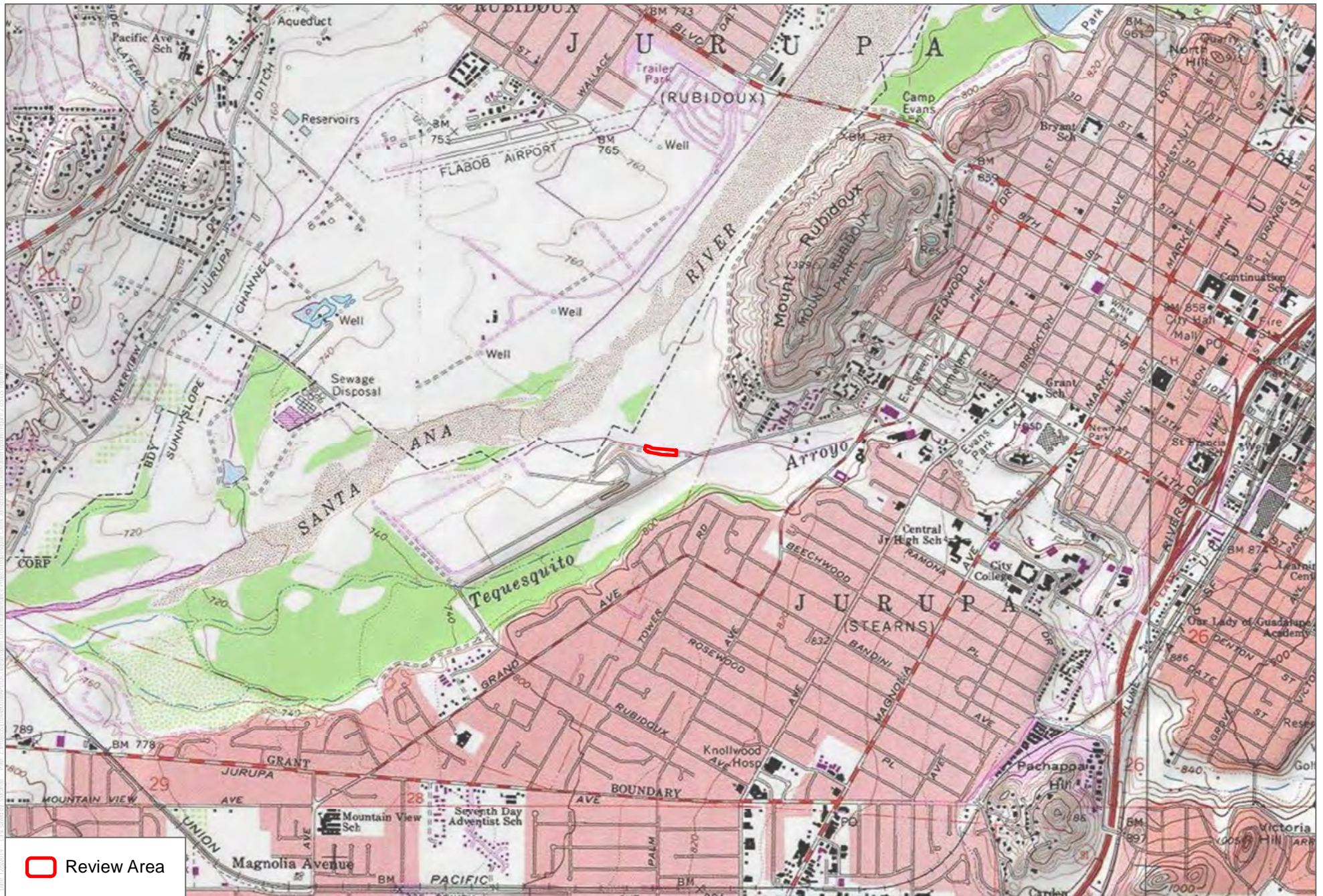


FIGURE 1

Vicinity Map





USGS 7.5-Minute Series Riverside West Quadrangle  
 Township 2S Range 5W Sections 21, 22  
 NAD83 California Zone VI US Foot

**DUDEK**



1 inch = 2,000 feet  
 0 1,000 2,000 Feet

FIGURE 2

USGS Topo Map

Tequesquite Creek Maintenance Project - Riverside, California - 12/5/2019





DigitalGlobe 2018  
USGS NRCS  
NAD83 California Zone VI US Foot

**DUDEK**



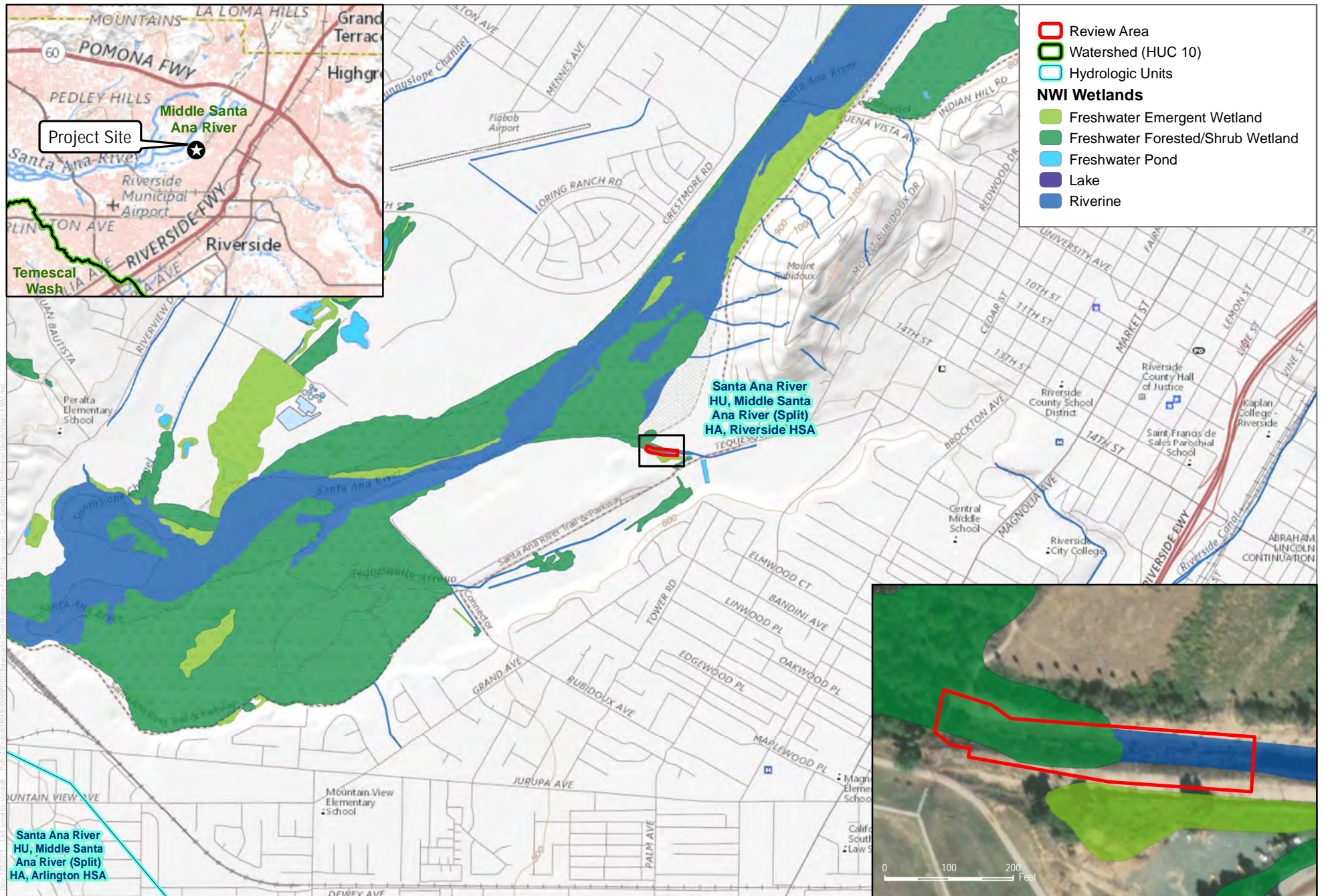
1 inch = 200 feet  
0 100 200 Feet

FIGURE 3

NRCS Soils Map

Tequesquite Creek Maintenance Project - Riverside, California - 12/5/2019





USGS National Map 2019; DigitalGlobe 2018; USFWS Nation Wetlands Inventory  
USGS National Hydrography Dataset; CA Dept of Water Resources  
NAD83 California Zone VI US Foot

**DUDEK**



1 inch = 0.38 miles  
0 0.225 0.45 Miles

FIGURE 4

National Wetlands Inventory and Hydrologic Unit Map

Tequesquite Creek Maintenance Project - Riverside, California - 12/5/2019



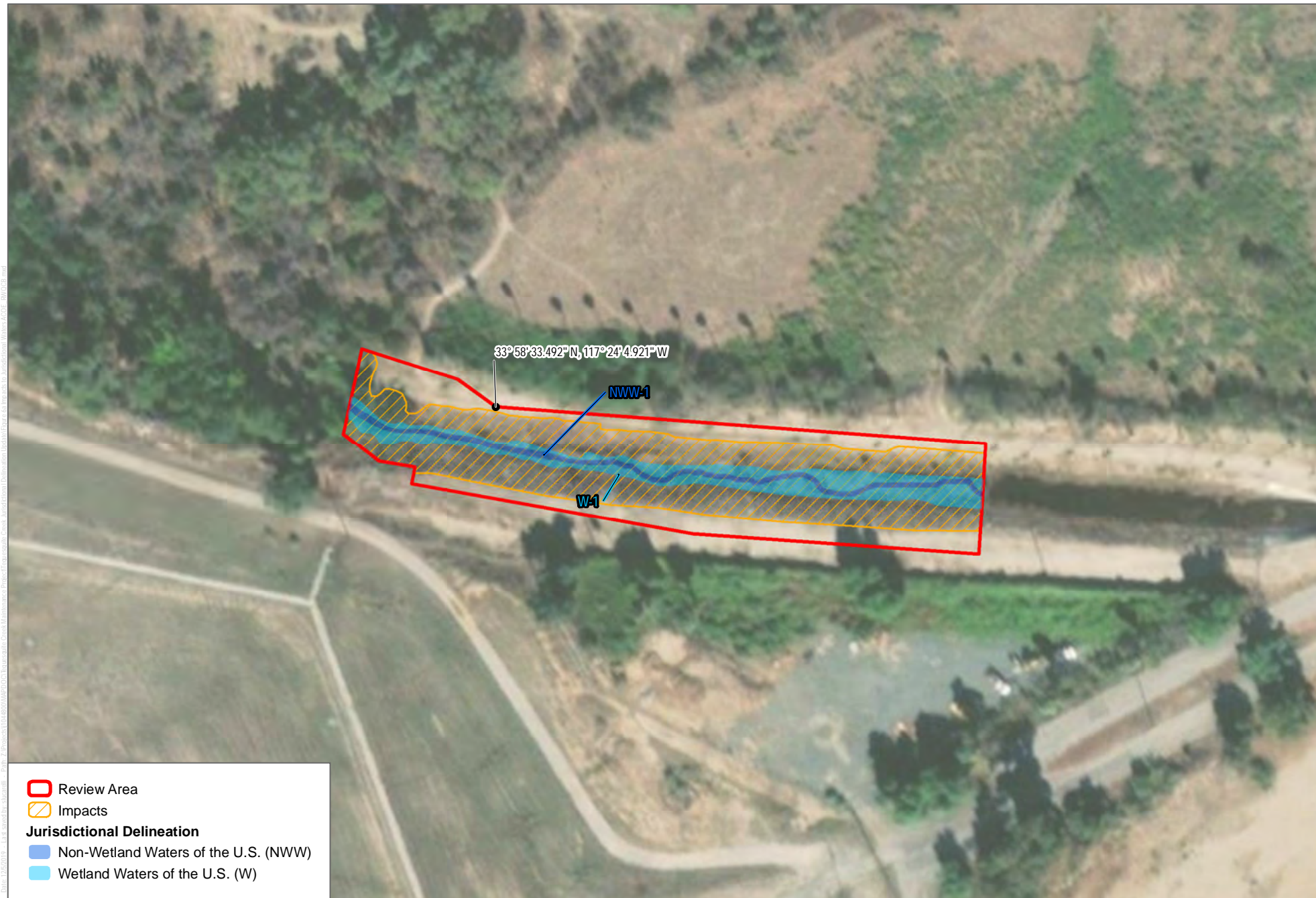


FIGURE 5a  
 Jurisdictional Waters Delineation Map (ACOE/RWQCB)  
 Tequesquite Creek Maintenance Project - Riverside, California - 12/5/2019









□ Review Area  
▨ Impacts  
**Jurisdictional Delineation**  
■ Non-Wetland Waters of the U.S. (NWW)  
■ Wetland Waters of the U.S. (W)

DigitalGlobe 2018  
 NAD83 California Zone VI US Foot

**DUDEK**



1 inch = 100 feet  
 0 50 100 Feet

FIGURE 6a  
 Impacts to Jurisdictional Waters (ACOE/RWQCB)  
 Tequesquite Creek Maintenance Project - Riverside, California - 12/5/2019





- Review Area
- Impacts
- Jurisdictional Delineation**
- ▨ Non-Riparian Streambed
- ▨ Riparian

DigitalGlobe 2018  
NAD83 California Zone VI US Foot

**DUDEK**



1 inch = 100 feet  
0 50 100 Feet

FIGURE 6b  
Impacts to Jurisdictional Waters (CDFW)  
Tequesquite Creek Maintenance Project - Riverside, California - 12/5/2019



# Attachment B

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Photo Documentation





## ATTACHMENT B

### Photo Documentation

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**Location 1:** View of low-flow channel towards upstream from the western edge of the project site.



**Location 2:** View of downstream streambed from the eastern side of the project site.



**Location 3:** View of upstream streambed from the western side of the project site.



**Location 4:** Pit for Data Station 1 taken within ordinary high water mark.



## ATTACHMENT B (Continued)



**Location 5:** Pit for Data Station 2 taken within ordinary high water mark.



**Location 6:** Downstream view of streambed from center portion of the project site.



**Location 7:** Pit from Data Station 3 taken outside of the ordinary high water mark.



**Location 8:** View of ruderal vegetation community composing the creek banks, facing northeast.



# Attachment C

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Wetland Determination Data Forms and Ordinary High  
Water Mark Forms



# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Tequesquite Creek City/County: Riverside/Riverside Sampling Date: 06/14/2017  
 Applicant/Owner: City of Riverside State: CA Sampling Point: DS 1  
 Investigator(s): Anna Cassady Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): Channel Bottom Local relief (concave, convex, none): Concave Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: Riverine

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☐ No ☐  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

|  |                                      |                          |  |   |
|--|--------------------------------------|--------------------------|--|---|
| Hydrophytic Vegetation Present?  | Yes <input checked="" type="radio"/> | No <input type="radio"/> | Is the Sampled Area<br>within a Wetland? | Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present?   | Yes <input checked="" type="radio"/> | No <input type="radio"/> |  |   |
| Wetland Hydrology Present?   | Yes <input checked="" type="radio"/> | No <input type="radio"/> |  |   |
| Remarks: This region previously had a wet winter following approximately 5 years of drought. |                                      |                          |  |   |

## VEGETATION

| Tree Stratum (Use scientific names.)  | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet:   |           |              |                |
|---|------------------|-------------------|------------------|---|-----------|--------------|----------------|
| 1. _____  | _____            | _____             | _____            | Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)   |           |              |                |
| 2. _____  | _____            | _____             | _____            | Total Number of Dominant Species Across All Strata: <u>3</u> (B)  |           |              |                |
| 3. _____  | _____            | _____             | _____            | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.7 %</u> (A/B)   |           |              |                |
| 4. _____  | _____            | _____             | _____            |   |           |              |                |
| Total Cover: _____ %  |                  |                   |                  |   |           |              |                |
| <u>Sapling/Shrub Stratum</u>  |                  |                   |                  | <b>Prevalence Index worksheet:</b>  |           |              |                |
| 1. <i>Ricinus communis</i>  | 10               | Yes               | FACU             | Total % Cover of:   |           | Multiply by: |                |
| 2. <i>Nicotiana glauca</i>  | 2                | No                | FAC              | OBL species   | <u>20</u> | x 1 =        | <u>20</u>      |
| 3. _____  | _____            | _____             | _____            | FACW species  | <u>40</u> | x 2 =        | <u>80</u>      |
| 4. _____  | _____            | _____             | _____            | FAC species   | <u>2</u>  | x 3 =        | <u>6</u>       |
| 5. _____  | _____            | _____             | _____            | FACU species  | <u>10</u> | x 4 =        | <u>40</u>      |
| Total Cover: <u>12 %</u>  |                  |                   |                  | UPL species   | _____     | x 5 =        | <u>0</u>       |
| <u>Herb Stratum</u>   |                  |                   |                  | Column Totals:  | <u>72</u> | (A)          | <u>146</u> (B) |
| 1. <i>Cyperus eragrostis</i>  | 20               | Yes               | FACW             | Prevalence Index = B/A = <u>2.03</u>  |           |              |                |
| 2. <i>Cyperus esculentus</i>  | 20               | Yes               | FACW             |   |           |              |                |
| 3. <i>Mimulus guttatus</i>  | 10               | No                | OBL              |   |           |              |                |
| 4. <i>Veronica anagallis-aquatica</i>   | 10               | No                | OBL              |   |           |              |                |
| 5. _____  | _____            | _____             | _____            |   |           |              |                |
| 6. _____  | _____            | _____             | _____            |   |           |              |                |
| 7. _____  | _____            | _____             | _____            |   |           |              |                |
| 8. _____  | _____            | _____             | _____            |   |           |              |                |
| Total Cover: <u>60 %</u>  |                  |                   |                  |   |           |              |                |
| <u>Woody Vine Stratum</u>   |                  |                   |                  | <b>Hydrophytic Vegetation Indicators:</b>   |           |              |                |
| 1. _____  | _____            | _____             | _____            | <input checked="" type="checkbox"/> Dominance Test is >50%  |           |              |                |
| 2. _____  | _____            | _____             | _____            | <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>   |           |              |                |
|   |                  |                   |                  | <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) |           |              |                |
|   |                  |                   |                  | <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  |           |              |                |
|   |                  |                   |                  | <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.   |           |              |                |
|   |                  |                   |                  | <b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="radio"/> No <input type="radio"/>                        |           |              |                |
| % Bare Ground in Herb Stratum <u>50 %</u> % Cover of Biotic Crust _____ %<br>Remarks: _____ |                  |                   |                  |   |           |              |                |

## SOIL

Sampling Point: DS 1**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth<br>(inches) | Matrix        |    | Redox Features  |    |                   | Loc <sup>2</sup> | Texture <sup>3</sup> | Remarks |
|-------------------|---------------|----|-----------------|----|-------------------|------------------|----------------------|---------|
|                   | Color (moist) | %  | Color (moist)   | %  | Type <sup>1</sup> |                  |                      |         |
| 12                | 2.5 Y 4/3     | 60 | Gley1 10Y 2.5/1 | 40 | D                 | M                | Sand                 |         |
|                   |               |    |                 |    |                   |                  |                      |         |
|                   |               |    |                 |    |                   |                  |                      |         |
|                   |               |    |                 |    |                   |                  |                      |         |
|                   |               |    |                 |    |                   |                  |                      |         |
|                   |               |    |                 |    |                   |                  |                      |         |
|                   |               |    |                 |    |                   |                  |                      |         |
|                   |               |    |                 |    |                   |                  |                      |         |
|                   |               |    |                 |    |                   |                  |                      |         |
|                   |               |    |                 |    |                   |                  |                      |         |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- |  |   |
|--|---|
| <input type="checkbox"/> Histosol (A1)                           | <input type="checkbox"/> Sandy Redox (S5)           |
| <input type="checkbox"/> Histic Epipedon (A2)                    | <input type="checkbox"/> Stripped Matrix (S6)       |
| <input type="checkbox"/> Black Histic (A3)                       | <input type="checkbox"/> Loamy Mucky Mineral (F1)   |
| <input checked="" type="checkbox"/> Hydrogen Sulfide (A4)        | <input type="checkbox"/> Loamy Gleyed Matrix (F2)   |
| <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) | <input type="checkbox"/> Depleted Matrix (F3)       |
| <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )         | <input type="checkbox"/> Redox Dark Surface (F6)    |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)       | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Thick Dark Surface (A12)                | <input type="checkbox"/> Redox Depressions (F8)     |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)                | <input type="checkbox"/> Vernal Pools (F9)          |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)                |   |

**Indicators for Problematic Hydric Soils:<sup>4</sup>**

- ☐ 1 cm Muck (A9) (**LRR C**)  
☐ 2 cm Muck (A10) (**LRR B**)  
☐ Reduced Vertic (F18)  
☐ Red Parent Material (TF2)  
☐ Other (Explain in Remarks)

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes ☒ No ☐

Remarks: \_\_\_\_\_

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Surface Water (A1)                 | <input type="checkbox"/> Salt Crust (B11)                              |
| <input checked="" type="checkbox"/> High Water Table (A2)              | <input type="checkbox"/> Biotic Crust (B12)                            |
| <input type="checkbox"/> Saturation (A3)                               | <input type="checkbox"/> Aquatic Invertebrates (B13)                   |
| <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )       | <input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1)         |
| <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )    | <input type="checkbox"/> Presence of Reduced Iron (C4)                 |
| <input type="checkbox"/> Surface Soil Cracks (B6)                      | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)    |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)     | <input type="checkbox"/> Other (Explain in Remarks)                    |
| <input type="checkbox"/> Water-Stained Leaves (B9)                     |  |

**Secondary Indicators (2 or more required)**

- ☐ Water Marks (B1) (**Riverine**)  
☐ Sediment Deposits (B2) (**Riverine**)  
☐ Drift Deposits (B3) (**Riverine**)  
☐ Drainage Patterns (B10)  
☐ Dry-Season Water Table (C2)  
☐ Thin Muck Surface (C7)  
☐ Crayfish Burrows (C8)  
☐ Saturation Visible on Aerial Imagery (C9)  
☐ Shallow Aquitard (D3)  
☐ FAC-Neutral Test (D5)

**Field Observations:**Surface Water Present? Yes ☒ No ☐

Depth (inches): 0.2

Water Table Present? Yes ☒ No ☐

Depth (inches): 8

Saturation Present? Yes ☐ No ☐  
(includes capillary fringe)

Depth (inches): \_\_\_\_\_

**Wetland Hydrology Present?** Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: \_\_\_\_\_



# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Tequesquite Creek City/County: Riverside/Riverside Sampling Date: 06/14/2017  
 Applicant/Owner: City of Riverside State: CA Sampling Point: DS 2  
 Investigator(s): Anna Cassady Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): Channel Bottom Local relief (concave, convex, none): Concave Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: Riverine

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☐ No ☐  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

|  |                                      |                          |  |   |
|--|--------------------------------------|--------------------------|--|---|
| Hydrophytic Vegetation Present?  | Yes <input checked="" type="radio"/> | No <input type="radio"/> | Is the Sampled Area<br>within a Wetland? | Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present?   | Yes <input checked="" type="radio"/> | No <input type="radio"/> |  |   |
| Wetland Hydrology Present?   | Yes <input checked="" type="radio"/> | No <input type="radio"/> |  |   |
| Remarks: This region previously had a wet winter following approximately 5 years of drought. |                                      |                          |  |   |

## VEGETATION

| Tree Stratum (Use scientific names.)      | Absolute % Cover | Dominant Species?                       | Indicator Status | Dominance Test worksheet:   |       |       |         |
|---|------------------|---|------------------|---|-------|-------|---------|
| 1. _____                                  | _____            | _____                                   | _____            | Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)   |       |       |         |
| 2. _____                                  | _____            | _____                                   | _____            | Total Number of Dominant Species Across All Strata: <u>4</u> (B)  |       |       |         |
| 3. _____                                  | _____            | _____                                   | _____            | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75.0 %</u> (A/B)   |       |       |         |
| 4. _____                                  | _____            | _____                                   | _____            | Total Cover: <u>      </u> %  |       |       |         |
| <u>Sapling/Shrub Stratum</u>              |                  |   |                  | Prevalence Index worksheet:   |       |       |         |
| 1. <i>Ricinus communis</i>                | 15               | Yes                                     | FACU             | Total % Cover of: _____ Multiply by: _____  |       |       |         |
| 2. <i>Salix gooddingii</i>                | 10               | Yes                                     | FACW             | OBL species   | 17    | x 1 = | 17      |
| 3. _____                                  | _____            | _____                                   | _____            | FACW species  | 25    | x 2 = | 50      |
| 4. _____                                  | _____            | _____                                   | _____            | FAC species   | _____ | x 3 = | 0       |
| 5. _____                                  | _____            | _____                                   | _____            | FACU species  | 15    | x 4 = | 60      |
| Total Cover: <u>25 %</u>                  |                  |   |                  | UPL species   | _____ | x 5 = | 0       |
| <u>Herb Stratum</u>                       |                  |   |                  | Column Totals:  | 57    | (A)   | 127 (B) |
| 1. <i>Typha latifolia</i>                 | 7                | Yes                                     | OBL              | Prevalence Index = B/A = <u>2.23</u>  |       |       |         |
| 2. <i>Cyperus esculentus</i>              | 10               | Yes                                     | FACW             | Hydrophytic Vegetation Indicators:  |       |       |         |
| 3. <i>Mimulus guttatus</i>                | 5                | No                                      | OBL              | <input checked="" type="checkbox"/> Dominance Test is >50%  |       |       |         |
| 4. <i>Veronica anagallis-aquatica</i>     | 5                | No                                      | OBL              | <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>   |       |       |         |
| 5. <i>Polypogon viridis</i>               | 5                | No                                      | FACW             | <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) |       |       |         |
| 6. _____                                  | _____            | _____                                   | _____            | <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  |       |       |         |
| 7. _____                                  | _____            | _____                                   | _____            | <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.   |       |       |         |
| 8. _____                                  | _____            | _____                                   | _____            | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/>                               |       |       |         |
| Total Cover: <u>32 %</u>                  |                  |   |                  |   |       |       |         |
| <u>Woody Vine Stratum</u>                 |                  |   |                  |   |       |       |         |
| 1. _____                                  | _____            | _____                                   | _____            |   |       |       |         |
| 2. _____                                  | _____            | _____                                   | _____            |   |       |       |         |
| Total Cover: <u>      </u> %              |                  |   |                  |   |       |       |         |
| % Bare Ground in Herb Stratum <u>60 %</u> |                  | % Cover of Biotic Crust <u>      </u> % |                  |   |       |       |         |

Remarks:

## SOIL

Sampling Point: DS 2**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth<br>(inches) | Matrix        |    | Redox Features  |    |                   | Loc <sup>2</sup> | Texture <sup>3</sup> | Remarks |
|-------------------|---------------|----|-----------------|----|-------------------|------------------|----------------------|---------|
|                   | Color (moist) | %  | Color (moist)   | %  | Type <sup>1</sup> |                  |                      |         |
| 12                | 2.5 Y 4/3     | 60 | Gley1 10Y 2.5/1 | 40 | D                 | M                | Sand                 |         |
|                   |               |    |                 |    |                   |                  |                      |         |
|                   |               |    |                 |    |                   |                  |                      |         |
|                   |               |    |                 |    |                   |                  |                      |         |
|                   |               |    |                 |    |                   |                  |                      |         |
|                   |               |    |                 |    |                   |                  |                      |         |
|                   |               |    |                 |    |                   |                  |                      |         |
|                   |               |    |                 |    |                   |                  |                      |         |
|                   |               |    |                 |    |                   |                  |                      |         |
|                   |               |    |                 |    |                   |                  |                      |         |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- |  |   |
|--|---|
| <input type="checkbox"/> Histosol (A1)                           | <input type="checkbox"/> Sandy Redox (S5)           |
| <input type="checkbox"/> Histic Epipedon (A2)                    | <input type="checkbox"/> Stripped Matrix (S6)       |
| <input type="checkbox"/> Black Histic (A3)                       | <input type="checkbox"/> Loamy Mucky Mineral (F1)   |
| <input checked="" type="checkbox"/> Hydrogen Sulfide (A4)        | <input type="checkbox"/> Loamy Gleyed Matrix (F2)   |
| <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) | <input type="checkbox"/> Depleted Matrix (F3)       |
| <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )         | <input type="checkbox"/> Redox Dark Surface (F6)    |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)       | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Thick Dark Surface (A12)                | <input type="checkbox"/> Redox Depressions (F8)     |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)                | <input type="checkbox"/> Vernal Pools (F9)          |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)                |   |

**Indicators for Problematic Hydric Soils:<sup>4</sup>**

- ☐ 1 cm Muck (A9) (**LRR C**)  
☐ 2 cm Muck (A10) (**LRR B**)  
☐ Reduced Vertic (F18)  
☐ Red Parent Material (TF2)  
☐ Other (Explain in Remarks)

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes ☒ No ☐

Remarks: \_\_\_\_\_

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Surface Water (A1)                 | <input type="checkbox"/> Salt Crust (B11)                              |
| <input checked="" type="checkbox"/> High Water Table (A2)              | <input type="checkbox"/> Biotic Crust (B12)                            |
| <input type="checkbox"/> Saturation (A3)                               | <input type="checkbox"/> Aquatic Invertebrates (B13)                   |
| <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )       | <input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1)         |
| <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )    | <input type="checkbox"/> Presence of Reduced Iron (C4)                 |
| <input type="checkbox"/> Surface Soil Cracks (B6)                      | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)    |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)     | <input type="checkbox"/> Other (Explain in Remarks)                    |
| <input type="checkbox"/> Water-Stained Leaves (B9)                     |  |

**Secondary Indicators (2 or more required)**

- ☐ Water Marks (B1) (**Riverine**)  
☐ Sediment Deposits (B2) (**Riverine**)  
☐ Drift Deposits (B3) (**Riverine**)  
☐ Drainage Patterns (B10)  
☐ Dry-Season Water Table (C2)  
☐ Thin Muck Surface (C7)  
☐ Crayfish Burrows (C8)  
☐ Saturation Visible on Aerial Imagery (C9)  
☐ Shallow Aquitard (D3)  
☐ FAC-Neutral Test (D5)

**Field Observations:**Surface Water Present? Yes ☒ No ☐

Depth (inches): 0.2

Water Table Present? Yes ☒ No ☐

Depth (inches): 8

Saturation Present? Yes ☐ No ☐  
(includes capillary fringe)

Depth (inches): \_\_\_\_\_

**Wetland Hydrology Present?** Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: \_\_\_\_\_



# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Tequesquite Creek City/County: Riverside/Riverside Sampling Date: 06/14/2017  
 Applicant/Owner: City of Riverside State: CA Sampling Point: DS 3  
 Investigator(s): Anna Cassady Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): None Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☐ No ☐  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

|  |                           |                                     |  |                           |                                     |
|--|---------------------------|-------------------------------------|--|---------------------------|-------------------------------------|
| Hydrophytic Vegetation Present?  | Yes <input type="radio"/> | No <input checked="" type="radio"/> | Is the Sampled Area<br>within a Wetland? | Yes <input type="radio"/> | No <input checked="" type="radio"/> |
| Hydric Soil Present?   | Yes <input type="radio"/> | No <input checked="" type="radio"/> |  |                           |                                     |
| Wetland Hydrology Present?   | Yes <input type="radio"/> | No <input checked="" type="radio"/> |  |                           |                                     |
| Remarks: This region previously had a wet winter following approximately 5 years of drought. |                           |                                     |  |                           |                                     |

## VEGETATION

| Tree Stratum (Use scientific names.)      | Absolute % Cover | Dominant Species?                       | Indicator Status  | Dominance Test worksheet:   |  |  |  |
|---|------------------|---|-------------------|---|--|--|--|
| 1. _____                                  |                  |   |                   | Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)   |  |  |  |
| 2. _____                                  |                  |   |                   | Total Number of Dominant Species Across All Strata: <u>4</u> (B)  |  |  |  |
| 3. _____                                  |                  |   |                   | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0 %</u> (A/B)   |  |  |  |
| 4. _____                                  |                  |   |                   |   |  |  |  |
| Total Cover: <u>      </u> %              |                  |   |                   |   |  |  |  |
| <u>Sapling/Shrub Stratum</u>              |                  |   |                   | <b>Prevalence Index worksheet:</b>  |  |  |  |
| 1. <i>Ricinus communis</i>                | <u>5</u>         | <u>Yes</u>                              | <u>FACU</u>       | Total % Cover of: _____ Multiply by: _____  |  |  |  |
| 2. <i>Nicotiana glauca</i>                | <u>2</u>         | <u>Yes</u>                              | <u>FAC</u>        | OBL species <u>      </u> x 1 = <u>0</u>  |  |  |  |
| 3. _____                                  |                  |   |                   | FACW species <u>      </u> x 2 = <u>0</u>   |  |  |  |
| 4. _____                                  |                  |   |                   | FAC species <u>12</u> x 3 = <u>36</u>   |  |  |  |
| 5. _____                                  |                  |   |                   | FACU species <u>5</u> x 4 = <u>20</u>   |  |  |  |
| Total Cover: <u>7</u> %                   |                  |   |                   | UPL species <u>7</u> x 5 = <u>35</u>  |  |  |  |
|   |                  |   |                   | Column Totals: <u>24</u> (A) <u>91</u> (B)  |  |  |  |
|   |                  |   |                   | Prevalence Index = B/A = <u>3.79</u>  |  |  |  |
| <u>Herb Stratum</u>                       |                  |   |                   | <b>Hydrophytic Vegetation Indicators:</b>   |  |  |  |
| 1. <i>Brassica nigra</i>                  | <u>7</u>         | <u>Yes</u>                              | <u>Not Listed</u> | <input checked="" type="checkbox"/> Dominance Test is >50%  |  |  |  |
| 2. <i>Urtica dioica</i>                   | <u>10</u>        | <u>Yes</u>                              | <u>FAC</u>        | <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>   |  |  |  |
| 3. _____                                  |                  |   |                   | <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) |  |  |  |
| 4. _____                                  |                  |   |                   | <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  |  |  |  |
| 5. _____                                  |                  |   |                   |   |  |  |  |
| 6. _____                                  |                  |   |                   |   |  |  |  |
| 7. _____                                  |                  |   |                   |   |  |  |  |
| 8. _____                                  |                  |   |                   |   |  |  |  |
| Total Cover: <u>17</u> %                  |                  |   |                   |   |  |  |  |
| <u>Woody Vine Stratum</u>                 |                  |   |                   | <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.   |  |  |  |
| 1. _____                                  |                  |   |                   | <b>Hydrophytic Vegetation Present?</b>  |  |  |  |
| 2. _____                                  |                  |   |                   | Yes <input type="radio"/> No <input checked="" type="radio"/>   |  |  |  |
| Total Cover: <u>      </u> %              |                  |   |                   |   |  |  |  |
| % Bare Ground in Herb Stratum <u>85 %</u> |                  | % Cover of Biotic Crust <u>      </u> % |                   |   |  |  |  |

Remarks:

## SOIL

Sampling Point: DS 3**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth<br>(inches) | Matrix        |     | Redox Features |   |                   | Loc <sup>2</sup> | Texture <sup>3</sup> | Remarks |
|-------------------|---------------|-----|----------------|---|-------------------|------------------|----------------------|---------|
|                   | Color (moist) | %   | Color (moist)  | % | Type <sup>1</sup> |                  |                      |         |
| 10                | 10 YR 3/2     | 100 |                |   |                   |                  | Sand                 |         |
|                   |               |     |                |   |                   |                  |                      |         |
|                   |               |     |                |   |                   |                  |                      |         |
|                   |               |     |                |   |                   |                  |                      |         |
|                   |               |     |                |   |                   |                  |                      |         |
|                   |               |     |                |   |                   |                  |                      |         |
|                   |               |     |                |   |                   |                  |                      |         |
|                   |               |     |                |   |                   |                  |                      |         |
|                   |               |     |                |   |                   |                  |                      |         |
|                   |               |     |                |   |                   |                  |                      |         |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☒ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5) (**LRR C**)  
☐ 1 cm Muck (A9) (**LRR D**)  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Sandy Mucky Mineral (S1)  
☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Loamy Mucky Mineral (F1)  
☐ Loamy Gleyed Matrix (F2)  
☐ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ Vernal Pools (F9)

**Indicators for Problematic Hydric Soils:<sup>4</sup>**

- ☐ 1 cm Muck (A9) (**LRR C**)  
☐ 2 cm Muck (A10) (**LRR B**)  
☐ Reduced Vertic (F18)  
☐ Red Parent Material (TF2)  
☐ Other (Explain in Remarks)

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes ☐ No ☒

Remarks: \_\_\_\_\_

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ☒ Surface Water (A1)  
☒ High Water Table (A2)  
☐ Saturation (A3)  
☐ Water Marks (B1) (**Nonriverine**)  
☐ Sediment Deposits (B2) (**Nonriverine**)  
☐ Drift Deposits (B3) (**Nonriverine**)  
☐ Surface Soil Cracks (B6)  
☐ Inundation Visible on Aerial Imagery (B7)  
☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)  
☐ Biotic Crust (B12)  
☐ Aquatic Invertebrates (B13)  
☒ Hydrogen Sulfide Odor (C1)  
☐ Oxidized Rhizospheres along Living Roots (C3)  
☐ Presence of Reduced Iron (C4)  
☐ Recent Iron Reduction in Plowed Soils (C6)  
☐ Other (Explain in Remarks)

**Secondary Indicators (2 or more required)**

- ☐ Water Marks (B1) (**Riverine**)  
☐ Sediment Deposits (B2) (**Riverine**)  
☐ Drift Deposits (B3) (**Riverine**)  
☐ Drainage Patterns (B10)  
☐ Dry-Season Water Table (C2)  
☐ Thin Muck Surface (C7)  
☐ Crayfish Burrows (C8)  
☐ Saturation Visible on Aerial Imagery (C9)  
☐ Shallow Aquitard (D3)  
☐ FAC-Neutral Test (D5)

**Field Observations:**Surface Water Present? Yes ☒ No ☐

Depth (inches): 0.2

Water Table Present? Yes ☒ No ☐

Depth (inches): 8

Saturation Present? Yes ☐ No ☐  
(includes capillary fringe)

Depth (inches): \_\_\_\_\_

**Wetland Hydrology Present?** Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: \_\_\_\_\_

Remarks: \_\_\_\_\_

## APPENDIX D

### *Determination of Biologically Equivalent or Superior Preservation*



# **MSHCP Determination of Biologically Equivalent or Superior Preservation**

**Public Works Department Tequesquite Creek Maintenance Project**  
*City of Riverside, Western Riverside County, California*

## **FINAL REPORT**



### ***Prepared for:***

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### ***Prepared by:***

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**June 2019**

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## INTRODUCTION

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### BACKGROUND AND PURPOSE

This document presents the results of a Determination of Biologically Equivalent or Superior Preservation (DBESP) analysis conducted by Cadre Environmental for the City of Riverside Public Works Department Annual Tequesquite Creek Maintenance Project “Study Area” as required under Section 6.1.2, *Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools*, of the Western Riverside County Multiple Species Habitat Conservation Plan “MSHCP” (MSHCP 2004).

### DEFINITION OF THE STUDY AREA

The 0.93-acre Study Area (portion of APN 187-090-001) is located within and adjacent to a channelized reach of Tequesquite Creek which drains into the Santa Ana River. Specifically, the Study Area is located downstream of Ryan Bonamimio Park within the United States Geological Survey (USGS) West Riverside Quadrangle, T2S, R5W, Sec 28, in the City of Riverside, Western Riverside County, California as illustrated in Figure 1, *Regional Location Map*, and Figure 2, *MSHCP Relationship Map*.

The majority of the Study Area is characterized as a channelized/earthen bottom reach of Tequesquite Creek including flanking slopes and access/maintenance roads with elevations ranging from 760 feet above mean sea level (AMSL) and 750 feet AMSL. The Study Area is primarily characterized as ruderal/disturbed, disturbed willow scrub, coastal and valley freshwater marsh and streambed channel (Tequesquite Creek) vegetation communities.

### RELATIONSHIP TO THE MSHCP

The Study Area is located within the Western Riverside County MSHCP Cities of Riverside/Norco Area Plan (SU1-Santa Ana River South), partially within Criteria Area 443, outside of a linkage area as illustrated in Figure 2, *MSHCP Relationship Map*. Specifically, a total of 0.63-acre of the Study Area is located within Criteria Area 443. Although a HANS and JPR will only be required for the 0.63-acre portion of the Study Area located within the Criteria Area, the following DBESP document addresses impacts to all Section 6.1.2 resources present onsite.

The Study Area is located immediately east of Public/Quasi-Public (PQP) Conserved Lands owned and managed by the Riverside-Corona Resource Conservation District (RCRCD) (RCA GIS Data Downloads 2018).

The MSHCP has determined that all of the sensitive species potentially occurring onsite have been adequately covered (MSHCP Table 2-2 Species Considered for Conservation Under the MSHCP Since 1999, 2004). However, additional surveys may be required for narrow endemic plants, criteria area species, and specific wildlife species if suitable habitat is documented onsite and/or if the property is located within a predetermined “Survey Area” (MSHCP 2004).



The Study Area occurs partially within a predetermined Survey Area for three (3) MSHCP Narrow Endemic Plant Species: San Diego ambrosia (*Ambrosia pumila*), Brand's phacelia (*Phacelia stellaris*), and San Miquel savory (*Satureja chandleri*). These sensitive plant species are not expected to occur onsite due to the extensive disturbed nature of the vegetation communities, disturbed soils and historic maintenance activities conduction within this man-made reach of Tequesquite Creek. No additional surveys are required (Cadre Environmental 2018).

The Study Area does not occur within a predetermined Survey Area for MSHCP criteria area species (RCA GIS Data Downloads 2018). No additional surveys are required.

The Study Area does not occur within a predetermined Survey Area for amphibian or mammal species (RCA GIS Data Downloads 2018). No additional surveys are required.

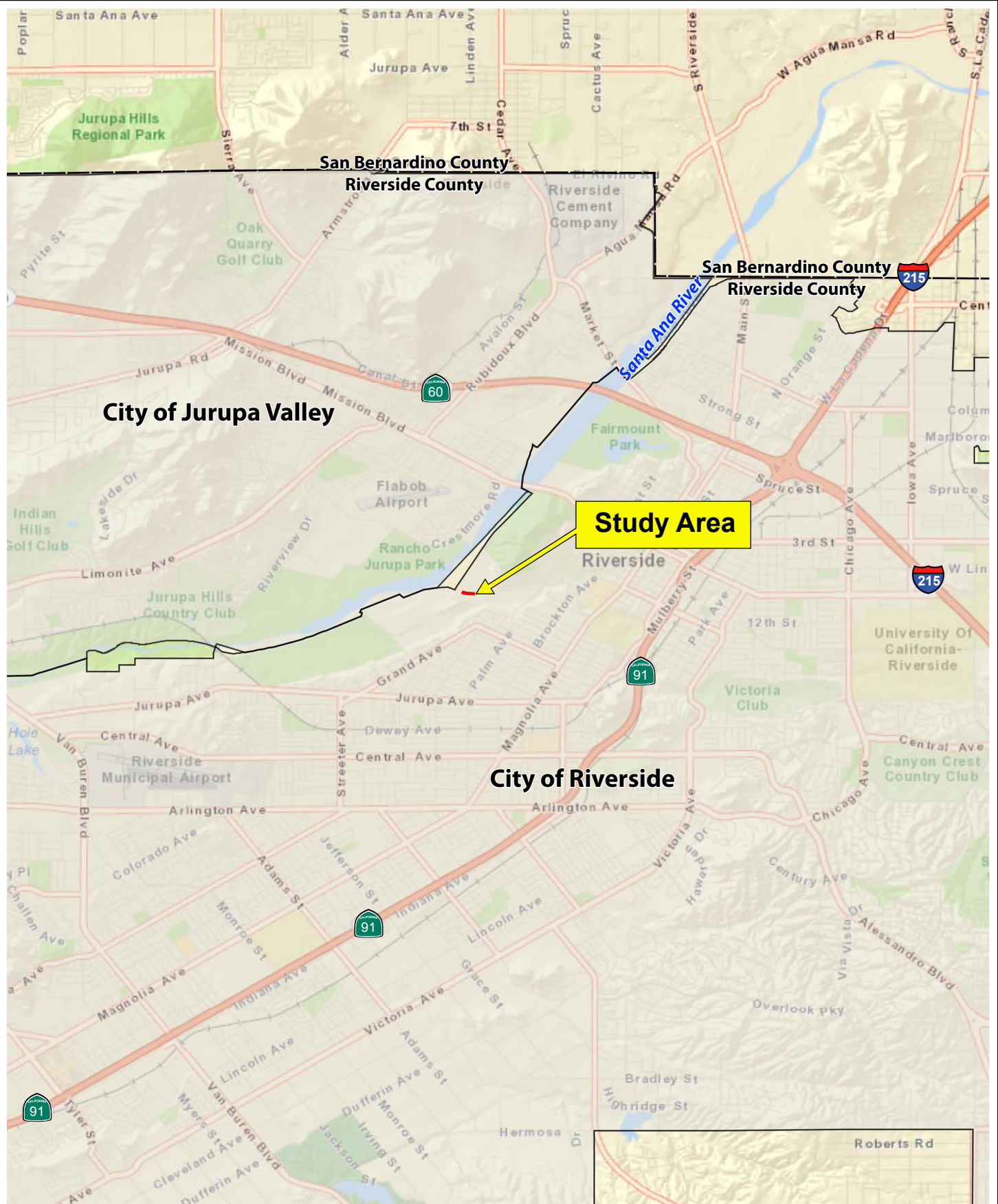
The Study Area occurs partially within a predetermined Survey Area for the burrowing owl (*Athene cunicularia*). No suitable burrows were documented within or immediately adjacent to the Study Area during the habitat assessment (Cadre Environmental 2018). In the event conditions change, at a minimum a 30-day MSHCP preconstruction survey will be required immediately prior to the initiation of annual maintenance activities to ensure protection for this species and compliance with the conservation goals as outlined in the MSHCP.

## **SURVEY HISTORY**

Table 1, *Survey History*, presents a summary of the surveys conducted within the Study Area by Cadre Environmental in 2018. Weather conditions were clear with temperature ranging from 58°F to 68°F, and winds 0-2 mph.

**Table 1. Survey History**

| <b>Survey Date</b>         | <b>Survey Type</b>   | <b>Conducted By</b> |
|----------------------------|--|---------------------|
| March 6 <sup>th</sup> 2018 | General MSHCP Habitat Assessment,<br>Preliminary Investigation of Jurisdictional<br>Waters of the U.S./State and MSHCP<br>Riparian, Riverine, Vernal Pool<br>Resources | Cadre Environmental |



Partially within APN 187-090-001

**Figure 1** Regional Location Map  
 DBESP - Tequesquite Creek Maintenance Project  
 City of Riverside, California







**Figure 2** MSHCP Relationship Map  
DBESP - Tequesquite Creek Maintenance Project  
City of Riverside, California



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## PROJECT DESCRIPTION

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### PROPOSED PROJECT

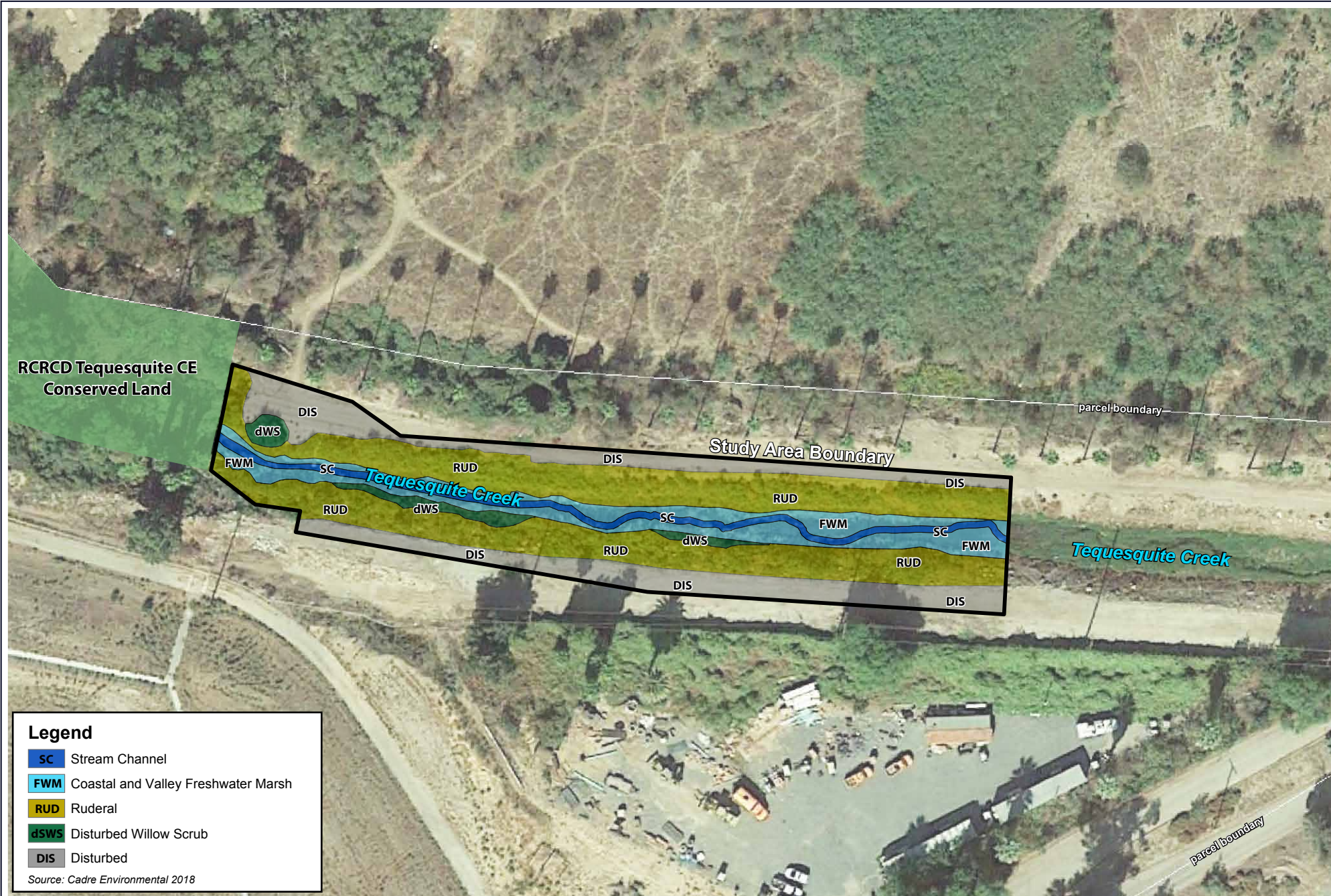
The proposed City of Riverside Public Works Department Annual Tequesquite Creek Maintenance project includes the removal of native and non-native vegetation, reduction of potential pollutants for purposes of improving hydraulic capacity and contributing to an overall improvement in the functions and values of the channel. The man-made channel including the adjacent banks primarily possess ruderal and coastal and valley freshwater marsh vegetation, as shown in Figure 3, *Biological Resources Map*. All annual maintenance and temporary project related staging will occur within the 0.93-acre Study Area. Specifically, annual maintenance will occur within the 0.66-acre active channel/adjacent slopes and staging will occur within the adjacent disturbed habitats (access roads).

Those areas designated as California Department of Fish and Wildlife (CDFW) regulated resources are also classified as Western Riverside County MSHCP Section 6.1.2 riparian/riverine resources. Specifically, a total of 0.66-acre of MSHCP riparian/riverine resources will be directly impacted as a result of project implementation. All permanent impacts totaling 0.66-acre of MSHCP riparian/riverine resources will be mitigated by:

- 1) Purchasing 1.32 acres of credits within a resource agency approved mitigation bank or payment to an in-lieu fee program, or
- 2) Recordation of a Conservation Easement (CE) over Assessor's Parcel Number (APN) 187-080-009. The CE would be recorded in favor of a CDFW due diligence-approved entity, or.
- 3) Recordation of a CE over APN 187-080-010. The CE would be recorded in favor of a CDFW due diligence-approved entity.

Implementation of one of the three mitigation options outlined above to offset permanent impacts to 0.66-acre of MSHCP Section 6.1.2 riparian/riverine resources (0.46-acre of ruderal, 0.17-acre coastal and valley freshwater marsh/stream channel and 0.03-acre of disturbed willow scrub) would meet the criteria of a biologically equivalent or superior alternative. Tequesquite Creek is currently discharging untreated water and garbage to the Santa Ana River floodprone area.

Due to the uncertainty in the DBESP mitigation strategy, a final proposed mitigation approach will be submitted to the RCA and Wildlife Agencies in writing for review, comment, and approval at least two (2) weeks prior to scheduled initiation of work activities. Initial annual maintenance activities will not be initiated until the RCA and Wildlife Agencies has approved the final mitigation strategy.



Partially within APN 187-090-001

**Figure 3 Biological Resources Map**  
**DBESP - Tequesquite Creek Maintenance Project**  
 City of Riverside, California

## ALTERNATIVES

As described above, a total of 0.66-acre of vegetation mapped as MSHCP riparian/riverine resources will be directly impacted as a result of the annual maintenance project.

No alternatives are proposed.

## DESCRIPTION OF AVAILABLE BIOLOGICAL INFORMATION

Cadre Environmental biologist assessed the Study Area in March 2018 to determine onsite conditions. The following is a summary of the current biological conditions within the Study Area.

## SOILS

The Soil Survey of Western Riverside Area has the following soils mapped within the boundary of the property:

- **Du – Domino silt loam**
- Gob – Grangeville loamy fine sand, drained, 0 to 5 percent slopes
- TvC – Tujunga loamy sand, channeled, 0 to 8 percent slopes
- 

Domino soil types (Bold) are classified as sensitive substrates considered important for the conservation of certain plant species and vernal pool resources in the region (MSHCP 2004). The soils documented onsite are characterized as well drained (drainage class).

## PLANT COMMUNITIES

The following section provides general vegetation descriptions for habitat types documented within the Study Area. Representative distribution and photographs of these habitat types are illustrated in Figure 3, *Biological Resources Map* and Figures 4 to 5, *Current Study Area Photographs*.

The majority of the Study Area is characterized as a channelized/earthen bottom reach of Tequesquite Creek including flanking slopes and access/maintenance roads with elevations ranging from 760 feet above mean sea level (AMSL) and 750 feet AMSL. The Study Area is primarily characterized as ruderal/disturbed, disturbed willow scrub, coastal and valley freshwater marsh and streambed channel (Tequesquite Creek) vegetation communities.





PHOTOGRAPH 1 - Westward view of Tequesquite Creek from the eastern Study Area boundary.



PHOTOGRAPH 2 - Westward view of Study Area from the north central region. The Study Area is bordered by disturbed dirt access roads and the within channel banks are dominated by ruderal/non-native vegetation.



PHOTOGRAPH 3 - Eastward view of Tequesquite Creek from the western Study Area boundary.



PHOTOGRAPH 4 - Westward view of upper reach of Study Area - A small patch of disturbed willow scrub occurs along the north-facing bank.



### **Ruderal:**

A total of 0.46-acre of ruderal (**RUD**) non-native vegetation was documented within the Study Area.

Ruderal is not recognized as a native plant community by Holland (1986). Nonetheless, it is a distinct vegetation association in Southern California. Ruderal habitat consists of predominately non-native plant species where native habitat recovery is improbable. This habitat varies in the composition of non-native species. Commonly, ruderal habitat is documented to contain such forbs as black mustard (*Brassica nigra*), star thistle (*Centaurea melitensis*), filaree (*Erodium cicutarium*) and sweet-fennel (*Foeniculum vulgare*).

The banks of the channel and areas surrounding the channel contains ruderal habitat. Dominant species present include castorbean, black mustard, prickly Russian thistle (*Salsola tragus*), orchard nettle (*Urtica urens*), and bull thistle (*Cirsium vulgare*).

### **Disturbed (Access Roads):**

Tequesquite Creek is flanked by a total of 0.27-acre of disturbed (**DIS**) unvegetated dirt access roads.

### **Coastal and Valley Freshwater Marsh:**

A total of 0.12-acre of coastal and valley freshwater marsh (**FWM**) vegetation was documented within the Study Area.

Coastal and valley freshwater marsh is a wetland habitat composed of areas with slow-moving streams and prolonged saturation. This vegetation community is typically dominated by bulrush (*Scirpus* sp.) and cattail (*Typha* sp.) plants.

This vegetation makes up the streambed of Tequesquite Creek that runs through the Study Area. The bed of the channel has a meandering stream and vegetation dominated by tall flatsedge (*Cyperus eragrostis*), broadleaf cattail (*Typha latifolia*), water speedwell (*Veronica anagallis-aquatica*), and clustered dock (*Rumex conglomeratus*).

### **Stream Channel:**

A total of 0.05-acre of unvegetated stream channel (**SC**) was documented within the Study Area.

Stream channel refers to ephemeral and intermittent stream channels that are barren or sparsely vegetated, and thus do not fit into other wetland habitat categories. Tequesquite Creek is an earthen channel that runs through the Study Area. The bed of the channel is largely vegetated, but a low-flow channel meanders through the center of the streambed that is completely unvegetated and had water present at the time of the survey.

### Disturbed Willow Scrub:

A total of 0.03-acre of disturbed willow scrub (**dWS**) vegetation was documented within the Study Area.

Disturbed willow scrub is composed of areas consisting of remnant patches of willows, mulefat, and a few other native species, with most of the area containing either urban development or mechanical disturbance that has led to a significant alteration to hydrology.

There is one area on site that is mapped as disturbed willow scrub. A swath of vegetation on the southern side of the channel contains this vegetation community (Figure 3). Dominant species within this community included Goodding's willow (*Salix gooddingii*), tree tobacco (*Nicotiana glauca*), castor bean (*Ricinus communis*), Washington fan palm (*Washingtonia robusta*), and tree of heaven (*Ailanthus altissima*).

### RIPARIAN/RIVERINE VERNAL POOL RESOURCES

No vernal pool resources were documented within or adjacent to the Study Area.

The active channel (coastal and valley freshwater marsh/Tequesquite Creek) and adjacent slopes (ruderal and disturbed willow scrub) are subject to the jurisdiction of the CDFW. Those areas designated as CDFW regulated resources are also classified as Western Riverside County MSHCP Section 6.1.2 riparian/ riverine resources. A total of 0.66-acre of MSHCP Section 6.1.2 riparian/riverine resources would be permanently impacted (annual maintenance), as shown in Figure 6, *MSHCP Riparian & Riverine Resources Impact Map*, and presented in Table 2, *MSHCP Riverine & Riparian Impacts*.

**Table 2, MSHCP Riverine & Riparian Impacts**

| <b>Vegetation Communities</b>       | <b>Study Area (ac)</b> | <b>MSHCP Riparian/Riverine Permanent Impacts within Criteria Area 443 (ac)</b> | <b>Total MSHCP Riparian/Riverine Permanent Impacts (ac)</b> |
|-------------------------------------|------------------------|--|---|
| Ruderal                             | 0.46                   | 0.30   | 0.46  |
| Disturbed                           | 0.27                   | 0.00   | 0.00  |
| Coastal and Valley Freshwater Marsh | 0.12                   | 0.11   | 0.12  |
| Stream Channel                      | 0.05                   | 0.03   | 0.05  |
| Disturbed Willow Scrub              | 0.03                   | 0.01   | 0.03  |
| <b>TOTAL</b>                        | <b>0.93</b>            | <b>0.45</b>  | <b>0.66</b>   |

\*Cadre Environmental 2018.

## **LOCATION OF THE STUDY AREA WITHIN MSHCP CRITERIA CELLS**

The Study Area is located within the Western Riverside County Multiple Species Habitat Conservation Plan Cities of Riverside/Norco Area Plan (SU1-Santa Ana River South), partially within Criteria Area 443, outside of a linkage area. Therefore, a Habitat Evaluation and Acquisition Negotiation Strategy (HANS) and Joint Project Review (JPR) may be required.

As stated in the MSHCP:

*“Conservation within this Cell will contribute to assembly of Existing Core A. Conservation within this Cell will focus on Riversidean alluvial fan sage scrub, riparian scrub, woodland and forest habitat along the Santa Ana River. Areas conserved within this Cell will be connected to existing conserved wetland habitat along the Santa Ana River in Cell #534 to the southwest. Conservation within this Cell will be approximately 5% of the Cell focusing in the western portion of the Cell.”*

A total of 0.63-acre of the Study Area is located within Criteria Area 443. Although a HANS and JPR will only be required for the 0.63-acre portion of the Study Area located within the Criteria Area, the following DBESP addresses impacts to all Section 6.1.2 resources present onsite.

## **LOCATION OF THE STUDY AREA WITHIN MSHCP CORES AND LINKAGES**

The Study Area is located immediately east of Public/Quasi-Public (PQP) Conserved Lands (Riverside-Corona Resource Conservation District, CE), as shown in Figure 2, *MSHCP Relationship Map*. The guidelines pertaining to the Urban/Wildlands Interface guidelines presented in Section 6.1.4 of the MSHCP are intended to address indirect effects associated with locating commercial, mixed uses and residential developments in proximity to a MSHCP Conservation Area. The City of Riverside Public Works Department Annual Tequesquite Creek Maintenance Project is an annual action and would not conflict with Urban/Wildlands Interface guidelines. The annual proposed maintenance activities would improve the functions and values of the channel through improved hydraulic capacity, reduction of potential pollutants, and removal of non-native vegetation. Compliance with all the following MSHCP Urban/Wildlands Interface guidelines will ensure that the proposed project will not result in indirect impacts to Riverside-Corona Resource Conservation District conservation area or resources within the Santa Ana River floodprone area.

### **Drainage**

Applicable Best Management Practices (BMPs) will be implemented during annual maintenance activities. The proposed City of Riverside Public Works Department Annual Tequesquite Creek Maintenance project includes the removal of native and non-native vegetation.

## **Toxics**

The proposed annual maintenance activities would not result in the release of toxins, chemicals, petroleum products, exotic plant material, or other elements that could degrade or harm downstream biological or aquatic resources. All staging and fueling activities (as needed) would be conducted outside of the active channel within the disturbed habitat (access roads). The proposed City of Riverside Public Works Department Annual Tequesquite Creek Maintenance project only includes the removal of native and non-native vegetation, reduction of potential pollutants for purposes of improving hydraulic capacity and contributing to an overall improvement in the functions and values of the channel.

## **Lighting**

No night work would occur as a result of the proposed City of Riverside Public Works Department Annual Tequesquite Creek Maintenance project.

## **Noise**

Short-term maintenance-related noise impacts will be reduced by the implementation of the following: 1) The maintenance crews shall equip all equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards. The maintenance crews shall place all stationary equipment so that emitted noise is directed away from sensitive receptors nearest the Study Area, and 2) The maintenance crews shall locate equipment staging in areas that will create the greatest distance between noise sources and noise sensitive receptors nearest the Study Area.

## **Invasives**

No landscaping is proposed. The proposed City of Riverside Public Works Department Annual Tequesquite Creek Maintenance project includes the removal of native and non-native vegetation.

## **Barriers**

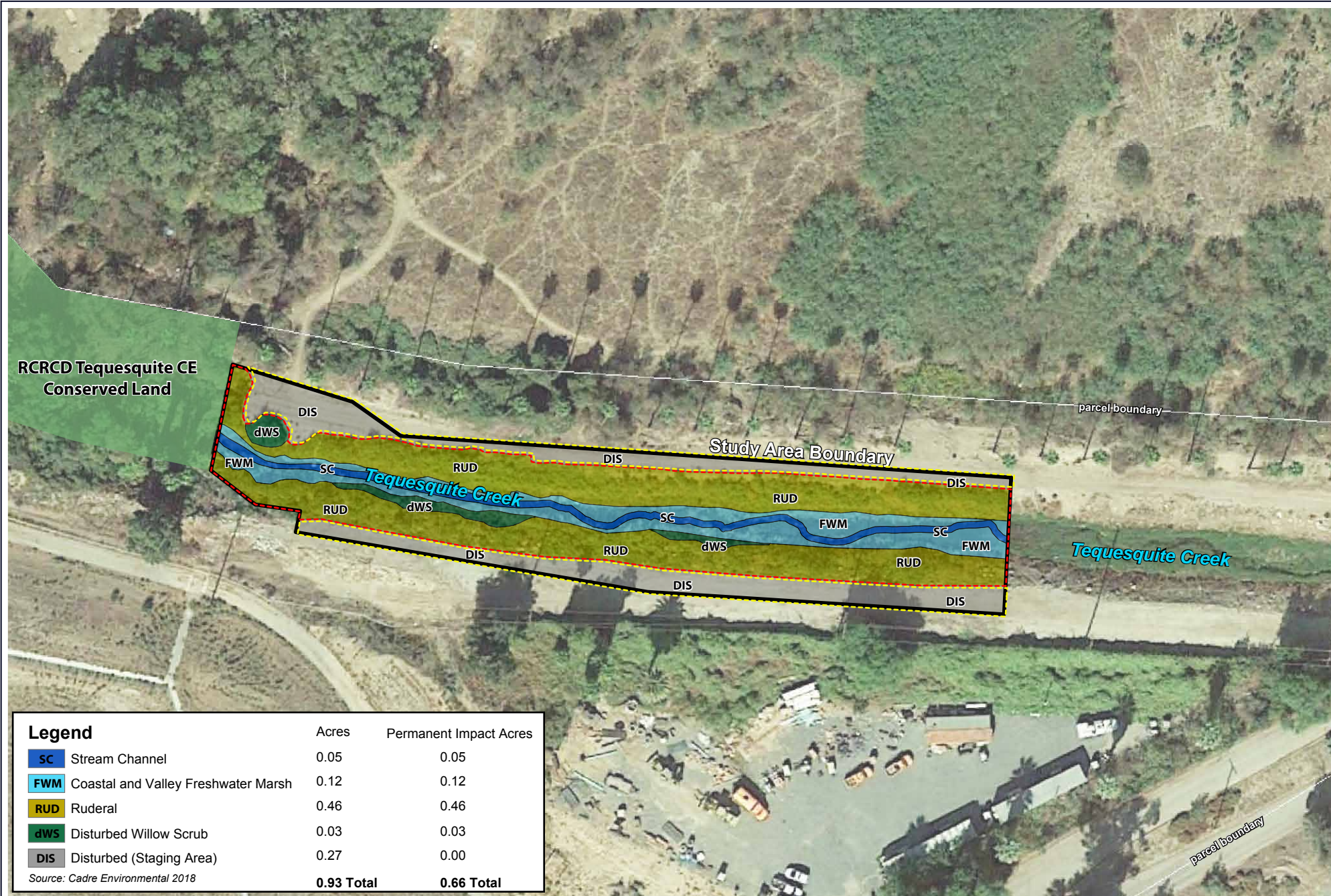
No barriers are proposed to be constructed as a result of the annual maintenance activities.

## **Grading/Land Development**

No grading or development activities are proposed to be constructed as a result of the annual maintenance activities. The proposed City of Riverside Public Works Department Annual Tequesquite Creek Maintenance project includes the removal of native and non-native vegetation.

Implementation of all Urban/Wildlands Interface guidelines will minimize adverse project indirect impacts and is consistent with MSHCP Section 6.1.4.





**Figure 6** MSHCP Riparian & Riverine Resources Impact Map  
 DBESP - Tequesquite Creek Maintenance Project  
 City of Riverside, California

## **DIRECT IMPACTS**

Direct impacts are considered to be those that involve the loss, modification, or disturbance of natural resources or habitats (i.e., vegetative communities or substrate) that in turn, directly affect plant and wildlife species dependent on that habitat. Direct impacts include the destruction of individual plants or wildlife of low mobility (i.e., plants, amphibians, reptiles, and small mammals). The collective loss of individuals may also directly affect area-wide population numbers or result in the physical isolation of populations thereby reducing genetic diversity and population stability.

A total of 0.66-acre of MSHCP riparian/riverine resources (0.46-acre of ruderal, 0.17-acre coastal and valley freshwater marsh/stream channel and 0.03-acre of disturbed willow scrub) will be directly/permanently impacted as summarized in Table 2, *MSHCP Riparian & Riverine Impacts*, and illustrated on Figure 6, *MSHCP Riparian & Riverine Resources Impact Map*.

## **INDIRECT IMPACTS**

Indirect impacts are considered to be those impacts associated with the project that involve the effects of alteration of the existing habitat and an increase in human population and or land use within the Study Area. These impacts are commonly referred to as “edge effects” and may result in changes in the behavioral patterns of wildlife and reduced wildlife diversity and abundance in habitats adjacent to the Study Area.

Indirect impacts also include the effects of increases in ambient levels of sensory stimuli (e.g., noise and light), unnatural predators (e.g., domestic cats and other non-native animals), competitors (e.g., exotic plants and non-native animals), and trampling and unauthorized recreational use due to the increase in human population. Other permanent indirect effects may occur that are related to water quality and storm water management, including trash/debris, toxic materials, and dust.

The Study Area is located immediately east of PQP Conserved Lands (Riverside-Corona Resource Conservation District, CE), as shown in Figure 2, *MSHCP Relationship Map*.

The guidelines pertaining to the Urban/Wildlands Interface guidelines presented in Section 6.1.4 of the MSHCP are intended to address indirect effects associated with locating commercial, mixed uses and residential developments in proximity to a MSHCP Conservation Area. The City of Riverside Public Works Department Annual Tequesquite Creek Maintenance Project would not result in permanent or indirect impacts to the adjacent downstream Riverside-Corona Resource Conservation District conservation area or resources within the Santa Ana River floodprone area. The proposed annual maintenance activities would improve the functions and values of the channel through improved hydraulic capacity, reduction of potential pollutants, and removal of non-native vegetation.

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## PROJECT DESIGN FEATURES AND MITIGATION MEASURES

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### MEASURES TO MITIGATE IMPACTS TO RIPARIAN/RIVERINE AREAS AND VERNAL POOLS

To meet the criteria of a biologically equivalent or superior alternative, the applicant will offset impacts to 0.66-acre of MSHCP Section 6.1.2 riparian/riverine resources characterized as ruderal, coastal and valley freshwater marsh/stream channel and disturbed willow scrub by:

- 1) Purchasing 1.32 acres of credits within a resource agency approved mitigation bank or payment to an in-lieu fee program, or
- 2) Recordation of a Conservation Easement (CE) over Assessor's Parcel Number (APN) 187-080-009. The CE would be recorded in favor of a CDFW due diligence-approved entity, or.
- 3) Recordation of a CE over APN 187-080-010. The CE would be recorded in favor of a CDFW due diligence-approved entity.

As stated by the Riverside-Corona Resource Conservation District:

*"An in-lieu-fee program is an agreement between a regulatory agency and a single sponsor, generally a public agency or non-profit organization, to mitigate for loss of habitat due to land development. In-lieu-fee mitigation occurs in circumstances where a permittee provides funds to a sponsor instead of either completing project-specific mitigation itself or purchasing credits from a wetland mitigation bank. In-lieu-fee mitigation is generally categorized as mitigation that is conducted after permitted impacts have occurred.*

*RCRCD's in-lieu-fee agreement is with the Army Corps of Engineers (ACOE), a regulatory agency. ACOE issues permits to individuals or public or private entities (permittees) who are required to mitigate for loss of habitat associated with development or other activities taking place in "waters of the United States." The sponsor, RCRCD, is authorized to sell mitigation "credits" to permittees. RCRCD may use the funds pooled from sales of credits to various permittees to create one or a number of conservation sites to satisfy the required mitigation. In sum, under the program, RCRCD, a non-regulatory agency, receives funds from selling credits to restore habitat areas to make up for important riparian and other "wet" areas that have been lost due to land use changes." (RCRCD 2017)*

Due to the uncertainty in the DBESP mitigation strategy, a final proposed mitigation approach will be submitted to the RCA and Wildlife Agencies in writing for review, comment, and approval at least two (2) weeks prior to scheduled initiation of work activities. Initial annual maintenance activities will not be initiated until the RCA and Wildlife Agencies has approved the final mitigation strategy.



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## DETERMINATION OF BIOLOGICALLY EQUIVALENT OR SUPERIOR PRESERVATION

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To meet the criteria of a biologically equivalent or superior alternative, the applicant will offset impacts to 0.66-acre of MSHCP Section 6.1.2 riparian/riverine resources characterized as ruderal, coastal and valley freshwater marsh/stream channel and disturbed willow scrub by:

- 1) Purchasing 1.32 acres of credits within a resource agency approved mitigation bank or payment to an in-lieu fee program, or
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Implementation of one of the three mitigation options outlined above to offset permanent impacts to 0.66-acre of MSHCP Section 6.1.2 riparian/riverine resources (0.46-acre of ruderal, 0.17-acre coastal and valley freshwater marsh/stream channel and 0.03-acre of disturbed willow scrub) would meet the criteria of a biologically equivalent or superior alternative. Tequesquite Creek is currently discharging untreated water and garbage to the Santa Ana River floodprone area.

Due to the uncertainty in the DBESP mitigation strategy, a final proposed mitigation approach will be submitted to the RCA and Wildlife Agencies in writing for review, comment, and approval at least two (2) weeks prior to scheduled initiation of work activities. Initial annual maintenance activities will not be initiated until the RCA and Wildlife Agencies has approved the final mitigation strategy.



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## REFERENCES

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- Cadre Environmental. 2018 (Updated March 2019). General MSHCP Habitat Assessment and Consistency Analysis for the City of Riverside Public Works Department Tequesquite Creek Maintenance Project, City of Riverside, Western Riverside County, California.
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**APPENDIX E**  
*Cultural Resources Report*  
*(CONFIDENTIAL)*

