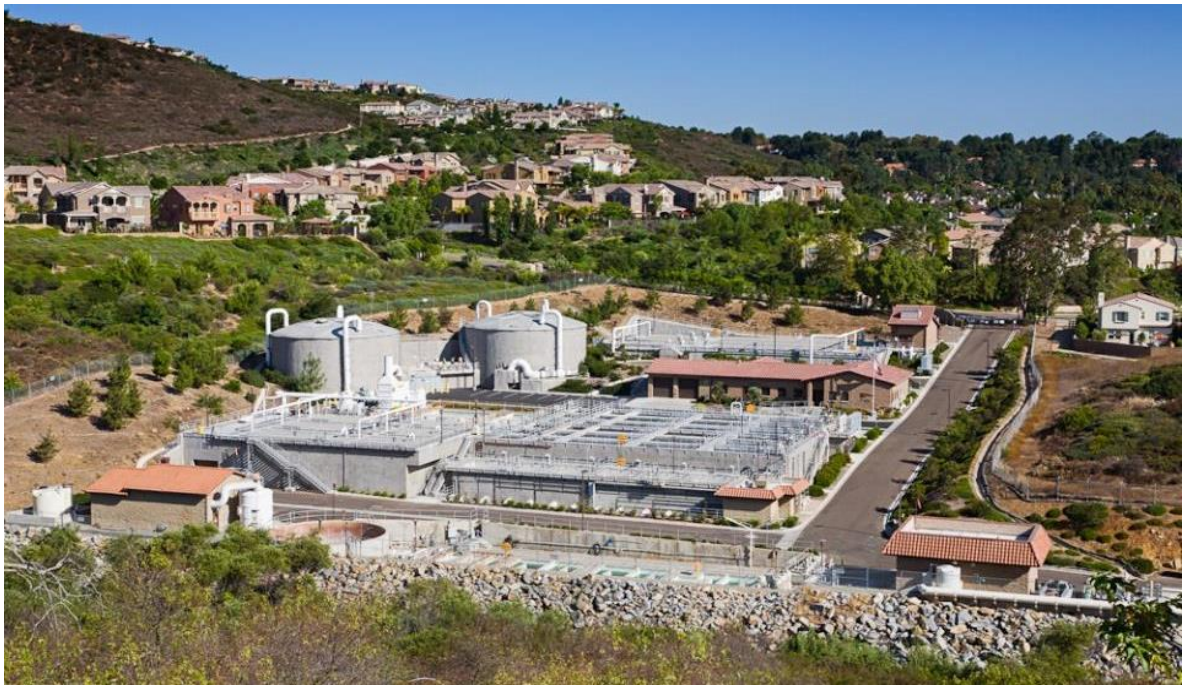

# Meadowlark Water Reclamation Facility Chlorine Contact Tank Expansion Project

Addendum to the Final Program Environmental Impact Report for the North San Diego Water Reuse Coalition Regional Recycled Water Project
SCH#2014081028

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**December 2023**

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# 1 Introduction

This Addendum was prepared in accordance with the California Environmental Quality Act (CEQA) and the CEQA Guidelines. This document has been prepared to serve as an Addendum to the previously certified Final Program Environmental Impact Report (Final PEIR) (State Clearinghouse [SCH] #2014081028) for the North San Diego Water Reuse Coalition Regional Recycled Water Project (Original Project). Olivenhain Municipal Water District was the lead agency for the certified Final PEIR, and Vallecitos Water District is the lead agency for the environmental review in this Addendum.

## 1.1 Background and Purpose of the EIR Addendum

### 2015 Final PEIR and Original Project

The Final PEIR for the Original Project (SCH #2014081028) was certified on October 21, 2015, by Olivenhain Municipal Water District's Board of Directors. The certified Final PEIR consists of responses to public and agency comments received on the Draft PEIR and the text of the Draft PEIR. The certified Final PEIR is further supported by an accompanying Mitigation Monitoring and Reporting Program (MMRP). Information and technical analyses from the certified Final PEIR are utilized or referenced throughout this Addendum. Relevant passages from the certified Final PEIR are cited and available for review online, at the North San Diego Water Reuse Coalition website[1]. In conjunction with certification of the Final PEIR, Olivenhain Municipal Water District also certified the MMRP and approved the Original Project.

As approved, the Original Project would involve development of regional recycled water infrastructure to increase the capacity and connectivity of the recycled water storage and distribution systems of North San Diego Water Reuse Coalition members and maximize reuse of available wastewater supplies. The North San Diego Water Reuse Coalition includes Carlsbad Municipal Water District, City of Escondido, City of Oceanside, Leucadia Wastewater District, Olivenhain Municipal Water District, Rincon del Diablo Municipal Water District, San Elijo Joint Powers Authority, Santa Fe Irrigation District, and Vallecitos Water District. The Original Project includes replacing potable water uses with recycled water components, converting facilities to recycled water service, connecting discrete recycled water systems to one another, increasing recycled water storage capacity, distributing recycled water to effectively meet recycled water demands, and implementing advanced water treatment to produce and use potable reuse water. The Original Project facilities that were analyzed in the Final PEIR are located in the cities of Carlsbad, Escondido, Oceanside, Vista, Encinitas, and Del Mar as well as unincorporated San Diego County.

### Addendum to the Final PEIR and Proposed Chlorine Contact Tank Expansion Project

Vallecitos Water District proposes modifications to the Original Project, herein referred to as the "proposed Chlorine Contact Tank (CCT) Expansion Project," which involves expansion of chlorine contact tanks at the Meadowlark Water Reclamation Facility (MWRF), located at 7941 Corintia

[1] https://nsdwrc.org/project.html

Street in Carlsbad, San Diego County, California. A detailed description of the proposed CCT Expansion Project is provided in Section 2, *Project Description*, of this Addendum. This document is an Addendum to the previously certified Final PEIR and has been prepared by Vallecitos Water District to evaluate the potential environmental impacts of the proposed CCT Expansion Project.

## 1.2 Basis for the Addendum

When an EIR has been certified and a project is modified or otherwise changed after certification, additional CEQA review may be necessary. The key considerations in determining the need for the appropriate type of additional CEQA review are outlined in Section 21166 of the Public Resources Code (CEQA) and Sections 15162, 15163, and 15164 of the CEQA Guidelines. Section 15162(a) of the CEQA Guidelines provides a Subsequent Environmental Impact Report (EIR) is not required unless the following occurs:

(1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

(2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:

   (A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;

   (B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;

   (C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

   (D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

As outlined in Section 15164 (Addendum to an EIR or Negative Declaration) of the CEQA Guidelines, a lead agency shall prepare an Addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in the CEQA Guidelines Section 15162 calling for preparation of a subsequent EIR have occurred. Specifically, the CEQA Guidelines state:

- The lead agency or responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred (Section 15164[a]);
- An addendum need not be circulated for public review but can be included in or attached to the certified EIR or adopted negative declaration (Section 15164[c]);

- The decision-making body shall consider the addendum with the certified EIR or adopted negative declaration prior to making a decision on the project (Section 15164[d]); and
- A brief explanation of the decision not to prepare a subsequent EIR pursuant to Section 15162 should be included in an addendum to an EIR, the lead agency's findings on the project, or elsewhere in the record. The explanation must be supported by substantial evidence (Section 15164[e]).

An Addendum to the certified Final PEIR for the Original Project is appropriate to address the proposed CCT Expansion Project because the proposed modifications to the Original Project do not meet the conditions of CEQA Guidelines Section 15162(a) for preparation of a Subsequent EIR or negative declaration. The proposed CCT Expansion Project would not result in new or more severe impacts related to:

(1) Substantial changes to the Original Project that would require major revisions to the certified Final PEIR;

2) Substantial changes to the circumstances under which the Original Project are being undertaken that would require major revisions to the certified Final PEIR; or

(3) New information of substantial importance showing significant effects not previously examined.

The Final PEIR and this Addendum to the Final PEIR serve as informational documents to inform decision-makers and the public of the potential environmental consequences of approving the proposed CCT Expansion Project.

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# 2 Project Description

## Project Location

The proposed CCT Expansion Project site is within and adjacent to the Meadowlark Water Reclamation Facility (MWRF), located at 7941 Corintia Street in Carlsbad, San Diego County, California. The MWRF is located in a suburban area and is surrounded by single-family residences to the west, north, and northeast, and open space hillsides to the east, south, and west. San Marcos Creek runs parallel to the MWRF's southern boundary, and South Rancho Santa Fe Road, a major thoroughfare in the area, is located approximately 0.2 mile east of the proposed CCT Expansion Project site. The proposed CCT Expansion Project site has been previously disturbed and graded and currently contains the developed MWRF. Access to the proposed CCT Expansion Project site is provided by Corintia Street and South Rancho Sante Fe Road. The MWRF is included as part of the Original Project site as described in the Final PEIR for the Original Project. Figure 1 illustrates the location of the proposed CCT Expansion Project site within the region, and Figure 2 shows the proposed CCT Expansion Project site in a local context.

## Project Components

The MWRF is an existing treatment plant that treats wastewater to tertiary levels. The existing chlorine contact tanks at the MWRF are configured for five million gallons per day (MGD; peak dry weather flow) to meet the 90 minutes modal contact time requirement pursuant to California Code of Regulations Title 22. The proposed CCT Expansion Project involves expansion of these tanks at the MWRF within the boundary of the plant to achieve a capacity of 6.5 MGD (peak dry weather flow) to continue to maintain compliance with the requirements of California Code of Regulations Title 22. The new tanks would be covered by a concrete roof and would slope slightly to the east towards existing sumps to facilitate dewatering through the use of portable submersible pumps on an as-needed basis. The expansion of the tanks would result in a reduction in width of Tertiary Drive (an internal plant road) by approximately four feet and elimination of the landscape area that is currently present between the existing tanks and Tertiary Drive.

The Final PEIR identifies the proposed CCT Expansion Project as a long-term project described in limited detail for informational purposes only. According to the Final PEIR, the MWRF is anticipated to eventually provide recycled water to meet long-term water demands of approximately 1,703 acre-feet per year (AFY). To meet these long-term demands, the Final PEIR anticipates the MWRF would increase tertiary treatment capacity by approximately 2.0 MGD, from 5.0 to 7.0 MGD and advanced water treatment capacity by approximately 1.0 MGD, from 1.0 to 2.0 MGD. The Final PEIR does not include long-term projects, including the proposed CCT Expansion Project, in the environmental analysis.

## Construction

Project construction would occur over the course of approximately 16 months between June 2024 and August 2025 and would involve demolition and utility relocations, site preparation, infrastructure installation, paving, and site restoration. Project construction would occur from 7:00 a.m. to 4:00 p.m., Monday to Friday, and no nighttime construction would be required.

Construction of the proposed CCT Expansion Project would involve the excavation of approximately 4,920 cubic yards of soil, all of which would be exported from the proposed CCT Expansion Project

site. Approximately 3,820 cubic yards of soil would be imported from off-site sources. The maximum depth of excavation would be approximately 30 feet. Project construction would involve demolition of 2,550 cubic yards of materials. Haul trucks would access the proposed CCT Expansion Project site via the ingress and egress gate at 7941 Corintia Street in Carlsbad. Construction activities would not include pile-driving. Although unlikely, rock breaking/processing may be required if granite is encountered in the subgrade. Construction staging and laydown would occur at two developed/disturbed locations – one adjacent to the project development footprint in the southwestern portion of the MWRF and one on the north side of the plant's eastern access road, immediately outside the MWRF's eastern access gate. Construction workers would park at the MWRF, or beyond the eastern access gate, adjacent to South Rancho Santa Fe Road.

## Operation

The proposed CCT Expansion Project would not require additional employees at the MWRF for plant operations and would not include any new noise-generating equipment. However, project operation would result in a net increase in electricity consumption at the MWRF, anticipated to be approximately 3,200 kilowatt-hours per day, due to the increase in treatment capacity.

**Figure 1 Regional Location**

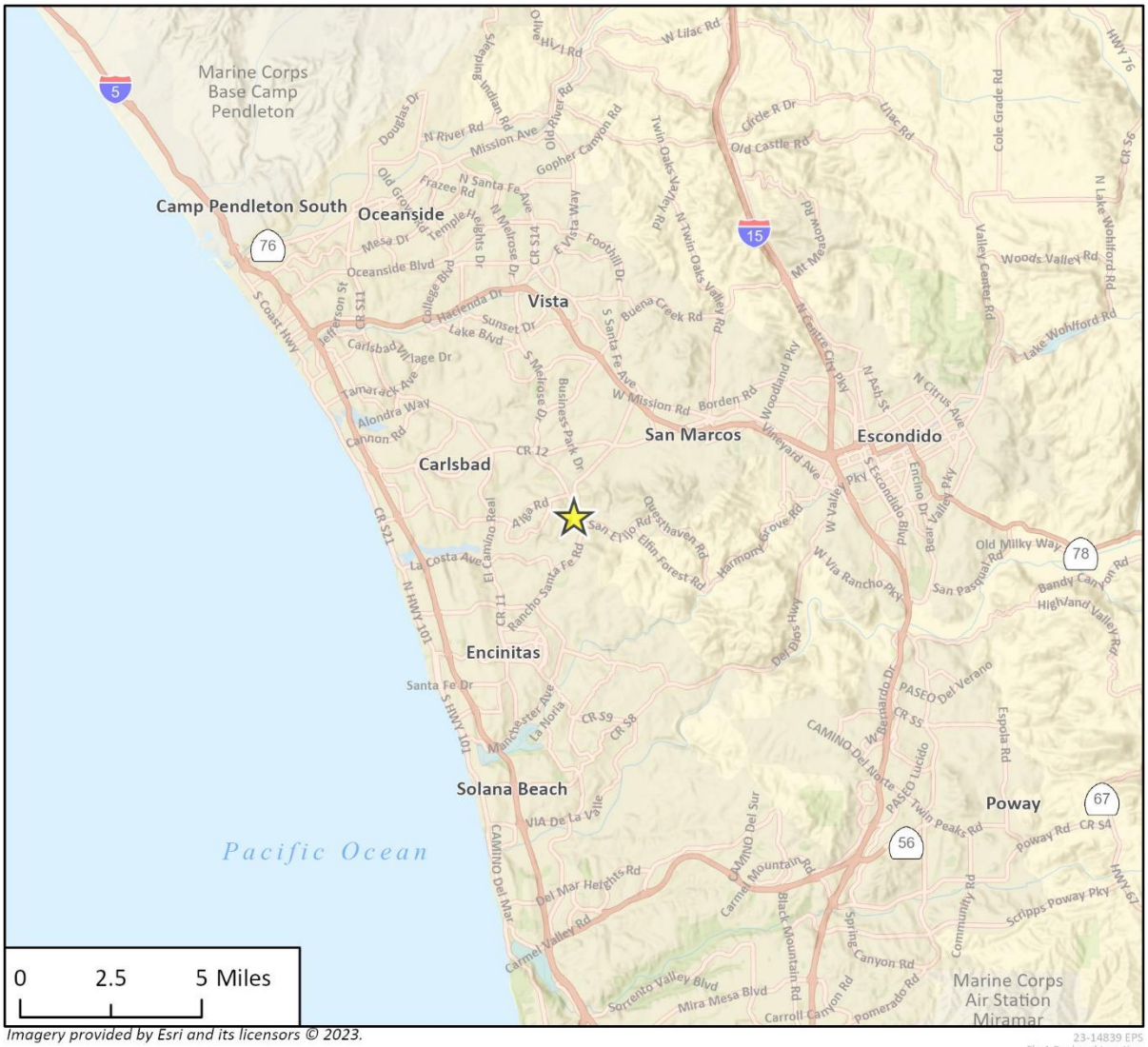

**Figure 2 Proposed CCT Expansion Project Site Location**

# 3 Impact Analysis

A comparative analysis of the potential impacts associated with the proposed CCT Expansion Project and those of the Original Project analyzed in the Final PEIR has been prepared using the CEQA Appendix G Checklist as a guide. This checklist is consistent with the format, environmental topics, and questions of the checklist used in the Final PEIR, but also includes recent updates to reflect the most recently adopted checklist provided in Appendix G of the CEQA Guidelines. The checklist considers the full range of environmental issues subject to analysis under CEQA (in rows), and then poses a series of questions (in columns) aimed at identifying the degree to which the issue was analyzed in the Final PEIR. The questions posed in each column are described below.

*Where was impact analyzed?*

This column provides a cross-reference to the portions of the Final PEIR where information and analyses may be found relative to the environmental issue listed under each topic. The cross-references identified in this column correspond with page numbers and section numbers of the Final PEIR.

*Do proposed changes require major revisions to the Final PEIR?*

In accordance with Section 15162(a)(1) of the CEQA Guidelines, this column indicates whether the proposed CCT Expansion Project would involve new significant environmental impacts or a substantial increase in the severity of previously identified significant environmental impacts that, in turn, would require major revisions of the Final PEIR.

*Do new circumstances require major revisions to the Final PEIR?*

In accordance with Section 15162(a)(2) of the CEQA Guidelines, this column indicates whether changes to the circumstances under which the proposed CCT Expansion Project is undertaken or implemented have occurred that would involve new significant environmental impacts or a substantial increase in the severity of previously identified significant impacts that, in turn, would require major revisions of the Final PEIR.

*Is there any new information resulting in new or substantially more severe significant impacts?*

In accordance with Sections 15162(a)(3)(A) and 15162(a)(3)(B) of the CEQA Guidelines, this column indicates whether new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the Final PEIR was certified, shows additional or substantially more severe significant impacts not discussed in the Final PEIR.

*Do mitigation measures included in the certified Final PEIR address and/or resolve impacts?*

In accordance with Sections 15162(a)(3)(C) and 15162(a)(3)(D) of the CEQA Guidelines, this column indicates whether new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the Final PEIR was certified, shows that mitigation measures or alternatives in the Final PEIR would now be feasible, or identifies new mitigation measures or alternatives not in the Final PEIR that would reduce significant impacts, but which Vallecitos Water District declines to adopt.

# 3.1 Aesthetics

| | | Where was Impact Analyzed in the Final PEIR? | Do Proposed Changes Require Major Revisions to the Final PEIR? | Do New Circumstances Require Major Revisions to the Final PEIR? | Any New Information Resulting in New or Substantially More Severe Significant Impacts? | Do Final PEIR Mitigation Measures Address and/or Resolve Impacts? |
|---|---|---|---|---|---|---|
| Would the project: | | | | | | |
| a. | Have a substantial adverse effect on a scenic vista? | Pages 3.1-13 to 3.1-15 | No | No | No | N/A |
| b. | Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | Page 3.1-12 | No | No | No | N/A |
| 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? | Pages 3.1-15 and 3.1-16 | No | No | No | N/A |
| d. | Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area? | Pages 3.1-16 and 3.1-17 | No | No | No | N/A |

## Original Project

The Final PEIR determined the Original Project would result in potentially significant impacts to scenic vistas/resources, existing visual character and quality, and light and glare due to the construction of new, aboveground, permanent facilities that would alter the existing visual environment. However, potentially significant impacts were determined to be mitigated to a less-than-significant level following implementation of Mitigation Measures 3.1-1a, 3.1-1b, and 3.1-3 from the Final PEIR, which require restoration of disturbed areas (3.1-1a), screening analyses for the protection of scenic resources (3.1-1b), and minimization of light and glare (3.1-3). Additionally, the

Final PEIR determined the Original Project would have no impact to scenic resources within a state scenic highway.

## Proposed CCT Expansion Project

The City of Carlsbad's (City) General Plan identifies the Pacific Ocean and nearby beaches as scenic vistas (City of Carlsbad 2015). The proposed CCT Expansion Project site is located within the existing MWRF, approximately five miles from the Pacific Ocean. The MWRF is in a suburban area and is surrounded by single-family residences to the west, north, and northeast, and open space hillsides to the east, south, and west. Given the proposed CCT Expansion Project site is currently developed with an existing utility use, the expansion of chlorine contact tanks would not constitute a substantial change to the visual environment that could result in the degradation of a scenic vista from a public viewpoint. Expansion of the chlorine contact tanks under the proposed CCT Expansion Project would be consistent with the existing visual environment at the proposed CCT Expansion Project site and would be fully concealed from nearby public vantage points, including South Rancho Santa Fe Road, due to intervening vegetation and topography. Project construction would occur during daytime hours and would not require lighting, and no new sources of exterior lighting for proposed CCT Expansion Project operation would be required. Therefore, impacts of the proposed CCT Expansion Project to scenic vistas, the existing visual environment, and light/glare would be less than significant with no mitigation required, which would be a lesser level of impact than the Original Project.

The proposed CCT Expansion Project site is not visible from a state scenic highway. The nearest officially designated state scenic highway to the proposed CCT Expansion Project site is a portion of State Route 52, located approximately 20 miles south of the proposed CCT Expansion Project site (California Department of Transportation [Caltrans] 2018). Similar to the Original Project, the proposed CCT Expansion Project would result in no impact to scenic resources visible from a state scenic highway.

## Effects and Mitigation Measures

The proposed CCT Expansion Project would not result in new significant impacts related to aesthetics and would not increase the severity of significant impacts identified in the Final PEIR. Potential impacts would be less than significant, and no mitigation measures would be required.

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# 3.2 Agriculture and Forestry Resources

| | Where was Impact Analyzed in the Final PEIR? | Do Proposed Changes Require Major Revisions to the Final PEIR? | Do New Circumstances Require Major Revisions to the Final PEIR? | Any New Information Resulting in New or Substantially More Severe Significant Impacts? | Do Final PEIR Mitigation Measures Address and/or Resolve Impacts? |
|---|---|---|---|---|---|
| Would the project: | | | | | |
| a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | Pages 3.2-6 and 3.2-7 | No | No | No | N/A |
| b. Conflict with existing zoning for agricultural use or a Williamson Act contract? | Pages 3.2-7 and 3.2-8 | No | No | No | N/A |
| c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)); timberland (as defined by Public Resources Code Section 4526); or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))? | Page 3.2-6 | No | No | No | N/A |
| d. Result in the loss of forest land or conversion of forest land to non-forest use? | Page 3.2-6 | No | No | No | N/A |
| 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? | Page 3.2-8 | No | No | No | N/A |

## Original Project

The Final PEIR determined the Original Project would result in no impact regarding the conversion of forest land and a less than significant impact regarding the conversion of farmland.

## Proposed CCT Expansion Project

The proposed CCT Expansion Project site does not contain forest lands. Similar to the Original Project, the proposed CCT Expansion Project would result in no impact involving conflict with existing zoning of forest land or the loss/conversion of forest land to non-forest use.

The proposed CCT Expansion Project site does not contain agricultural lands, and according to the California Department of Conservation, the proposed CCT Expansion Project site is classified as Urban and Built-Up Land (California Department of Conservation 2023). Therefore, the proposed CCT Expansion Project would not result in the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, would not conflict with existing zoning for agricultural use, and would not result in the conversion of farmland to non-agricultural use. The proposed CCT Expansion Project would have no impact on agricultural resources, which would be a lesser level of impact than the Original Project.

## Effects and Mitigation Measures

The proposed CCT Expansion Project would not result in new significant impacts related to agriculture and forestry resources and would not increase the severity of significant impacts identified in the Final PEIR. Potential impacts would be less than significant, and no mitigation measures would be required.

# 3.3 Air Quality

| | Where was Impact Analyzed in the Final PEIR? | Do Proposed Changes Require Major Revisions to the Final PEIR? | Do New Circumstances Require Major Revisions to the Final PEIR? | Any New Information Resulting in New or Substantially More Severe Significant Impacts? | Do Final PEIR Mitigation Measures Address and/or Resolve Impacts? |
|---|---|---|---|---|---|
| Would the project: | | | | | |
| a. Conflict with or obstruct implementation of the applicable air quality plan? | Page 3.3-17 | No | No | No | N/A |
| 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? | Pages 3.3-19 to 3.3-22 | No | No | No | Yes |
| c. Expose sensitive receptors to substantial pollutant concentrations? | Page 3.3-23 | No | No | No | Yes |
| d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people? | Pages 3.3-23 to 3.3-24 | No | No | No | Yes |

## Original Project

The Final PEIR determined the Original Project would result in a less-than-significant impact regarding potential to conflict with or obstruct implementation of the applicable air quality plan because future demands that would be served by the Original Project would be consistent with growth forecasts incorporated into the Regional Air Quality Strategy and State Implementation Plan.

The Final PEIR determined the Original Project would result in potentially significant impacts regarding potential to violate an air quality standard or contribute substantially to an existing or projected air quality violation. This determination was primarily informed by the Original Project's potential for construction of project components to overlap such that San Diego Air Pollution Control District (SDAPCD) emissions thresholds would be exceeded. The Final PEIR required implementation of Mitigation Measure 3.3-2, which involves project-level air quality assessments to determine emissions and identify measures that could be incorporated into project operation and construction to minimize emissions to the extent practicable. However, impacts were determined to be significant and unavoidable due to the cumulative impact on air quality.

The Final PEIR determined the Original Project would result in potentially significant impacts regarding exposure of sensitive receptors to substantial pollutant concentrations because identification of sensitive receptors was speculative due to uncertainty over the final location of

project components. The Final EIR also required implementation of Mitigation Measure 3.3-2 to address this impact; however, impacts were determined to be significant and unavoidable due to the speculative nature of future project locations and the magnitude of individual projects' construction and operation emissions.

The Final PEIR determined the Original Project would result in potentially significant impacts regarding odors because treatment facility upgrades would increase the volume of wastewater treated at existing and new locations. However, potentially significant impacts were determined to be mitigated to a less-than-significant level following implementation of Mitigation Measure 3.3-5, which requires incorporation of odor control into design of treatment facilities and treatment facility expansions.

## Proposed CCT Expansion Project

### *Consistency with Applicable Air Quality Plan*

The proposed CCT Expansion Project, like the Original Project, would not include residential or commercial development that would induce population growth or exceed forecasts contained in the Regional Air Quality Strategy and State Implementation Plan. Therefore, similar to the Original Project, the proposed CCT Expansion Project would result in a less-than-significant impact regarding potential to conflict with or obstruct implementation of the applicable air quality plan.

### *Criteria Air Pollutant Emissions*

Construction emissions associated with the proposed CCT Expansion Project were quantified using the California Emissions Estimator Model (CalEEMod) version 2022.1.1.17 based on project characteristics described in Section 2, *Project Description*, and are presented in Table 1 in comparison to SDAPCD thresholds. As shown therein, construction-phase emissions would not exceed SDAPCD thresholds.

**Table 1 Unmitigated Estimated Maximum Daily Construction Emissions (lbs/day)**

| Construction Year | VOC | $NO_x$ | CO | $SO_2$ | $PM_{10}$ | $PM_{2.5}$ |
|---|---|---|---|---|---|---|
| 2024 | 1 | 7 | 7 | < 1 | 2 | 1 |
| 2025 | 1 | 5 | 7 | < 1 | < 1 | < 1 |
| **Maximum Emissions (lbs/day)** | **1** | **7** | **7** | **< 1** | **2** | **1** |
| SDAPCD Thresholds | 75 | 250 | 550 | 250 | 100 | 55 |
| Threshold Exceeded? | No | No | No | No | No | No |

lbs/day = pounds per day; VOC = volatile organic compounds; $NO_X$ = oxides of nitrogen; CO = carbon monoxide; $SO_2$ = sulfur dioxide; $PM_{10}$ = particulate matter with a diameter of 10 microns or less; $PM_{2.5}$ = particulate matter with a diameter of 2.5 microns or less; N/A = not applicable

Notes: All numbers have been rounded to the nearest whole number. Emissions modeling was completed using CalEEMod version 2022.1.1.17. See Appendix A for modeling results.

Nevertheless, pursuant to Mitigation Measure 3.3-2 in the Final PEIR, each project must incorporate emission reduction measures to minimize emissions to the extent practicable, even if the individual project does not exceed air quality thresholds, to reduce the Original Project's collective contribution to cumulative air quality impacts. For the proposed CCT Expansion Project, feasible

minimization measures to reduce construction-phase air pollutant emissions consist of the following:

- Water exposed soil during active construction at least twice per day to achieve dust suppression.
- Apply water at least twice per day during active demolition to achieve dust suppression.
- Limit heavy-duty diesel vehicle idling.

Construction emissions with incorporation of these feasible minimization measures was modeled in CalEEMod and are shown in Table 2. As shown therein, incorporation of these measures would reduce emissions of particulate matter measuring 10 microns or less in diameter ($PM_{10}$) and particulate matter measuring 10 microns or less in diameter ($PM_{2.5}$).

**Table 2 Mitigated Estimated Maximum Daily Construction Emissions (lbs/day)**

| Construction Year | VOC | $NO_x$ | CO | $SO_2$ | $PM_{10}$ | $PM_{2.5}$ |
|---|---|---|---|---|---|---|
| 2024 | 1 | 7 | 7 | < 1 | 1 | <1 |
| 2025 | 1 | 5 | 7 | < 1 | < 1 | < 1 |
| **Maximum Emissions (lbs/day)** | **1** | **7** | **7** | **< 1** | **1** | **<1** |
| SDAPCD Thresholds | 75 | 250 | 550 | 250 | 100 | 55 |
| Threshold Exceeded? | No | No | No | No | No | No |

lbs/day = pounds per day; VOC = volatile organic compounds; $NO_X$ = oxides of nitrogen; CO = carbon monoxide; $SO_2$ = sulfur dioxide; $PM_{10}$ = particulate matter with a diameter of 10 microns or less; $PM_{2.5}$ = particulate matter with a diameter of 2.5 microns or less; N/A = not applicable

Notes: All numbers have been rounded to the nearest whole number. Emissions modeling was completed using CalEEMod version 2022.1.1.17. See Appendix A for modeling results.

The proposed CCT Expansion Project would not introduce new sources of operational air pollutant emissions from mobile sources or area sources. Project operation would result in a net increase in electricity consumption of approximately 3,200 kilowatt-hours per day. However, emissions from electricity generation would not occur on site and are therefore not considered as part of this air quality analysis. As such, project operation would not result in air pollutant emissions, and measures to reduce operational emissions in accordance with Mitigation Measure 3.3-2 would not be necessary. Impacts would be less than significant, which would be a lesser level of impact than the Original Project.

### *Exposure of Sensitive Receptors to Substantial Pollutant Concentrations*

The proposed CCT Expansion Project would be constructed at the MWRF and is located approximately 380 feet south of the nearest sensitive receptor, a single-family residence on Corintia Street. Construction-related activities would result in temporary project-generated emissions of diesel particulate matter (DPM) exhaust emissions from off-road, heavy-duty diesel equipment for site preparation, grading, building construction, and other construction activities. DPM was identified as a toxic air contaminant by the California Air Resources Board (CARB) in 1998. The potential cancer risk from the inhalation of DPM (discussed in the following paragraphs) outweighs the potential non-cancer health impacts (CARB 2021) and is therefore the focus of this analysis.

Generation of DPM from construction projects typically occurs in a single area for a short period. Construction of the proposed CCT Expansion Project would occur over approximately 15 months. The dose to which the receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the extent of exposure that person has to the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for the Maximally Exposed Individual. The risks estimated for a Maximally Exposed Individual are higher if a fixed exposure occurs over a longer period of time. According to the California Office of Environmental Health Hazard Assessment, health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 70-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the project. Current models and methodologies for conducting health-risk assessments are associated with longer-term exposure periods of 9, 30, and 70 years, which do not correlate well with the temporary and highly variable nature of construction activities, resulting in difficulties in producing accurate estimates of health risk (Bay Area Air Quality Management District 2017). Of these, the 30-year exposure period is most commonly used. Thus, the duration of proposed construction activities (i.e., 15 months) is approximately four percent of the total exposure period used for 30-year health risk calculations.

For the purposes of this analysis, DPM is assumed to be equivalent to PM10 emissions, which is a conservative assumption given that PM10 includes both equipment exhaust and fugitive dust emissions and that 90 percent of DPM is a subset of PM2.5 (CARB 2021). Maximum PM10 emissions would occur site preparation and tank installation activities, which would last for approximately 170 days in total. Particulate matter emissions would be lower for the remainder of the construction period because construction activities such as demolition, utility relocation, paving, and site restoration would require less intensive construction equipment. While the maximum DPM emissions associated with site preparation activities and tank installation would only occur for a portion of the overall construction period, these activities represent the worst-case condition for the total construction period. This would represent approximately one percent of the total 30-year exposure period for health risk calculation. Given the aforementioned discussion, DPM generated by project construction would not create conditions where the probability is greater than one in one million of contracting cancer for the Maximally Exposed Individual or to generate ground-level concentrations of non-carcinogenic TACs that exceed a Hazard Index greater than one for the Maximally Exposed Individual. Therefore, construction of the proposed CCT Expansion project would not expose sensitive receptors to substantial TAC concentrations, and impacts would be less than significant, which would be a lesser level of impact than the Original Project.

Project operation would not result in an increase in maintenance trips or on-site air pollutant emissions beyond existing conditions at the MWRF. Additionally, no new sensitive receptors have been constructed in proximity to the proposed CCT Expansion site since adoption of the Final PEIR. Therefore, operation of the proposed CCT Expansion project would not expose sensitive receptors to substantial TAC concentrations, and impacts would be less than significant, which would be a lesser level of impact than the Original Project.

### *Other Emissions, Including Odorous Emissions*

The proposed CCT Expansion Project would occupy the same site as the existing MWRF chlorine contact tanks. As with the Original Project, the proposed CCT Expansion Project could result in increased odorous emissions because CCT expansion would increase the volume of wastewater treated at the MWRF. Therefore, Mitigation Measure 3.3-5 from the Final PEIR would be required

for the proposed CCT Expansion Project, which would reduce odorous emissions through the incorporation of odor control into design of the proposed CCT Expansion Project. Similar to the Original Project, following implementation of this mitigation measure, impacts related to odorous emissions under the proposed CCT Expansion Project would be reduced to a less-than-significant level.

## Effects and Mitigation Measures

The proposed CCT Expansion Project would not result in new significant impacts related to air quality and would not increase the severity of significant impacts identified in the Final PEIR. Potential impacts would be less than significant with mitigation incorporated.

As with the Original Project, Mitigation Measures 3.3-2 and 3.3-5 outlined in Section 3.3, *Air Quality*, of the Final PEIR would be required for the proposed CCT Expansion Project to reduce potential impacts to air quality to a less-than-significant level, with minor clarifications to reflect project-specific details as shown in ~~strikeout~~/underline format below. The requirements of Mitigation Measure 3.3-2 have been fulfilled through preparation of this Addendum and incorporation of the identified emission reduction measures into the proposed CCT Expansion Project; therefore, no further action is required in relation to this mitigation measure.

### *MM 3.3-2 Implementation of Practicable Air Pollution Control Measures*

~~During design of all project components, the lead agency for each component~~ Vallecitos Water District shall complete an air quality assessment that determines project-level air emissions and identifies measures that could be incorporated into project operation and construction to minimize emissions to the extent practicable. Potential mitigation measures could include control measures for $PM_{10}$ (e.g., imposing speed limits on unpaved roads, covering haul trucks, limiting daily grading), control measures for nitrogen oxides (e.g., grading or fuel use restrictions, using newer equipment), control measures for volatile organic compounds (e.g., use of volatile organic compound-free coatings, using volatile organic compound emission control reductions), or other control measures as appropriate. All project components shall implement air quality control measures to the extent practicable, even where such components do not individually violate air quality standards, due to the cumulative impact on air quality from the Proposed Project.

### *MM 3.3-5 Incorporate Odor Control into Facility Design*

Consideration of objectionable odors shall be incorporated into the design of treatment facilities and treatment facility expansions. Appropriate odor control measures shall be implemented for those treatment facilities located in close proximity to sensitive receptors, and residential and commercial areas, and that are found to be likely to produce objectionable odors during project-level CEQA review. Examples of odor control measures could include installation of odor-controlled ventilation systems and air filters, enclosing certain facilities within structures, use of closed systems, implementation of best management practices, or others, as appropriate and applicable.

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# 3.4 Biological Resources

| | Where was Impact Analyzed in the EIR? | Do Proposed Changes Require Major Revisions to the EIR? | Do New Circumstances Require Major Revisions to the EIR? | Any New Information Resulting in New or Substantially More Severe Significant Impacts? | Do EIR Mitigation Measures Address and/or Resolve Impacts? |
|---|---|---|---|---|---|
| Would the project: | | | | | |
| a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service? | N/A | No | No | No | No |
| b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service? | N/A | No | No | No | No |
| 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? | -N/A | No | No | No | No |
| 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? | N/A | No | No | No | No |

| | | Where was Impact Analyzed in the EIR? | Do Proposed Changes Require Major Revisions to the EIR? | Do New Circumstances Require Major Revisions to the EIR? | Any New Information Resulting in New or Substantially More Severe Significant Impacts? | Do EIR Mitigation Measures Address and/or Resolve Impacts? |
|---|---|---|---|---|---|---|
| e. | Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | N/A | No | No | No | No |
| 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? | N/A | No | No | No | No |

## Original Project

The Final PEIR determined the Original Project would result in potentially significant impacts to biological resources. These impacts were determined to be potentially significant due to the Original Project's construction activities that would occur within and near areas with suitable habitat for special-status species, riparian habitat, sensitive natural communities, protected wetlands, and migratory wildlife corridors as well as the potential for the Original Project to conflict with local policies/ordinances protecting biological resources, adopted habitat conservation plans, and adopted natural community conservation plans. However, these potentially significant impacts were determined to be mitigated to a less-than-significant level following implementation of Mitigation Measures 3.4-1a, 3.4-1b, 3.4-2, 3.4-3, 3.4-4, and 3.4-5. These mitigation measures would require completion of surveys and mitigation for special-status plant and wildlife species (3.4-1a and 3.4-1b); native habitat compensation (3.4-2); completion of a jurisdictional delineation and implementation of compensatory mitigation (3.4-3); avoidance of the nesting season or implementation of pre-construction nesting bird surveys and avoidance measures (3.4-4); preparation of a tree inventory (3.4-5).

## Proposed CCT Expansion Project

The following analysis is based in part on a Biological Assessment prepared by Rincon Consultants, Inc. in August 2023 for select projects in the North San Diego Water Reuse Coalition's Regional Recycled Water Program (Appendix B). The proposed CCT Expansion project is analyzed in this Biological Assessment as Vallecitos Water District Component 1.

### *Methodology*

The biological resources impact analysis area for this Addendum includes all areas to be directly and indirectly affected by the proposed CCT Expansion project. Accordingly, the Biological Study Area includes the proposed CCT Expansion Project site and a 200-foot buffer. A desktop assessment and

review of existing literature was conducted by Rincon, which included an evaluation of species occurrence records contained within the California Natural Diversity Databases (CNDDB; California Department of Fish and Wildlife [CDFW] 2023a) and Biogeographic Information and Observation System (BIOS) (CDFW 2023b) as well as the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPAC) system (USFWS 2023a). An IPAC Trust Resource Report was generated on April 28, 2023 (Appendix B). The desktop assessment also included a review of the existing CNDDB species and Sensitive Biological Resources Summary contained in Appendix D of the Final PEIR, previously reviewed federally listed species and critical habitats, CDFW's Special Vascular Plants, Bryophytes, and Lichens List (CDFW 2023c) and Special Animal List (CDFW 2023d); and the results of the reconnaissance survey that was conducted on February 21, 2023 in support of the Biological Assessment (Appendix B). In addition, Covered Species listed in the San Diego Multiple Habitat Conservation Plan (MHCP) were also analyzed and evaluated (AMEC et. al 2003a).

The online Inventory of Rare and Endangered Plants of California (California Native Plant Society 2023) was queried to obtain comprehensive information regarding state and federally listed plant species considered to have potential to occur within the *Rancho Santa Fe* United States Geological Survey (USGS) 7.5-minute topographic quadrangles and the surrounding seven quadrangles (*Valley Center*, *Poway*, *Encinitas*, *Escondido*, *San Luis Rey*, *San Marcos*, and *Del Mar*).

Vegetation classification was based on the classification systems provided in the *Draft Vegetation Communities of San Diego County* (Oberbauer et al. 2008) to provide consistency with the San Diego Association of Governments (SANDAG) Multiple Habitat Conservation Program (MHCP) and modified as appropriate to reflect the existing site conditions. Where applicable, vegetation communities were further classified using *A Manual of California Vegetation*, Second Edition (Sawyer et al. 2009) to better identify the species composition and provide consistency with California Department of Fish and Wildlife (CDFW) standards. Suitable plant habitat characteristics were determined using the Calfora database (Calflora 2023). Rincon also supplemented the results of the database queries with their professional biological knowledge to develop a list of special-status species with potential to occur within the Biological Study Area, particularly those species with federal and/or state listing status.

Waters of the U.S. and/or waters of the State were also identified based on a review of the USGS National Hydrography Dataset (USGS 2023) and USFWS (2023b) National Wetlands Inventory Wetlands Mapper to identify potential riparian/wetland resources in the Biological Study Area.

### *Multiple Habitat Conservation Program Context*

The Multiple Habitat Conservation Program (MHCP) is a comprehensive conservation planning process that addresses the needs of multiple plant and animal species in northwestern San Diego County. The MHCP encompasses the cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista. The MHCP goal is to conserve approximately 19,000 acres of habitat, of which roughly 8,800 acres (46 percent) are already in public ownership and contribute toward the habitat preserve system for the protection of rare, threatened, or endangered species. Take authorization can be provided under the MHCP for 20 plant species and 30 wildlife species, referred to collectively as Covered Species. The MHCP determines long-term viability for these species will be adequately maintained under the particular preserve system design (AMEC Earth & Environmental, Inc. et al. 2003a and 2003b).

The MHCP identifies a series of Focus Planning Areas (FPA) within which some lands will be dedicated for preservation of native habitats. These areas contain both "hardline" areas, which will

be preserved as open space, and "soft line" areas, which will include both development and open space to be determined through the planning process (AMEC Earth & Environmental, Inc. et al. 2003a and 2003b). The MHCP also identifies Biological Core and Linkage Areas as those areas determined biologically valuable for inclusion in the regional preserve system. Biological Core and Linkage Areas are designed to conserve sensitive species and corridors between areas of high-quality habitat and to provide avenues for wildlife movement between these areas (AMEC Earth & Environmental, Inc. et al. 2003a and 2003b).

The City of Carlsbad Subarea Habitat Conservation Plan/Natural Communities Conservation Plan (Subarea Plan), which is a subset of the MHCP, comprehensively addresses how the City, in cooperation with USFWS and CDFW, will preserve the diversity of habitats and protect biological resources, which include natural biotic communities and sensitive plant and wildlife species (City of Carlsbad 2004). The City's Subarea Plan was adopted in 2004 and is implemented in conjunction with the City's 1999 Habitat Management Plan (HMP), which is intended to guide the design, management, monitoring, and public use of the natural open space preserve system within the City of Carlsbad.

### *Special Status Plant Species*

The potential for special-status plant species to occur within the Biological Study Area was assessed based on known distribution, habitat requirements, and existing site conditions observed during the field reconnaissance survey. No special-status plant species were observed on the project site, and the field survey confirmed the absence of suitable habitat for federally listed plants, special-status plant species identified by the California Native Plant Society as rare, or those within the MHCP (AMEC et al. 2003a).

One species, San Diego marsh elder (*Iva hayesiana*) has historical records in the area; however, the most recent record was in 1992, and this species may be extirpated from the area. No special status plant species identified in this analysis as occurring in the region by the Final PEIR or the Biological Assessment (Appendix B) are expected to occur within the Biological Study Area. In addition, the development footprint of the proposed CCT Expansion project, located within the developed MWRF, lacks suitable habitat and soil for any special status plant species to occur. Therefore, impacts to special status plant species under the proposed CCT Expansion project would be less than significant, and no mitigation would be required, which would be a lesser level of impact than the Original Project.

### *Special Status Wildlife Species*

The potential for special-status animal species to occur on or within the Biological Study Area was assessed based on known distribution, habitat requirements, and existing site conditions as observed during the field reconnaissance survey. The 200-foot buffer area included in the Biological Study Area supports disturbed Diegan coastal sage scrub, southern maritime chapparal, and southern willow scrub; however, the development footprint of the proposed CCT Expansion project contains only urban/developed and disturbed habitats.

Based on the results of the literature review, desktop assessment, Biological Assessment, and field reconnaissance survey, 88 wildlife species were evaluated with a potential to occur within five miles of the Biological Study Area. Of these species, three were determined to have a moderate potential to occur, six were determined to have a low potential to occur, three were determined to be unlikely to occur, and 77 were determined to be 1) absent/not expected to occur within the

Biological Study Area and/or 2) had a lack recent occurrence records (less than 25 years old) documented in the CNDDB within five miles of the Biological Study Area.

Table 3 summarizes the nine listed and/or special status species with moderate or low potential to occur within the Biological Study Area and whether the proposed CCT Expansion project has the potential to result in direct and/or indirect impacts to those species.

### Table 3 Summary of Special Status Species with Potential to Occur and Potential Impacts

| Scientific Name<br>Common Name | Status Federal/State ESA<br>CDFW MHCP Covered | Potential for Direct Impacts | Potential for Indirect Impacts |
|---|---|---|---|
| *Accipiter cooperii*<br>Cooper's hawk | WL, CS | No | Unlikely |
| *Artemisiospiza belli belli*<br>Bell's sparrow | WL, CS | No | Unlikely |
| *Bombus crotchii*<br>Crotch bumble bee | SCE | No | Unlikely |
| *Empidonax traillii extimus*<br>southwestern willow flycatcher | FE, ST, CS | No | No |
| *Icteria virens*<br>yellow breasted chat | SSC, CS | No | Unlikely |
| *Polioptila californica californica*<br>Coastal California Gnatcatcher | FT, CS | No | No |
| *Setophaga petechia*<br>yellow warbler | SSC | No | Unlikely |
| *Vireo bellii pusillus*<br>least Bell's vireo | FE, ST, CS | No | Unlikely |
| *Aspidoscelis hyperythra*<br>orange throated whiptail | SSC | No | No |

ESA = Endangered Species Act; CDFW = California Department of Fish and Wildlife; MHCP = Multiple Habitat Conservation Plan

**Status**

FE = Federal Endangered

FT = Federal Threatened

CS = MHCP Covered Species

ST = State Threatened

SCE = State Candidate Endangered

SSC = CDFW Species of Special Concern

WL = CDFW Watch List

The development footprint of the proposed CCT Expansion project, located within the developed MWRF, lacks suitable habitat for any special status wildlife species to occur. Construction staging areas would be located within previously developed or disturbed areas of the site and within the proposed limits of work. No construction staging would occur near San Marcos Creek, within the limits of work adjacent to wetland buffers, as described in Mitigation Measure 3.4.3 of the Final PEIR, or within areas triggering compliance with the County of San Diego Biological Mitigation and Resource Protection Ordinances (County of San Diego 2010 and 2021). Therefore, no direct impacts to special status wildlife species would result from implementation of the proposed CCT Expansion project. However, the proposed CCT Expansion project could result in potential indirect impacts to special status wildlife species, including nesting birds such as Cooper's hawk, Bell's sparrow,

southern willow flycatcher, yellow breasted chat, yellow warbler, coastal California gnatcatcher, and least bell's vireo as well as Crotch bumble bee. These special status species have not been confirmed or detected within the Biological Study Area based on local, state, and regional resources, although recent focused surveys have not been carried out to confirm presence/absence. In addition, no designated critical habitat for listed species occurs within the Biological Study Area, and the nearest designated critical habitat is located approximately 0.2 mile east of the Biological Study Area, along San Marcos Creek, for coastal California gnatcatcher (USFWS 2023c). Nevertheless, suitable habitat for these species occurs within the Biological Study Area (outside of the direct development footprint), specifically in the surrounding chaparral and Diegan coastal sage scrub as well as in the southern willow scrub habitat that is associated with San Marcos Creek to the south. One species, Cooper's hawk, was also observed flying overhead during the reconnaissance survey on February 21, 2023.

Operation of the existing MWRF causes routine disturbances in the Biological Study Area. However, based on presence of suitable adjacent habitat, the proposed CCT Expansion project could result in indirect impacts to these special status species as the result of construction noise, dust, human presence, nighttime lighting, and a potential increase in predators. Therefore, similar to the Original Project, impacts to special status biological resources under the proposed CCT Expansion project would be potentially significant, and implementation of select provisions of Mitigation Measures 3.4-1b and 3.4-4 from the Final PEIR would be required. Similar to the Original Project, impacts would be reduced to a less-than-significant following implementation of these mitigation measures.

### *Nesting Birds and Raptors*

The proposed CCT Expansion project could adversely affect raptors and other nesting birds protected by the Migratory Bird Treaty Act and California Fish and Game Code if construction occurs while they are present on or adjacent to the proposed CCT Expansion project site. Impacts could result from noise, vibrations, and dust from construction activities that can cause birds to flush out of cover and become exposed to predators or vehicle strikes. Adults may not return to nests, predators may feed on eggs or chicks in unprotected nests, and/or vibrations could cause eggs to fall out of nests. Noise, dust, and vibrations may also cause avian species to leave regular foraging areas that are within and adjacent to the proposed CCT Expansion project site. Therefore, as with the Original Project, the proposed CCT Expansion project would result in potentially significant impacts to nesting birds and raptors, and implementation of Mitigation Measure 3.4-4 would be required. Similar to the Original Project, impacts would be reduced to a less-than-significant with following implementation of this mitigation measure.

### *Riparian Habitat and Sensitive Vegetation Communities*

Five habitat types are present within the Biological Study Area: urban/developed, disturbed, disturbed Diegan coastal sage scrub, southern maritime chapparal, and southern willow scrub. The development footprint of the proposed CCT Expansion project contains urban/developed and disturbed habitats. The other habitats occur outside of the development footprint but within the Biological Study Area.

Habitats are considered sensitive natural communities if they have limited distributions, have high wildlife value, include sensitive species, or are particularly susceptible to disturbance. The MHCP considers urban/developed land cover and disturbed habitat as Group F (least sensitive), and urban/developed land cover and disturbed habitat are not considered sensitive vegetation communities by the CNDDB or CDFW. Chapparal (Group D), Diegan coastal scrub (Group C),

southern maritime chapparal (Group B), and southern willow scrub are considered sensitive (AMEC Earth & Environmental et.al 2003a and 2003b).[2]

Although the direct development footprint itself is classified as urban/developed and does not support riparian habitat or other sensitive natural communities, Diegan coastal sage scrub, southern maritime chapparal, and southern willow scrub habitat are located within the Biological Study Area to the immediate east, west, south and southeast of the direct development footprint, along San Marcos Creek.

Three MHCP-designated sensitive vegetation communities and one state regulated (southern willow scrub) community occur within the Biological Study Area. Southern willow scrub, a riparian vegetation community associated with San Marcos Creek and regulated under California Fish and Game Code and the Clean Water Act, is located less than 100 feet from the MWRF access road. Southern maritime chapparal and Diegan coastal sage scrub communities also occur outside the direct development footprint but in the Biological Study Area in the surrounding open space to the south, east, and west.

No sensitive natural communities or riparian habitat are located within the direct development footprint of the proposed CCT Expansion project. Therefore, impacts to sensitive vegetation communities under the proposed CCT Expansion project would be less than significant, and no mitigation for these impacts would be required, which would be a lesser level of impact than the Original Project.

### *State and Federally Protected Wetlands*

No state or federally protected wetlands are present within the direct development footprint of the proposed CCT Expansion project. Construction activities would be limited to the already disturbed areas within the existing MWRF and along its access road. In addition, the MWRF has been operating adjacent to San Marcos Creek since it was originally permitted and constructed. Therefore, the proposed CCT Expansion project would not result in direct or indirect impacts to state or federally protected wetlands or waterways. Therefore, impacts to state and federally protected wetlands under the proposed CCT Expansion project would be less than significant, and no mitigation for these impacts would be required, which would be a lesser level of impact than the Original Project.

### *Wildlife Movement and Connectivity*

Regionally, the Biological Study Area is located within a "Natural Areas Small – California Essential Habitat Connectivity Essential Connectivity Area" (ECA) (CDFW 2023c; Spencer et. al 2010). ECAs represent principal connections between Natural Landscape Blocks and are regions in which land conservation and management actions should be prioritized to maintain and enhance ecological connectivity. ECAs are mapped based on coarse ecological condition indicators, rather than the needs of particular species and thus serve the majority of species in each region. Within the Biological Study Area, the southern maritime chapparal, Diegan coastal sage scrub, and southern willow scrub habitat (outside the direct development footprint) provides a suitable small-scale corridor for wildlife to travel locally, specifically along San Marcos Creek. Because construction activities for the proposed CCT Expansion project would occur within the existing MWRF and no

[2] The MHCP combines vegetation communities into habitat groups for the purposes of assigning mitigation ratios. The groups include Group A: Wetland/Riparian, Group B: Rare Upland, Group C: Coastal Sage Scrub, Group D: Chaparral, Group E: Annual (Nonnative) Grasslands, and Group F: Other Lands (AMEC et al. 2003b).

vegetation removal is proposed, the proposed CCT Expansion project would not substantially interfere with the movement of wildlife species, with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. Therefore, impacts would be less than significant, and no mitigation for these impacts would be required, similar to the Original Project.

### *Local Policies and Ordinances Protecting Biological Resources*

The Open Space, Conservation and Recreation (OSCR) Element of the City of Carlsbad General Plan and the City's Habitat Management Plan (HMP) (City of Carlsbad 1999 and 2015) as well as the Carlsbad Municipal Code include several applicable policies/ordinances that relate to the protection of biological resources. Table 4 summarizes the project's consistency with these applicable policies and ordinances.

**Table 4 Project Consistency with Applicable Biological Resources Protection Policies and Ordinances**

| Carlsbad General Plan Policy/Ordinance | Project Consistency |
|---|---|
| **Policy 4-G.3** Protect environmentally sensitive lands, wildlife habitats, and rare, threatened or endangered plant and animal communities. | **Consistent.** The proposed CCT Expansion Project would not result in significant direct impacts to any environmentally sensitive lands, wildlife habitats, or threatened plant and animal communities. No critical habitats, listed species, or environmentally sensitive lands occur within the Project Area. |
| **Policy 4-P.9** Maintain and implement the city's Habitat Management Plan (HMP), including the requirement that all development projects comply with the HMP and related documents. Require assessments of biological resources prior to approval of any development on sites with sensitive habitat, as depicted in Figure 4-3. | **Consistent.** The direct development footprint of the proposed CCT Expansion project is developed with an active wastewater treatment facility. The surrounding habitat, which includes the Biological Study Area, is within the boundaries of the City's HMP and is a designated Habitat Management Preserve and considered "Other Open Space" for Preservation of Natural Resources. It is within the boundaries of an existing Hardline Reserve (City of Carlsbad 2015). However, these areas would not be directly impacted by the proposed CCT Expansion project. |
| **Policy 4-P.15** Maintain functional wildlife corridors and habitat linkage in order to contribute to regional biodiversity and the viability of rare, unique or sensitive biological resources throughout the city. | **Consistent.** The direct development footprint of the proposed CCT Expansion project has a history of disturbance and is part of an active wastewater treatment facility. The expansion of existing treatment facilities with the current boundaries of the MWRF would not result in significant impacts to the wildlife corridors or habitat linkages within the surrounding areas, such as San Marcos Creek. |
| **Ordinance 11.12.090. Protection of Trees.** Except as otherwise provided in this chapter, pruning, cutting, trimming or removing any street tree in the city shall require a permit issued by the city manager, acting through the parks and recreation director or designee. | **Consistent.** The proposed CCT Expansion project does not include the removal or trimming of any trees. |

Source: City of Carlsbad 1999, 2015, and 2023

### *Habitat Conservation Plans and Natural Community Conservation Plans*

The Biological Study Area is located within the planning area of the MHCP, specifically within the planning area of the Carlsbad Subarea Plan. The MHCP identifies a series of Focused Planning Areas

within which some lands will be dedicated for the preservation of native and protected habitats. The surrounding habitat, excluding the Project Area, is within a Hardline Reserve or previously permitted area. The Biological Study Area is also within a General Area for Core California gnatcatcher conservation and a Biological Core and Linkage Area San Diego Association of Governments 2003). However, the direct development footprint of the proposed CCT Expansion project has been previously developed and disturbed and is within the existing boundaries of the MWRF. Therefore, the proposed CCT Expansion project would not result in direct impacts that would conflict with the MHCP or City's Subarea Plan. However, as discussed previously under *Special Status Wildlife Species*, the proposed CCT Expansion project could result in potential indirect impacts to special status wildlife species. Therefore, impacts related to consistency with an adopted habitat conservation plan would be potentially significant, similar to the Original Project, and implementation of select provisions of Mitigation Measures 3.4-1b and 3.4-4 from the Final PEIR would be required. As with the Original Project, impacts would be reduced to a less-than-significant following implementation of these mitigation measures.

## Effects and Mitigation Measures

The proposed CCT Expansion Project would not result in new significant impacts related to biological resources and would not increase the severity of significant impacts identified in the Final PEIR. Potential impacts would be less than significant with mitigation incorporated.

As with the Original Project, Mitigation Measures 3.4-1b and 3.4-4 outlined in Section 3.4, *Biological Resources*, of the Final PEIR would be required for the proposed CCT Expansion Project to reduce potential impacts to biological resources to a less-than-significant level, with clarifications to reflect project-specific details as shown in ~~strikeout~~/underline format below. In particular, species-specific mitigation requirements for western yellow-billed cuckoo, burrowing owl, Stephen's kangaroo rat, and other small sensitive mammal species have been removed because the proposed CCT Expansion Project does not have the potential to directly or indirectly impact these species. In addition, mitigation requirements to address direct impacts to coastal California gnatcatcher and least Bell's vireo have been removed because the proposed CCT Expansion Project does not have the potential to result in direct impacts to these species. Furthermore, the requirement of Mitigation Measure 3.4.1b to conduct a habitat assessment for sensitive wildlife species in areas of native habitat within construction zones has been fulfilled through preparation of this Addendum.

### *MM 3.4-1b Surveys and Mitigation for Sensitive Wildlife Species*

Prior to the initiation of construction, ~~the lead agency for that Project component~~ Vallecitos Water District shall conduct habitat assessments for sensitive wildlife species in areas of native habitat within construction zones, with focused surveys in areas where potentially suitable habitat for any species is identified (including but not limited to the coastal California gnatcatcher, least Bell's vireo, southwestern willow flycatcher, and burrowing owl).

~~Focused surveys shall be conducted by a qualified biologist(s) possessing valid permits as necessary, such as an Endangered Species Act Section 10(a)(1)(A) Recovery Permit (herein referred to as a USFWS permitted biologist), and following the required agency approved survey protocols. If the surveys determine the absence of sensitive wildlife species habitats or individuals, no further surveys or mitigation is required.~~

~~In the event that sensitive wildlife species are found on site and/or Critical Habitat for a sensitive species is mapped, and it is infeasible to avoid impacts, mitigation may be required. Authorization for impacts to federally-listed species (incidental take) or Critical Habitats would require a FESA~~

~~Section 7 Consultation (if a federal nexus is established from an "agency action") or a Section 10(a) Habitat Conservation Plan (HCP) (in the absence of a federal nexus) through the USFWS. The Section 7 process requires a Biological Assessment and consultation with the USFWS, which would issue a Biological Opinion. USFWS may consider informal consultation for minimal or temporary impacts.~~

~~During consultation, the USFWS would gather all relevant information concerning the Proposed Project and the potential project-related impacts on the species (i.e., the project applicant would submit a species-specific Biological Assessment), prepare its opinion with respect to whether the project is likely to jeopardize the continued existence of the species (i.e., the USFWS would issue a Biological Opinion), and recommend mitigation/conservation measures where appropriate. Additionally, the need for state regulatory permits (i.e., Fish and Wildlife Code Section 1602 Streambed Alteration Agreement issued by the CDFW) would require either a Consistency Determination or Incidental Take Permit from the CDFW for state-listed species, such as least Bell's vireo, under CESA. If coastal California gnatcatcher, least Bell's vireo, burrowing owl, or Stephen's kangaroo rat are found to occupy the site, one or more of the measures outlined below shall be incorporated into the project dependent on USFWS and/or CDFW approval.~~ Avoidance measures shall also be incorporated to avoid impacts from construction adjacent to any occupied areas. ~~The proposed measures may be refined during the USFWS consultation process.~~

## COASTAL CALIFORNIA GNATCATCHER (CAGN)

- ~~Avoid CAGN occupied habitat to the greatest extent feasible and preserve any mitigation areas in perpetuity, as appropriate (see Mitigation Measure MM 3.4-2 below).~~
- ~~Mitigate for any impacts to CAGN occupied habitat at a minimum 1:1 ratio of habitat restoration or creation either on site and/or off site on land acquired for the purpose of mitigation, or through the purchase of mitigation credits at an agency approved mitigation bank. Purchase of any mitigation credits shall occur prior to any habitat removal. Mitigation on land acquired for mitigation shall include the preservation, creation, restoration, and/or enhancement of similar habitat pursuant to a Habitat Mitigation and Monitoring Plan (HMMP). The HMMP shall be prepared prior to any impacts to the habitat, and shall provide details as to the implementation of the mitigation, maintenance, and future monitoring. The goal of the mitigation shall be to preserve, create, restore, and/or enhance similar habitat with equal or greater function and value than the impacted habitat.~~
- ~~Provide long-term management of mitigation habitat, if appropriate.~~
- ~~Avoid direct mortality of individual CAGN during construction by:~~
  - ~~Removing any vegetation within CAGN occupied habitat outside the breeding season (the breeding season is February 15 to August 31) to the greatest extent feasible; and~~
  - ~~Monitoring by a qualified biologist during vegetation removal to flush out any non-breeding birds away from the clearing activities.~~
- Avoid indirect impacts to CAGN including noise impacts during construction ~~and edge effects post-construction,~~ by implementing measures to buffer and avoid human-wildlife conflicts as appropriate. Proposed measures are as follows:

  *During Construction:*

  - Construction noise shall not exceed 60 dB(A) $L_{eq}$ in avoided occupied coastal California gnatcatcher habitat between February 15 and August 31 unless noise attenuation measures are implemented to reduce noise levels below this level, or the USFWS approves noise levels above this threshold. Noise attenuation measures may include, but are not limited to,

establishing construction set-back buffers, equipment noise mufflers, and noise walls, as determined necessary by an acoustic specialist and in consultation with the project biologist. Monitoring by a qualified biologist shall also occur during construction to ensure noise levels are maintained below the threshold. Alternatively, construction noise levels above 60 dB(A) $L_{eq}$ may be approved by USFWS if monitoring by a USFWS permitted biologist for this species determines that the construction noise is not impacting the expected breeding behavior of the birds.

~~*Post Construction:*~~

- ~~Restricting access to any native habitat areas adjacent to new above ground facilities, such as tanks, for example through installation of a fence around the perimeter and/or sign.~~
- ~~Direction of all night lighting associated with new above-ground facilities away from adjacent habitat.~~
- ~~Implementation of an awareness program to educate the occupants/employees of new above-ground facilities about the conservation values associated with any adjacent habitat areas.~~

### LEAST BELL'S VIREO, SOUTHERN WILLOW FLYCATCHER, AND WESTERN YELLOW-BILLED CUCKOO

- ~~Avoid occupied habitat to the greatest extent feasible and preserve any mitigation areas in-perpetuity, as appropriate (see Mitigation Measure MM 3.4-2).~~
- ~~Mitigate for any impacts to occupied habitat at a minimum 1:1 ratio of habitat restoration or creation either on site and/or off site on land acquired for the purpose of mitigation, or through the purchase of mitigation credits at an agency approved mitigation bank. Purchase of any mitigation credits shall occur prior to any habitat removal. Mitigation on land acquired for mitigation shall include the preservation, creation, restoration, and/or enhancement of similar habitat pursuant to a Habitat Mitigation and Monitoring Plan (HMMP). The HMMP shall be prepared prior to any impacts to the habitat and shall provide details as to the implementation of the mitigation, maintenance, and future monitoring. The goal of the mitigation shall be to preserve, create, restore, and/or enhance similar habitat with equal or greater function and value than the impacted habitat.~~
- ~~Provide long-term management of mitigation habitat, if appropriate~~
- ~~Avoid direct mortality of individual Least Bell's Vireo, Southwestern Willow Flycatcher, or Western Yellow-Billed Cuckoo during construction by:~~
  - ~~Removing any vegetation within occupied habitat outside the breeding season (the breeding season is March 15 to September 15); and~~
  - ~~Monitoring by a qualified biologist during construction in adjacent areas to avoid inadvertent removal of occupied habitat~~
- Avoid indirect impacts to Least Bell's Vireo, Southwestern Willow Flycatcher, or Western Yellow-Billed Cuckoo including noise impacts during construction by implementing the following proposed measures:
  - Construction limits in and around potential habitat shall be delineated with flags and fencing prior to the initiation of any grading or construction activities.
  - Prior to grading and construction, a training program shall be developed and implemented to inform all workers on the project about listed species, sensitive habitats, and the importance of complying with avoidance and minimization measures.

- All construction work shall occur during the daylight hours. The construction contractor shall limit all construction-related activities that would result in high noise levels according to the construction hours determined by the City.
- During all excavation and grading on site, the construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards to reduce construction equipment noise to the maximum extent possible.
- Construction contractor shall place all stationary construction equipment so that emitted noise is directed away from sensitive receptors (i.e., territory for Least Bell's Vireo, Southwestern Willow Flycatcher, and Western Yellow Billed Cuckoo) nearest the project site.
- The construction contractor shall stage equipment in areas that will create the greatest distance between construction-related noise sources and noise sensitive receptors nearest the project site during all project construction.
- Noise from construction activities shall be limited to the extent possible through the maximum use of technology available to reduce construction equipment noise. Project-generated noise, both during construction and after the development has been completed, shall be in compliance with the requirements outlined in any local noise regulations to ensure that noise levels that the riparian area is exposed to do not exceed noise standards for residential areas.
- The project shall be designed to minimize exterior night lighting while remaining compliant with local ordinances related to street lighting. Any necessary lighting (e.g., to light up equipment for security measures), both during construction and after construction has been completed, will be shielded or directed away from the nesting area and are not to exceed 0.5 foot-candles. Monitoring by a qualified lighting engineer (attained by the lead agency for that project component) shall be conducted as needed to verify light levels are below 0.5 foot-candles required within identified, occupied least Bell's vireo territories, both during construction and at the onset of operations. If the 0.5 foot-candles requirement is exceeded, the lighting engineer shall make operational changes and/or install a barrier to alleviate light levels during the breeding season.

**~~BURROWING OWL~~**

- ~~Focused surveys for burrowing owl shall be conducted during the breeding season by a qualified biologist with experience conducting burrowing owl surveys, prior to vegetation clearing or ground disturbing activities. Surveys shall be conducted in suitable habitat as determined by the qualified biologist based on a field assessment of site conditions at the time of the survey, including habitats such as the ruderal and non-native grassland plant communities. The survey methodology shall follow the protocol provided as Appendix D of the Staff Report on Burrowing Owl Mitigation published by the California Department of Fish and Wildlife (March 7, 2012). Pursuant to this protocol four survey visits are required, including at least one site visit between February 15 and April 15, and a minimum of three survey visits at least three weeks apart between April 15 and July 15 (with at least one visit after June 15). The results of the focused surveys are typically considered valid for one year after completion.~~
- ~~If burrowing owls are determined present following focused surveys, occupied burrows shall be avoided to the greatest extent feasible, following the guidelines in the 2012 Staff Report on Burrowing Owl Mitigation including, but not limited to, conducting pre-construction surveys,~~

~~avoiding occupied burrows during the nesting and non-breeding seasons, implementing a worker awareness program, biological monitoring, establishing avoidance buffers, and flagging burrows for avoidance with visible markers. If occupied burrows cannot be avoided, acceptable methods may be used to exclude burrowing owl either temporarily or permanently, pursuant to a Burrowing Owl Exclusion Plan that shall be prepared and approved by CDFW. The Burrowing Owl Exclusion Plan shall be prepared in accordance with the guidelines in the Staff Report on Burrowing Owl Mitigation. Habitat mitigation pursuant to the MSCP shall also be provided for occupied habitats subject to the approval of the implementing agency, at a minimum 1:1 ratio.~~

**~~STEPHEN'S KANGAROO RAT AND OTHER SENSITIVE SMALL MAMMAL SPECIES~~**

- ~~Avoid occupied or suitable habitat to the greatest extent feasible and preserve any mitigation areas in perpetuity, as appropriate (see Mitigation Measure MM 3.4-2 below).~~
- ~~Mitigate for any impacts to occupied habitat at a minimum 2:1 ratio of habitat restoration or creation either on site and/or off site on land acquired for the purpose of mitigation, or through the purchase of mitigation credits at an agency approved mitigation bank. Purchase of any mitigation credits shall occur prior to any habitat removal. Mitigation on land acquired for mitigation shall include the preservation, creation, restoration, and/or enhancement of similar habitat pursuant to a Habitat Mitigation and Monitoring Plan (HMMP). The HMMP shall be prepared prior to any impacts to the habitat, and shall provide details as to the implementation of the mitigation, maintenance, and future monitoring. The goal of the mitigation shall be to preserve, create, restore, and/or enhance similar habitat with equal or greater function and value than the impacted habitat.~~
- ~~Provide long-term management of mitigation habitat.~~
- ~~Avoid direct mortality of individual sensitive small mammals during construction by:~~
  - ~~Installation of exclusionary fencing at the limits of construction within suitable habitat areas; and~~
  - ~~Live-trapping within suitable habitat in construction areas and the relocation of trapped individuals to one or more biologically appropriate receiver sites (defined as suitable habitat that is known to be unoccupied, is below population carrying capacity levels, and/or where scrub vegetation has been restored and colonization by the species has not occurred). Trapping shall be conducted by a USFWS permitted or approved biologist.~~
- ~~Avoid indirect impacts as a result of edge effects post-construction for new above-ground facilities adjacent to suitable habitat areas by implementing measures to buffer and avoid human-wildlife conflicts as appropriate, such as installation of fencing or signage to restrict access, shielding night lighting away from the habitat areas, and educating the occupants/employees of the facilities as to the conservation value of the habitat areas~~

### *MM 3.4-4 Avoid Migratory Bird Nesting Season or Complete Surveys Before Construction Activities*

If feasible, construction within or adjacent to vegetation suitable for migratory birds shall occur outside the nesting season (i.e., construction shall occur between September 1 through January 14) to avoid potential direct and indirect impacts to nesting birds. If vegetation removal is required during the nesting season, a qualified biologist shall survey all suitable habitats for the presence of nesting birds before the commencement of clearing. If any nests are detected, a buffer of at least 300 feet (500 feet for raptors) shall be delineated, flagged, and avoided until the nesting cycle is complete, or

as determined appropriate by the biologist. Biological monitoring shall occur until nesting cycle is complete.

# 3.5 Cultural Resources

| | | Where was Impact Analyzed in the Final PEIR? | Do Proposed Changes Require Major Revisions to the Final PEIR? | Do New Circumstances Require Major Revisions to the Final PEIR? | Any New Information Resulting in New or Substantially More Severe Significant Impacts? | Do Final PEIR Mitigation Measures Address and/or Resolve Impacts? |
|---|---|---|---|---|---|---|
| Would the project: | | | | | | |
| a. | Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5? | Pages 3.5-8 through 3.5-11 | No | No | No | N/A |
| b. | Cause a substantial adverse change in the significance of an archaeological pursuant to §15064.5? | Pages 3.5-11 through 3.5-14 | No | No | No | Yes |
| c. | Disturb any human remains, including those interred outside of formal cemeteries? | Pages 3.5-16 and 3.5-17 | No | No | No | N/A |

## Original Project

The Final PEIR determined the Original Project would result in potentially significant impacts to historical resources, archaeological resources, and human remains. These impacts were determined to be potentially significant due to the Original Project's construction activities that would occur in the vicinity of historical resources and excavation that could affect buried archaeological resources and previously unknown human remains. However, these potentially significant impacts were determined to be mitigated to a less-than-significant level following implementation of Mitigation Measures 3.5-1a, 3.5-1, 3.5-1c, 3.5-1d, 3.5-2a, 3.5-2b, 3.5-2c, 3.5-2d, 3.5-2e, and 3.5-4. These mitigation measures would require preparation of a Phase I Historical Resources Assessment (3.5-1a), historical resources monitoring during construction (3.5-1b), project review and evaluation of historical resources by a qualified historic preservation consultant (3.5-1c and 3.5-1d), preparation of a Phase I Archaeological Resources Assessment (3.5-2a), preparation of a Phase II Archaeological Resources Assessment (3.5-2b), archaeological sensitivity training for construction personnel (3.5-2c), archaeological resource monitoring during construction (3.5-2d), and unanticipated discovery protocols if archaeological resources (3.5-2e) or human remains (3.5-4) are encountered.

## Proposed CCT Expansion Project

The following analysis is based on a Cultural Resources Assessment prepared for the proposed CCT Expansion Project by Rincon Consultants, Inc. in September 2023 (Rincon Consultants, Inc. 2023). To inform the Cultural Resources Assessment, Rincon completed background and archival research, including a review of historical maps, aerial photographs, and written histories of the area, as well as a field survey of the proposed CCT Expansion Project site. Rincon also requested a California Historical Resources Information System records search in February 2023, and a Sacred Lands File

(SLF) search from the Native American Heritage Commission (NAHC) in January 2023, to inform the cultural resources analysis.

The field survey and background research identified one historic-period built-environment property in the proposed CCT Expansion Project site - the MWRF. However, the MWRF was determined ineligible for listing under the National Register of Historic Places and California Register of Historical Resources due to a lack of architectural or historical significance. As such, the MWRF does not qualify as a historical resource. Therefore, the proposed CCT Expansion Project would have no impact on historical resources, and no mitigation would be required, which would be a lesser level of impact than the Original Project.

The field survey and background research concluded no known archaeological resources are within the proposed CCT Expansion Project site. However, one prehistoric archaeological habitation site with two loci is located approximately 10 and 20 meters from the easternmost and westernmost portions of the proposed CCT Expansion Project site, respectively. In addition, a positive SLF search result was received from the NAHC, meaning there is one or more resources of Native American significance identified within the Public Lands Survey System section that includes the proposed CCT Expansion Project site (no specific locational information is provided). As required by Mitigation Measure 3.5-2c of the Final PEIR, Rincon Archaeologist Mark Strother conducted Native American outreach following receipt of the positive SLF result. Mr. Strother contacted Cami Mojado of the San Luis Rey Band of Mission Indians (SLR Band) via email on September 11, 2023, to inquire if the SLR Band would be able to provide insight into the positive SLF result. Mr. Strother followed up with a telephone call on September 13, 2023, during which Ms. Mojado reviewed the California Historical Resources Information System records search results with Mr. Strother. Following this review, Ms. Mojado verbally requested that the SLR Band participate in monitoring of initial project-related ground disturbance associated with the proposed CCT Expansion Project. As a result, the sensitivity of the proposed CCT Expansion Project site for resources of Native American origin is heightened by the positive SLF result and the results of outreach to the San Luis Rey Band of Mission Indians. Therefore, the proposed CCT Expansion Project would have a potentially significant impact to archaeological resources, and, as with the Original Project, Mitigation Measures 3.5-2c, 3.5-2d, and 3.5-2e from the Final PEIR would be required for the proposed CCT Expansion Project. Similar to the Original Project, impacts would be reduced to a less-than-significant with following implementation of these mitigation measures.

No human remains are known to be present within the proposed CCT Expansion Project site. However, the discovery of human remains is always a possibility during ground-disturbing activities. Therefore, as with the Original Project, the proposed CCT Expansion Project would have a potentially significant impact to human remains, and Mitigation Measure 3.5-4 from the Final PEIR would be required. Similar to the Original Project, impacts would be reduced to a less-than-significant level with implementation of this mitigation measure.

## Effects and Mitigation Measures

The proposed CCT Expansion Project would not result in new significant impacts related to cultural resources and would not increase the severity of significant impacts identified in the Final PEIR. Potential impacts would be less than significant with mitigation incorporated.

As with the Original Project, Mitigation Measures 3.5-2c, 3.5-2d, 3.5-2e, and 3.5-4 outlined in Section 3.5, *Cultural Resources*, of the Final PEIR would be required for the proposed CCT Expansion Project to reduce potential impacts to cultural resources to a less-than-significant level, with minor clarifications to reflect project-specific details as shown in ~~strikeout~~/underline format below.

### *MM 3.5-2c Conduct Archaeological Sensitivity Training for Construction Personnel*

~~The lead agency for each project component~~ Vallecitos Water District shall retain a qualified archaeologist and Native American representative from the SLR Band who shall conduct an Archaeological Sensitivity Training for construction personnel prior to commencement of excavation activities. The training session shall be carried out by a cultural resources professional with expertise in archaeology, will focus on how to identify archaeological resources that may be encountered during earthmoving activities, and the procedures to be followed in such an event. The training session will include a Power Point presentation and/or handouts for all attendees. The basic topics to be addressed in the session include: a brief cultural and archaeological history of the area and the Study Area; cultural resource compliance obligations; training in potential resources that may be encountered through the use of photographs or other illustrations; the duties of archaeological and Native American monitors; notification and other procedures to follow upon discovery of resources; and the general steps that would be followed to conduct a salvage investigation if one is necessary.

### *MM 3.5-2d Monitor and Report Construction Excavations for Archeological Resources*

~~The lead agency for each project component~~ Vallecitos Water District shall retain a qualified professional archaeological monitor and Native American monitor from the SLR Band who shall be present during construction excavations such as clearing/grubbing, grading, trenching, or any other construction excavation activity associated with the proposed improvement. The frequency of monitoring shall be based on the rate of excavation and grading activities, proximity to known archaeological resources, the materials being excavated (native versus fill soils), and the depth of excavation, and if found, the abundance and type of archaeological resources encountered. Full-time monitoring can be reduced to part-time inspections if determined adequate by the archaeological and Native American monitors. In the event that archaeological resources are unearthed during ground-disturbing activities, ground-disturbing activities shall be halted or redirected away from the vicinity of the find so that the find can be evaluated. Work shall be allowed to continue outside of the vicinity of the find. All archaeological resources unearthed by project construction activities shall be evaluated by the archaeologist. ~~The Coalition~~ Vallecitos Water District shall coordinate with the archaeologist to develop an appropriate treatment plan for the resources. Treatment may include implementation of archaeological data recovery excavations to remove the resource or preserve it in place. ~~The landowner~~ Vallecitos Water District, in consultation with the ~~Coalition and~~ archaeologist, shall designate repositories in the event that archaeological material is recovered. The archaeological monitor shall prepare a final report at the conclusion of archaeological monitoring. The report shall be submitted to ~~the Coalition~~ Vallecitos Water District, South Coastal Information Center, and representatives of other appropriate or concerned agencies to signify the satisfactory completion of the project and required mitigation measures. The report shall include a description of resources unearthed, if any, evaluation of the resources with respect to the California Register of Historical Resources and CEQA, and treatment of the resources.

### *MM 3.5-2e Cease Ground-Disturbing Activities and Report if Archeological Resources Are Encountered*

If archaeological resources are encountered by construction personnel during implementation of the project, ground-disturbing activities should temporarily be redirected from the vicinity of the find. Recognition of archaeological resources by construction personnel would be based on the training received under Mitigation Measure MM 3.5-2c. ~~The lead agency for each project~~

~~component~~ Vallecitos Water District shall immediately notify a qualified archaeologist of the find if they are not already on site. The archaeologist should coordinate with ~~the Coalition~~ Vallecitos Water District as to the immediate treatment of the find until a proper site visit and evaluation is made by the archaeologist and Native American representative of the SLR Band if the find is of Native American origin. Treatment may include the implementation of an archaeological testing or data recovery program. All archaeological resources recovered will be documented on California DPR Site Forms to be filed with the SCIC. The archaeologist shall prepare a final report about the find to be filed with ~~the Coalition~~ Vallecitos Water District and SCIC, as required by the California Office of Historic Preservation. The report shall include documentation and interpretation of resources recovered. Interpretation will include full evaluation of the resource's eligibility for listing in the CRHR and whether the resource qualifies as a unique archaeological resource. ~~The landowner~~ Vallecitos Water District, in consultation with ~~the Coalition and~~ the archaeologist, shall designate repositories to curate any material in the event that resources are recovered. The archaeologist shall also determine the need for archaeological monitoring for any ground-disturbing activities in the area of the find thereafter.

### *MM 3.5-4 Cease Ground-Disturbing Activities and Notify County Coroner If Human Remains Are Encountered*

If human remains are unearthed during implementation of the ~~Proposed Project~~ proposed CCT Expansion Project, ~~the lead agency for the project component~~ Vallecitos Water District shall comply with State Health and Safety Code Section 7050.5. ~~The lead agency for the project component~~ Vallecitos Water District shall immediately notify the County Coroner and no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission (NAHC). The NAHC shall then identify the person(s) thought to be the Most Likely Descendent (MLD). The MLD may, with the permission of ~~the lead agency~~ Vallecitos Water District, inspect the site of the discovery of the Native American remains and may recommend to ~~the lead agency~~ Vallecitos Water District means for treating or disposing, with appropriate dignity, the human remains and any associated funerary objects. The MLD shall complete their inspection and make their recommendation within 48 hours of being granted access by ~~the lead agency~~ Vallecitos Water District to inspect the discovery. The recommendation may include the scientific removal and nondestructive analysis of human remains and cultural items associated with Native American burials. Upon the discovery of the Native American remains, ~~the landowner~~ Vallecitos Water District shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until ~~the lead agency~~ Vallecitos Water District has discussed and conferred, as prescribed in this mitigation measure, with the MLD regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. ~~The lead agency~~ Vallecitos Water District shall discuss and confer with the descendants all reasonable options regarding the descendants' preferences for treatment. MLDs in the region typically recommend reburial of the remains as close to the original burial location as feasible accompanied by a ceremony. The MLD shall file a record of the reburial with the NAHC and the project archaeologist shall file a record of the reburial with the California Historical Resources Information System South Coastal Information Center.

If the NAHC is unable to identify a MLD, or the MLD identified fails to make a recommendation, or ~~the landowner~~ Vallecitos Water District rejects the recommendation of the MLD and the mediation

provided for in Subdivision (k) of Section 5097.94, if invoked, fails to provide measures acceptable to ~~the lead agency~~ Vallecitos Water District, ~~the lead agency~~ Vallecitos Water District or its authorized representative shall inter the human remains and items associated with Native American human remains with appropriate dignity on the facility property in a location not subject to further and future subsurface disturbance.

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# 3.6 Energy

| | Where was Impact Analyzed in the Final PEIR? | Do Proposed Changes Require Major Revisions to the Final PEIR? | Do New Circumstances Require Major Revisions to the Final PEIR? | Any New Information Resulting in New or Substantially More Severe Significant Impacts? | Do Final PEIR Mitigation Measures Address and/or Resolve Impacts? |
|---|---|---|---|---|---|
| Would the project: | | | | | |
| a. Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? | N/A | No | No | No | Yes |
| b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency? | N/A | No | No | No | Yes |

## Original Project

The Final PEIR did not include a separate section analyzing potential impacts related to the topic of Energy because it was not required under the CEQA Guidelines in effect at the time. The topic of energy use was, however, addressed in the Air Quality and Greenhouse Gas Emissions sections of the Final PEIR in relation to the Original Project's potential emissions from energy use. Pursuant to the most recent version of the CEQA Guidelines in which energy is included in the Appendix G checklist as a separate resource category, a standalone discussion of energy is included in this Addendum pursuant.

## Proposed CCT Expansion Project

The proposed CCT Expansion Project would require construction-related energy consumption in the form of petroleum-based fuels used to power off-road construction vehicles and equipment on the proposed CCT Expansion Project site, construction worker travel to and from the site, and vehicles used to transport materials to and from the site.

Energy use during construction would be temporary in nature, and construction equipment used would be typical of similar-sized construction projects in the region. In addition, construction contractors would be required to comply with the provisions of California Code of Regulations Title 13 Sections 2449 and 2485, which prohibit diesel-fueled commercial motor vehicles and off-road diesel vehicles from idling for more than five minutes and would minimize unnecessary fuel consumption. Construction equipment would be subject to the United States Environmental Protection Agency Construction Equipment Fuel Efficiency Standard, which would also minimize inefficient, wasteful, or unnecessary fuel consumption. These practices would result in the efficient use of energy necessary to construct the project. In the interest of cost-efficiency, construction contractors also would not utilize fuel in a manner that is wasteful or unnecessary. Therefore,

construction of the proposed CCT Expansion Project would not involve the inefficient, wasteful, and unnecessary use of energy during construction, and impacts would be less than significant.

Operation of the proposed CCT Expansion Project would result in a net increase in electricity consumption of approximately 3,200 kilowatt-hours per day due to the additional wastewater treatment capacity. The increase in electricity demand is necessary for the MWRF to meet existing and future water demands, and electricity consumption would be consistent with similar water reclamation facilities throughout California. The proposed CCT Expansion Project also would not result in additional vehicle fuel demands because the maintenance needs of the MWRF would not increase as compared to existing conditions and no new employees would be required to operate the proposed CCT Expansion Project. Therefore, operation of the proposed CCT Expansion Project would not involve the inefficient, wasteful, and unnecessary use of energy during construction, and impacts would be less than significant.

Senate Bill 100 mandates 100 percent clean electricity for California by 2045. The proposed CCT Expansion Project would be powered by the electricity grid and would eventually be powered by renewable energy mandated by Senate Bill 100. The proposed CCT Expansion Project would therefore not conflict with state or local plans for renewable energy or energy efficiency, and no impact would occur.

## Effects and Mitigation Measures

The proposed CCT Expansion Project would not result in new significant impacts related to energy and would not increase the severity of significant impacts identified in the Final PEIR. Potential impacts would be less than significant, and no mitigation measures would be required.

# 3.7 Geology and Soils

| | Where was Impact Analyzed in the Final PEIR? | Do Proposed Changes Require Major Revisions to the Final PEIR? | Do New Circumstances Require Major Revisions to the Final PEIR? | Any New Information Resulting in New or Substantially More Severe Significant Impacts? | Do Final PEIR Mitigation Measures Address and/or Resolve Impacts? |
|---|---|---|---|---|---|
| Would the project: | | | | | |
| a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: | | | | | |
| 1. 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? | Pages 3.6-5 and 3.6-6 | No | No | No | N/A |
| 2. Strong seismic ground shaking? | Pages 3.6-5 and 3.6-6 | No | No | No | N/A |
| 3. Seismic-related ground failure, including liquefaction? | Pages 3.6-5 and 3.6-6 | No | No | No | N/A |
| 4. Landslides? | Pages 3.6-5 and 3.6-6 | No | No | No | N/A |
| b. Result in substantial soil erosion or the loss of topsoil? | Page 3.6-5 | No | No | No | N/A |
| 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? | Page 3.6-7 | No | No | No | N/A |

| | | Where was Impact Analyzed in the Final PEIR? | Do Proposed Changes Require Major Revisions to the Final PEIR? | Do New Circumstances Require Major Revisions to the Final PEIR? | Any New Information Resulting in New or Substantially More Severe Significant Impacts? | Do Final PEIR Mitigation Measures Address and/or Resolve Impacts? |
|---|---|---|---|---|---|---|
| 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? | Pages 3.6-7 and 3.6-8 | No | No | No | N/A |
| e. | Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater? | Page 3.6-5 | No | No | No | N/A |
| f. | Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | Pages 3.5-14 through 3.5-16 | No | No | No | Yes |

## Original Project

The Final PEIR determined the Original Project would result in no impact regarding substantial soil erosion or the loss of topsoil because standard construction and planning processes would reduce soil loss during construction. The Final PEIR also determined the Original Project would result in no impact to septic tanks or alternative wastewater disposal systems because no septic tanks or alternative wastewater disposal systems were included in the Original Project.

The Final PEIR determined the Original Project would result in potentially significant impacts involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, landslides, unstable soils, and expansive soils. This determination was primarily informed by the Original Project's location within a seismically-active area prone to seismic-related events. However, potentially significant impacts were determined to be mitigated to a less-than-significant level following implementation of Mitigation Measures 3.6-1a and 3.6-1b from the Final PEIR, which require assessment of liquefaction potential and incorporation of protective measures (3.6-1a) and stabilization of slopes during construction (3.6-1b).

The Final PEIR determined projects involving ground disturbance in geologic units with moderate, moderate to high, or high potential for retaining fossils have the potential to significantly impact previously unknown paleontological resources. However, this potentially significant impact was determined to be mitigated to a less-than-significant level following implementation of Mitigation Measures 3.5-3a and 3.5-3b, which require paleontological sensitivity training (3.5-3a) and paleontological monitoring (3.5-3b).

## Proposed CCT Expansion Project

Similar to the Original Project, the proposed CCT Expansion Project is located in a seismically-active area, as is most of southern California. According to the County of San Diego's *Guidelines for Determining Significance: Geologic Hazards* (County of San Diego 2007), the proposed CCT Expansion Project site is not located in an area susceptible to seismic shaking, liquefaction, or landslides. The proposed CCT Expansion Project would not include components that would exacerbate seismic risks related to fault rupture, ground shaking, liquefaction, or landslides due to compliance with applicable design and construction standards. Therefore, impacts involving risk of loss, injury, or death, due to fault rupture, ground shaking, liquefaction, or landslides would be less than significant for the proposed CCT Expansion Project, which would be a lesser level of impact than the Original Project.

The proposed CCT Expansion Project site is located in an area susceptible to expansive soils (County of San Diego 2007). However, the proposed CCT Expansion Project would not construct habitable structures on expansive soils. Construction of the proposed CCT Expansion Project would comply with all applicable codes, standards, and regulations designed to protect people and structures from adverse effects of expansive soil. Impacts involving expansive soils would be less than significant, which would be a lesser level of impact than the Original Project.

Similar to the Original Project, the proposed CCT Expansion Project would not require septic tanks or alternative wastewater disposal systems, and no impact would occur.

The proposed CCT Expansion Project site is located on Quaternary young alluvial floodplain deposits (Kennedy et al. 2007), which have a low paleontological potential pursuant to the Guidelines for Determining Significance: Paleontological Resources (County of San Diego 2009) and the Carlsbad Tribal, Cultural, and Paleontological Resources Guidelines (ECORP Consulting, Inc. 2017). However, given the volume (approximately 4,920 cubic yards) and depth (up to approximately 30 feet) of excavations required for the proposed CCT Expansion Project, additional geologic units that underlie Quaternary young alluvial floodplain deposits would likely be impacted during construction. Based on the geology of the region surrounding the proposed CCT Expansion Project site (Kennedy et al. 2007), the underlying geologic units that would likely be impacted would be Pleistocene alluvial floodplain deposits and metasedimentary and metavolcanic rocks (undivided). Based on the Cultural Resources Assessment prepared for the Original Project in support of the Final PEIR (and included as Appendix E of that document), Pleistocene alluvial floodplain deposits have low paleontological potential, and metasedimentary and metavolcanic rocks (undivided) may have high or no paleontological potential. The metasedimentary beds of this latter geologic unit have high paleontological potential, whereas metavolcanic beds have no paleontological potential. Therefore, as with the Original Project, the proposed CCT Expansion Project would result in potentially significant impacts to paleontological resources, and Mitigation Measures 3.5-3a and 3.5-3b from the Final PEIR would be required, which would reduce impacts to paleontological resources by requiring paleontological sensitivity training for construction personnel and paleontological monitoring during construction. Similar to the Original Project, following implementation of these mitigation measures, impacts would be reduced to a less-than-significant level.

## Effects and Mitigation Measures

The proposed CCT Expansion Project would not result in new significant impacts related to geology or soils and would not increase the severity of significant impacts identified in the Final PEIR. Potential impacts would be less than significant with mitigation incorporated.

As with the Original Project, Mitigation Measures 3.5-3a and 3.5-3b outlined in Section 3.5, *Cultural Resources*, of the Final PEIR would be required for the proposed CCT Expansion Project to reduce potential impacts to paleontological resources to a less-than-significant level, with minor clarifications to reflect project-specific details as shown in ~~strikeout~~/underline format below.

### *MM 3.5-3a Conduct Paleontological Sensitivity Training for Construction Personnel*

~~The lead agency for each project component~~ Vallecitos Water District shall retain a qualified paleontologist who shall conduct a Paleontological Sensitivity Training for construction personnel prior to commencement of excavation activities. The training session shall be carried out by a cultural resources professional with expertise in paleontology, and will focus on how to identify paleontological resources that may be encountered during earthmoving activities, and the procedures to be followed in such an event. The training session will include a Power Point presentation and/or handouts for all attendees. The basic topics to be addressed in the session include: a brief cultural and geologic history of the area and the ~~Coalition's~~ District's cultural resource compliance obligations; training in potential resources that may be encountered through the use of photographs or other illustrations; the duties of paleontological monitors; notification and other procedures to follow upon discovery of resources; and the general steps that would be followed to conduct a salvage investigation if one is necessary.

### *MM 3.5-3b Monitor and Report Construction Excavations for Paleontological Resources*

A qualified professional paleontologist shall be retained to monitor excavation activities ~~in certain areas of the project that would encounter fossiliferous geologic units that have been assigned "moderate", "moderate to high", and "high" potential as detailed in this report~~. Monitoring shall consist of visually inspecting fresh exposures of rock for larger fossil remains and, where appropriate, collecting wet or dry screened sediment samples of promising horizons for smaller fossil remains. The frequency of monitoring shall be based on the rate of excavation and grading activities, proximity to known paleontological resources or fossiliferous geologic units, the materials being excavated (native versus fill soils), and the depth of excavation, and if found, the abundance and type of paleontological resources encountered. Full-time monitoring can be reduced to part-time inspections or ceased entirely if determined adequate by the paleontological monitor.

If a potential fossil is found, the grading and excavation activities shall be temporarily diverted or redirected away from or around the area of the exposed fossil to facilitate evaluation and, if necessary, salvage. At the paleontologist's discretion and to reduce any construction delay, the grading and excavation contractor shall assist in removing rock samples for initial processing.

Any fossils encountered and recovered shall be prepared to the point of identification and catalogued before they are donated to their final repository. Any fossils collected shall be donated to a public, non-profit institution with a research interest in the materials, such as the San Diego Natural History Museum. Accompanying notes, maps, and photographs shall also be filed at the repository.

Upon completion of the above activities, the paleontologist shall prepare a report summarizing the results of the monitoring and salvaging efforts, the methodology used in these efforts, as well as a description of the fossils collected and their significance. The report shall be submitted to ~~the lead agency for the project component~~ Vallecitos Water District, the San Diego Natural History Museum, and representatives of other appropriate or concerned agencies to signify the satisfactory completion of the Project and required mitigation measures.

# 3.8 Greenhouse Gas Emissions

| | Where was Impact Analyzed in the Final PEIR? | Do Proposed Changes Require Major Revisions to the Final PEIR? | Do New Circumstances Require Major Revisions to the Final PEIR? | Any New Information Resulting in New or Substantially More Severe Significant Impacts? | Do Final PEIR Mitigation Measures Address and/or Resolve Impacts? |
|---|---|---|---|---|---|
| Would the project: | | | | | |
| a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? | Pages 3.7-8 to 3.7-10 | No | No | No | Yes |
| b. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases? | Page 3.7-11 | No | No | No | Yes |

## Original Project

The Final PEIR determined the Original Project would result in a significant and unavoidable impact related to the generation of greenhouse gas (GHG) emissions because future construction and operational details of the Original Project were unknown at the time of adoption. The Final PEIR also determined the Original Project would result in a significant and unavoidable impact related to consistency with applicable GHG emission reduction plans. The Final PEIR required implementation of Mitigation Measure 3.3-2, which involves project-level CEQA review and implementation of feasible minimization measures to reduce GHG emissions to the maximum extent feasible.

## Proposed CCT Expansion Project

GHG emissions for construction and operation of the proposed CCT Expansion Project were estimated using CalEEMod version 2022.1.1.17 with the assumptions described in Section 3.3, *Air Quality*. For the purposes of this GHG analysis, it was assumed the proposed CCT Expansion Project would have a 50-year lifetime. Construction emissions were amortized over this estimated 50-year lifetime because construction emissions are confined to a relatively short period of time in relation to the overall life of the proposed CCT Expansion Project. The proposed CCT Expansion Project would not introduce new sources of operational GHG emissions from mobile sources or area sources. Project operation would result in a net increase in electricity consumption of approximately 3,200 kilowatt-hours per day, which would result in additional GHG emissions associated with electricity generation as compared to existing conditions.

Construction and operational emissions associated with the proposed CCT Expansion Project are shown in Table 5. As shown therein, total emissions resulting from the proposed CCT Expansion Project would be approximately 317 metric tons (MT) of carbon dioxide equivalent ($CO_2e$) per year, which would not exceed the threshold of 2,500 MT of $CO_2e$ per year used in the PEIR. These

operational emissions are conservative because they do not account for energy use that would move further towards 100 percent renewable energy by 2045 in accordance with state regulations.

### Table 5 Combined Annual GHG Emissions

| Emission Source | Annual Emissions (MT of $CO_2e$) |
|---|---|
| **Construction** | |
| 2024 | 131 |
| 2025 | 80 |
| **Construction Total** | **211** |
| **Amortized over 50 years** | **5 per year** |
| **Operational** | |
| Energy | 312 per year |
| **Operational Total** | **312 per year** |
| **Total** | |
| **Total Emissions** | **317 per year** |
| Threshold | 2,500 per year |
| **Threshold Exceeded?** | **No** |

MT = metric tons; $CO_2e$ = carbon dioxide equivalents

Notes: Emissions modeling was completed using CalEEMod. See Appendix A for modeling results.

A consideration of the Final PEIR was that the Original Project would offset imported potable water use with locally-produced recycled and advanced treated water. Despite GHG emissions reductions from offsetting of imported water, operational impacts were determined to be significant and unavoidable due to the programmatic nature of the Final PEIR and the speculative nature of future developments planned as part of the Original Project. Like the Original Project, the proposed CCT Expansion Project would offset GHG emissions from imported water through increased availability and use of non-potable water. Nevertheless, it is possible that construction and operational GHG emissions for other new and upgraded facilities considered in the Original Project in addition to the emissions generated by the proposed CCT Expansion Project would collectively exceed the threshold of 2,500 MT of $CO_2e$ per year, resulting in increased emissions. Therefore, like the Original Project, the proposed CCT Expansion Project would result in a significant and unavoidable impact regarding potential to generate GHG emissions. Pursuant to Mitigation Measure 3.3-2 in the Final PEIR, each project must incorporate GHG emission reduction measures to minimize emissions to the extent practicable, even if the individual project does not exceed the GHG emission threshold, to reduce the Original Project's collective GHG emissions impact. However, operation of the proposed CCT Expansion Project would not result in emissions from transportation or area sources, and there are no practicable measures that can feasibly be incorporated into the proposed CCT Expansion Project pursuant to Mitigation Measure 3.3-2. Energy consumption would represent the only operational source of GHG emissions related to the proposed CCT Expansion Project. As discussed in Section 3.6, *Energy*, Senate Bill 100 mandates 100 percent clean electricity for California by 2045. The proposed CCT Expansion Project would be powered by the electricity grid and would eventually be powered by renewable energy mandated by Senate Bill 100.

The proposed CCT Expansion Project would be consistent with energy-related policies set forth in the 2022 Scoping Plan due to San Diego Gas & Electric's compliance with Senate Bill 100 requirements. Other policies set forth in the 2022 Scoping Plan are not applicable because the

project does not include any other operational sources of GHG emissions. In addition, as noted above, the project would result in minor GHG emissions from construction compared to the applicable threshold, indicating that the project's GHG emission would not conflict with plans to reduce GHG emissions. Nevertheless, it is possible that construction and operational GHG emissions for other new and upgraded facilities considered in the Original Project in addition to the emissions generated by the proposed CCT Expansion Project would collectively exceed the threshold of 2,500 MT of $CO_2e$ per year, resulting in a conflict with GHG emission reduction plans. Therefore, like the Original Project, the proposed CCT Expansion Project would result in a significant and unavoidable impact regarding consistency with applicable GHG emission reduction plans.

## Effects and Mitigation Measures

The proposed CCT Expansion Project would not result in new significant impacts related to GHG emissions and would not increase the severity of significant impacts identified in the Final PEIR. Potential impacts would be less than significant with mitigation incorporated.

As with the Original Project, Mitigation Measure 3.3-2 outlined in Section 3.3, *Air Quality*, of the Final PEIR would be required for the proposed CCT Expansion Project to reduce potential impacts to GHG emissions to a less-than-significant level, with minor clarifications to reflect project-specific details. The text of this mitigation measure is included in Section 3.3, *Air Quality*, of this Addendum.

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# 3.9 Hazards and Hazardous Materials

| | Where was Impact Analyzed in the Final PEIR? | Do Proposed Changes Require Major Revisions to the Final PEIR? | Do New Circumstances Require Major Revisions to the Final PEIR? | Any New Information Resulting in New or Substantially More Severe Significant Impacts? | Do Final PEIR Mitigation Measures Address and/or Resolve Impacts? |
|---|---|---|---|---|---|
| Would the project: | | | | | |
| a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | Pages 3.8-8 and 3.8-9 | No | No | No | N/A |
| 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? | Pages 3.8-9 and 3.8-10 | No | No | No | N/A |
| c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school? | Page 3.8-11 | No | No | No | N/A |
| d. Be located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? | Pages 3.8-11 through 3.8-13 | No | No | No | N/A |
| e. For a project located in 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? | Page 3.8-14 | No | No | No | N/A |

| | | Where was Impact Analyzed in the Final PEIR? | Do Proposed Changes Require Major Revisions to the Final PEIR? | Do New Circumstances Require Major Revisions to the Final PEIR? | Any New Information Resulting in New or Substantially More Severe Significant Impacts? | Do Final PEIR Mitigation Measures Address and/or Resolve Impacts? |
|---|---|---|---|---|---|---|
| f. | Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | Pages 3.8-14 and 3.8-15 | No | No | No | N/A |
| g. | Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires? | Pages 3.8-15 and 3.8-16 | No | No | No | Yes |

## Original Project

The Final PEIR determined the Original Project would result in potentially significant impacts involving the routine transport, use, or disposal of hazardous materials; the accidental release of hazardous materials into the environment; the emission of hazardous materials or substances within 0.25 mile of an existing or proposed school; and the location of known hazardous materials sites that could create a hazard to the public or the environment. This determination was primarily informed by the routine transport, storage, use, and disposal of hazardous materials during Original Project operation, the large number of nearby schools, and the number of hazardous material sites located near the Original Project locations. However, potentially significant impacts were determined to be mitigated to a less-than-significant level following implementation of Mitigation Measures 3.8-1, 3.8-2a, 3.8-2b, and 3.8-2c, which require preparation of a Hazardous Materials Business Plan (3.8-1), identification of potential hazardous materials exposure (3.8-2a), preparation of a Hazardous Materials Management and Spill Prevention and Control Plan (3.8-2b), and preparation of a Contaminated Soil Contingency Plan (3.8-2c).

The Final PEIR also determined the Original Project would result in potentially significant impacts involving impairment or physical interference with an adopted emergency response or emergency evacuation plan, as well as the potential exposure of people or structures to wildland fires. This determination was informed by the temporary blocking of roadways and driveways required during construction of the Original Project and the location of the Original Project within fire hazard zones. However, these potentially significant impacts were determined to be mitigated to a less-than-significant level following implementation of Mitigation Measures 3.8-7 and 3.8-8, which require maintenance of emergency response strategies during Original Project construction (3.8-7) and implementation of construction best management practices to prevent fire hazards (3.8-8).

Additionally, the Final PEIR determined the Original Project would have a less-than-significant impact involving a safety hazard or excessive noise from airports because the Original Project would be consistent with applicable airport-related policies from the McClellan-Palomar Airport and Oceanside Municipal Airport Land Use Compatibility Plans.

## Proposed CCT Expansion Project

Similar to the Original Project, construction and operation of the proposed CCT Expansion Project would involve the transport, use, and disposal of hazardous materials. The proposed CCT Expansion Project would be required to comply with applicable standards that regulate the transport, use, and disposal of hazardous materials, and adherence to these standards would minimize the proposed CCT Expansion Project's potential to create a significant hazard to the public or the environment through the transport, use, disposal, or accidental release of hazardous materials. Therefore, the proposed CCT Expansion Project would have a less-than-significant impact, and no mitigation would be required, which would be a lesser level of impact than the Original Project.

The nearest school to the proposed CCT Expansion Project site is the Discovery Island Preschool, located approximately 0.28 mile to the east. Additionally, there are no hazardous material sites located on or adjacent to the proposed CCT Expansion Project site (California State Water Resources Control Board 2023; California Department of Toxic Substances Control 2023). Therefore, the proposed CCT Expansion Project would not involve the emissions of hazardous materials within 0.25 mile of an existing or proposed school and would not be located on a known hazardous materials site. Impacts would be less than significant, and no mitigation would be required, which would be a lesser level of impact than the Original Project.

The nearest airport to the proposed CCT Expansion Project site is the McClellan-Palomar Airport, located approximately three miles to the northwest. Due to the distance between this airport and the proposed CCT Expansion Project site, the proposed CCT Expansion Project would have a less-than-significant impact involving a safety hazard or excessive noise from airports, and no mitigation would be required, similar to the Original Project.

Construction vehicles would access the proposed CCT Expansion Project site via ingress and egress gates at 7941 Corintia Street in Carlsbad. Construction workers would park on the proposed CCT Expansion Project site at the MWRF, or beyond the eastern access gate, adjacent to South Rancho Santa Fe Road. The nearest major roadway to the proposed CCT Expansion Project site, South Rancho Santa Fe Road, is not identified as an evacuation route or heavily congested roadway within the San Diego County Multi-Jurisdictional Hazard Mitigation Plan (County of San Diego 2023). Therefore, the addition of construction vehicles to this roadway and surrounding roads would not result in impairment or interference with an adopted emergency response or emergency evacuation plan. Therefore, the proposed CCT Expansion Project would have a less-than-significant impact and no mitigation would be required, which would be a lesser level of impact than the Original Project.

The proposed CCT Expansion Project site is located within a Very High Fire Hazard Severity Zone (California Department of Forestry and Fire Protection 2023). Although the proposed CCT Expansion Project would not include the construction of habitable structures, there remains a potential for construction workers to be exposed to wildland fires. Therefore, Mitigation Measure 3.8-8 from the Final PEIR would be required for the proposed CCT Expansion Project, which would reduce wildland fire risk by implementing best management practices for fire prevention during construction activities. Similar to the Original Project, following implementation of this mitigation measure, impacts related to wildland fires under the proposed CCT Expansion Project would be reduced to a less-than-significant level.

## Effects and Mitigation Measures

The proposed CCT Expansion Project would not result in new significant impacts related to hazards or hazardous materials and would not increase the severity of significant impacts identified in the Final PEIR. Potential impacts would be less than significant with mitigation incorporated.

As with the Original Project, Mitigation Measure 3.8-8 outlined in Section 3.8, *Hazards and Hazardous Materials*, of the Final PEIR would be required for the proposed CCT Expansion Project to reduce potential impacts involving wildland fires to a less-than-significant level, with minor clarifications to reflect project-specific details as shown in ~~strikeout~~/underline format below.

### *MM 3.8-8 Prevention of Fire Hazards*

~~The lead agency for each project component~~ Vallecitos Water District shall require that construction equipment staging areas shall be cleared of dried vegetation or other material that could ignite, and equipment that heats up during use shall be stored only in areas cleared of vegetation. All equipment shall be kept in good working order and equipped with spark arrestors to prevent potential sparks, and a spotter shall be utilized during all welding activities. Fire extinguishers shall be made available at all construction sites, and construction employees shall be trained in proper fire safety and prevention measures.

# 3.10 Hydrology and Water Quality

| | Where was Impact Analyzed in the Final PEIR? | Do Proposed Changes Require Major Revisions to the Final PEIR? | Do New Circumstances Require Major Revisions to the Final PEIR? | Any New Information Resulting in New or Substantially More Severe Significant Impacts? | Do Final PEIR Mitigation Measures Address and/or Resolve Impacts? |
|---|---|---|---|---|---|
| Would the project: | | | | | |
| a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality? | Pages 3.9-20 through 3.9-23 | No | No | No | N/A |
| b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? | Pages 3.9-23 through 3.9-28 | No | No | No | N/A |
| 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: | Pages 3.9-28 and 3.9-29 | No | No | No | N/A |
| (i) Result in substantial erosion or siltation on- or off-site | Pages 3.9-28 and 3.9-29 | No | No | No | N/A |
| (ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site | Pages 3.9-28 and 3.9-29 | No | No | No | N/A |
| (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 | Pages 3.9-28 and 3.9-29 | No | No | No | N/A |

| | | Where was Impact Analyzed in the Final PEIR? | Do Proposed Changes Require Major Revisions to the Final PEIR? | Do New Circumstances Require Major Revisions to the Final PEIR? | Any New Information Resulting in New or Substantially More Severe Significant Impacts? | Do Final PEIR Mitigation Measures Address and/or Resolve Impacts? |
|---|---|---|---|---|---|---|
| | (iv) Impede or redirect flood flows? | Pages 3.9-28 and 3.9-29 | No | No | No | N/A |
| d. | In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? | Pages 3.9-20; 3.9-28 through 3.9-30 | No | No | No | N/A |
| e. | Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? | Pages 3.9-23 through 3.9-28 | No | No | No | N/A |

## Original Project

The Final PEIR determined the Original Project would result in potentially significant impacts involving the violation of water quality standards or waste discharge requirements, the substantial depletion of groundwater supplies or interference with groundwater recharge, the alteration of existing drainage patterns such that runoff would exceed stormwater drainage system capacity, and the potential for inundation by seiche, tsunami, or mudflow. This determination was primarily informed by the Original Project's potential to introduce pollutants to nearby water sources during construction and operation, the extraction of groundwater for potable use, the addition of impervious surfaces for Original Project facilities, and the Original Project's location in a tsunami hazard area. However, potentially significant impacts were determined to be mitigated to a less-than-significant level following implementation of Mitigation Measures 3.8-1, 3.9-3, 3.9-4, 3.6-1a, and 3.6-1b, which require preparation of a Hazardous Materials Business Plan (3.8-1), potable use technical investigations (3.9-3), improvement of stormwater capacity at aboveground facilities (3.9-4), assessment of liquefaction potential and incorporation of protective measures (3.6-1a), and stabilization of slopes during construction (3.6-1b).

Additionally, the Final PEIR determined the Original Project would result in no impact involving flood hazards, and a less-than-significant impact involving the use of groundwater for non-potable facilities.

## Proposed CCT Expansion Project

Construction and operational activities under the proposed CCT Expansion Project would continue to be subject to state, regional and local laws and regulations related to soil erosion, stormwater runoff, and surface water quality. Adherence to these standards would minimize the proposed CCT Expansion Project's potential to substantially degrade surface or groundwater quality, such that impacts would be less than significant and no mitigation would be required, which would be a lesser level of impact than the Original Project.

The proposed CCT Expansion Project would expand the treatment capacity of the MWRF, a water reclamation facility that produces recycled water utilizing wastewater generated in Vallecitos Water District's service area. The proposed CCT Expansion Project would not require a new source of water, including groundwater, and would not increase existing demand for water resources. Therefore, similar to the Original Project, which the Final EIR determined would have less-than-significant impacts to groundwater supplies from non-potable use facilities, the proposed CCT Expansion Project, as a wastewater treatment facility, would have a less-than-significant impact involving the substantial depletion of groundwater supplies or interference with groundwater recharge, and would not conflict with a water quality control plan or sustainable groundwater management plan.

The proposed CCT Expansion Project would not involve the alteration of the course of a stream or river. Additionally, the proposed CCT Expansion Project site is located within the existing MWRF and is currently developed with impervious surfaces. Thus, the proposed CCT Expansion Project would not increase impervious surfaces such that substantial erosion, siltation, or runoff would occur. Therefore, the proposed CCT Expansion Project would have a less-than-significant impact involving erosion, siltation, or runoff, and no mitigation would be required, which would be a lesser level of impact than the Original Project.

The proposed CCT Expansion Project site is not located in a flood or tsunami hazard area (Federal Emergency Management Agency 2023; California Geological Survey 2023). There is no potential for seiche on the proposed CCT Expansion Project site due to the lack of a significant water body in the immediate vicinity. Therefore, the proposed CCT Expansion Project would result in no impact involving flooding or the risk of pollutant release during inundation, and no mitigation would be required, which would be a lesser level of impact than the Original Project.

## Effects and Mitigation Measures

The proposed CCT Expansion Project would not result in new significant impacts related to hydrology or water quality and would not increase the severity of significant impacts identified in the Final PEIR. Potential impacts would be less than significant, and no mitigation measures would be required.

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# 3.11 Land Use and Planning

| | Where was Impact Analyzed in the Final PEIR? | Do Proposed Changes Require Major Revisions to the Final PEIR? | Do New Circumstances Require Major Revisions to the Final PEIR? | Any New Information Resulting in New or Substantially More Severe Significant Impacts? | Do Final PEIR Mitigation Measures Address and/or Resolve Impacts? |
|---|---|---|---|---|---|
| Would the project: | | | | | |
| a. Physically divide an established community? | Page 3.10-9 | No | No | No | N/A |
| 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? | Pages 3.10-9 and 3.10-10 | No | No | No | N/A |

## Original Project

The Final PEIR determined the Original Project would result in a potentially significant impact involving conflicts with applicable land use plans, policies or regulations adopted for the purpose of avoiding or mitigating an environmental effect. This determination was primarily informed by the Original Project's excavation activities, during construction, which would occur in jurisdictions with Local Coastal Programs that regulate such excavation activities. However, this potentially significant impact was determined to be mitigated to a less-than-significant level following implementation of Mitigation Measure 3.1-1b, which require screening analyses for the protection of scenic resources such that Original Project construction would not conflict with applicable land use regulations. Additionally, the Final PEIR determined the Original Project would have no impact involving the physical division of an established community.

## Proposed CCT Expansion Project

Similar to the Original Project, the proposed CCT Expansion Project would not construct or alter roadways or other features in such a manner that would physically divide an established community. No impact would occur, and no mitigation would be required.

The proposed CCT Expansion Project would be located within the MWRF, a water treatment facility. Under the City's General Plan, the MWRF has a land use designation of Public, "P" (City of Carlsbad 2015). Approved land uses for the "P" designation include public utilities. Considering the proposed CCT Expansion Project would expand the MWRF within the facility's existing footprint, the proposed CCT Expansion Project would not introduce new land uses or operational activities that would conflict with the "P" land use designation. The proposed CCT Expansion Project would represent a continuation of existing operational activities, and as such, would not conflict with applicable land use plans, policies or regulations adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, the proposed CCT Expansion Project would have a less-than-

significant impact, and no mitigation would be required, which would be a lesser level of impact than the Original Project.

## Effects and Mitigation Measures

The proposed CCT Expansion Project would not result in new significant impacts related to land use and planning and would not increase the severity of significant impacts identified in the Final PEIR. Potential impacts would be less than significant, and no mitigation measures would be required.

# 3.12 Mineral Resources

| | Where was Impact Analyzed in the Final PEIR? | Do Proposed Changes Require Major Revisions to the Final PEIR? | Do New Circumstances Require Major Revisions to the Final PEIR? | Any New Information Resulting in New or Substantially More Severe Significant Impacts? | Do Final PEIR Mitigation Measures Address and/or Resolve Impacts? |
|---|---|---|---|---|---|
| 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? | Pages 3.11-3 and 3.11-4 | No | No | No | N/A |
| 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? | Pages 3.11-4 and 3.11-5 | No | No | No | N/A |

## Original Project

The Final PEIR determined the Original Project would result in no impact to mineral resources because the Original Project would not involve mineral extraction and would not impede access to mineral resources.

## Proposed CCT Expansion Project

Similar to the Original Project, the proposed CCT Expansion Project would not involve the extraction of mineral resources. According to the City's General Plan, the proposed CCT Expansion Project site is not located in or adjacent to an open space area with major mineral resources (City of Carlsbad 2015). Thus, the proposed CCT Expansion Project would not result in the loss of mineral resources and would not impede access to mineral resources. Similar to the Original Project, no impacts to mineral resources would occur under the proposed CCT Expansion Project.

## Effects and Mitigation Measures

The proposed CCT Expansion Project would not result in new significant impacts related to mineral resources and would not increase the severity of significant impacts identified in the Final PEIR. Potential impacts would be less than significant, and no mitigation measures would be required.

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# 3.13 Noise

| | Where was Impact Analyzed in the Final PEIR? | Do Proposed Changes Require Major Revisions to the Final PEIR? | Do New Circumstances Require Major Revisions to the Final PEIR? | Any New Information Resulting in New or Substantially More Severe Significant Impacts? | Do Final PEIR Mitigation Measures Address and/or Resolve Impacts? |
|---|---|---|---|---|---|
| Would the project: | | | | | |
| a. Generate 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? | Pages 3.12-10 to 3.12-12 | No | No | No | Yes |
| b. Generate excessive groundborne vibration or groundborne noise levels? | Pages 3.12-13 to 3.12-14 | No | No | No | Yes |
| c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels? | Page 3.12-9 | No | No | No | N/A |

## Original Project

The Final PEIR determined the Original Project would result in potentially significant impacts involving the potential to generate noise levels in excess of applicable standards, excessive groundborne vibration or groundborne noise levels, and substantial temporary/periodic and permanent increases in ambient noise levels in the Original Project site vicinity above existing levels. This determination was primarily informed by the speculative nature of construction duration, location, intensity, and proximity to sensitive receptors. However, the Final EIR determined potentially significant impacts would be mitigated to a less-than-significant level with implementation of Mitigation Measures 3.12-1a, 3.12-1b, 3.12-1c, and 3.12-2, which require noise and vibration control during construction (3.12-1a), pre-construction notification to residents within 500 feet of construction (3.12-1b), noise and vibration minimization measures during operation (3.12-1c), and geotechnical evaluation and mitigation (3.12-2).

Additionally, the Final PEIR determined the Original Project would have a less-than-significant impact involving exposure of sensitive receptors to excessive noise near a public-use airport or

private airstrip because the Original Project would not include inhabited structures or facilities and would be consistent with applicable General Plans, which are themselves consistent with airport-related policies from the applicable Airport Land Use Compatibility Plans.

## Proposed CCT Expansion Project

Similar to the Original Project, construction of the proposed CCT Expansion Project would result in noise generation by construction equipment and haul trucks. Although unlikely, construction of the proposed CCT Expansion Project may also include the potential for minor rock blasting if granite is encountered in the subgrade; however, these activities would be temporary and intermittent. In addition, because they would occur in the subgrade, noise would be reduced through attenuation of surrounding topographic features. These activities would also occur far from the nearest residences, located 380 feet away. Nevertheless, because construction noise could exceed established standards, construction of the proposed CCT Expansion Project would generate a substantial temporary increase in ambient noise levels in the vicinity of the MWRF, similar to the Original Project. Therefore, Mitigation Measures 3.12-1a and 3.12-1b from the Final PEIR would be required for the proposed CCT Expansion Project, which would reduce noise impacts by implementing noise and vibration control measures during construction. Similar to the Original Project, following implementation of this mitigation measure, impacts related to construction noise under the proposed CCT Expansion Project would be reduced to a less-than-significant level.

Operation of the proposed CCT Expansion Project would not include any new noise-generating equipment and therefore would not generate a substantial permanent increase in ambient noise levels in the vicinity of the MWRF in excess of applicable standards. As such, no impact would occur, which would be a lesser level of impact than the Original Project, and no mitigation would be required.

Similar to the Original Project, construction of the proposed CCT Expansion Project would result in groundborne vibration generation by construction equipment. However, vibration-generating activities would occur approximately 380 feet from the nearest offsite structures (single-family residences) and greater than 50 feet from existing on-site structures. Therefore, vibration generated by construction activities would not exceed thresholds for human annoyance or damage to buildings, and this impact would be less than significant, which would be a lesser level of impact than the Original Project.

The nearest airport to the proposed CCT Expansion Project site is the McClellan-Palomar Airport, located approximately three miles to the northwest. Due to the distance between this airport and the proposed CCT Expansion Project site, the proposed CCT Expansion Project would have a less-than-significant impact involving excessive noise from airports, similar to the Original Project.

## Effects and Mitigation Measures

The proposed CCT Expansion Project would not result in new significant noise and vibration impacts and would not increase the severity of significant impacts identified in the Final PEIR. Potential impacts would be less than significant with mitigation incorporated.

As with the Original Project, Mitigation Measures 3.12-1a, 3.12-1b, and 3.12-2 outlined in Section 3.12, *Noise*, of the Final PEIR would be required for the proposed CCT Expansion Project to reduce potential impacts involving construction noise and vibration to a less-than-significant level, with minor clarifications to reflect project-specific details as shown in ~~strikeout~~/<u>underline</u> format below.

### *MM 3.12-1a Noise and Vibration Control During Construction*

~~The Coalition members~~ Vallecitos Water District shall incorporate into contract specifications the following noise and vibration control measures:

- Impact equipment (e.g., jack hammers, pavement breakers, and rock drills) used for project construction will be hydraulically or electrically powered whenever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatically powered tools is unavoidable, an exhaust muffler on the compressed air exhaust would be used. This muffler can lower noise levels from the exhaust by up to 10 dBA. External jackets on the tools themselves would be used where feasible, and this could achieve a reduction of 5 dBA. Quieter procedures will be used such as drilling rather than impact equipment whenever feasible
- Wherever possible, sonic or vibratory pile drivers will be used instead of impact pile drivers. If sonic or vibratory pile drivers are not feasible, acoustical enclosures will be provided as necessary to reduce noise levels. Engine and pneumatic exhaust controls on pile drivers will be required as necessary to ensure that exhaust noise from pile driver engines are minimized to the extent feasible. Where feasible, pile holes will be pre-drilled to reduce potential noise and vibration impacts. No impact pile drivers shall be used in the vicinity of sensitive receptors unless necessary. For above-ground facilities, temporary noise barriers may be erected at some locations to reduce noise impacts to residents adjacent to construction sites.
- Comply with compaction standards for backfill. Vibration generated during soil compaction may be minimized by using a small compactor.
- During sheetpile driving for the trench excavation, use the following measures: pushing the sheetpile in as far as possible with the excavator CAT before using the vibrator; using a small, hand-operated vibratory hammer or one with a different operational frequency to further reduce the vibration potential; flooding the soils before tamping with the vibrator; and/or operating the vibratory CAT with “throttling” when a vibrator must be used.
- All equipment and trucks used for project construction shall use the best available noise control techniques (including mufflers, use of intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds) and be maintained in good operating condition to minimize construction noise impacts. All internal combustion engine-drive equipment shall be fitted with intake and exhaust mufflers which are in good condition.
- Unnecessary idling of internal combustion engines shall be prohibited. In practice, this would mean turning off equipment if it would not be used for five or more minutes.
- Stationary noise-generating construction equipment, such as air compressors and generators, shall be located as far as possible from homes and businesses.
- Staging areas shall be located as far as feasibly possible from sensitive receptors.
- For construction activities anticipated to generate noise above local standards even with the noise attenuation measures listed above, timing and length of construction activities generating excessive noise shall be adjusted to maintain average or impulsive noise levels within acceptable limits, as set forth in applicable local regulations.

### *MM 3.12-1b Pre-Construction Notification*

Prior to construction, written notification to residents within 500 feet of the proposed facilities undergoing construction shall be provided, identifying the type, duration, and frequency of construction activities. Notification materials shall also identify a mechanism for residents to

register complaints with ~~Coalition members~~ Vallecitos Water District if construction related noise impacts should occur.

# 3.14 Population and Housing

| | Where was Impact Analyzed in the Final PEIR? | Do Proposed Changes Require Major Revisions to the Final PEIR? | Do New Circumstances Require Major Revisions to the Final PEIR? | Any New Information Resulting in New or Substantially More Severe Significant Impacts? | Do Final PEIR Mitigation Measures Address and/or Resolve Impacts? |
|---|---|---|---|---|---|
| Would the project: | | | | | |
| a. Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)? | Pages 3.13-3 and 3.13-4 | No | No | No | N/A |
| b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? | Page 3.13-3 | No | No | No | N/A |

## Original Project

The Final PEIR determined the Original Project would result in no impact involving the displacement of substantial numbers of people or housing and a less-than-significant impact involving the potential to induce substantial population growth.

## Proposed CCT Expansion Project

The proposed CCT Expansion Project, like the Original Project, does not include construction of residences or the creation of substantial employment opportunities. As with the Original Project, the proposed CCT Expansion Project would not require demolition of existing housing or create long-term disturbances to residential land uses that would lead to the displacement of substantial numbers of people and necessitate construction of replacement housing. Therefore, similar to the Original Project, the proposed CCT Expansion Project would result in no impacts to population and housing.

## Effects and Mitigation Measures

The proposed CCT Expansion Project would not result in new significant impacts related to population or housing and would not increase the severity of significant impacts identified in the Final PEIR. Potential impacts would be less than significant, and no mitigation measures would be required.

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# 3.15 Public Services

| | | Where was Impact Analyzed in the Final PEIR? | Do Proposed Changes Require Major Revisions to the Final PEIR? | Do New Circumstances Require Major Revisions to the Final PEIR? | Any New Information Resulting in New or Substantially More Severe Significant Impacts? | Do Final PEIR Mitigation Measures Address and/or Resolve Impacts? |
|---|---|---|---|---|---|---|
| Would the project: | | | | | | |
| a. | Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: | | | | | |
| | 1 Fire protection? | Pages 3.14-6 and 3.14-7 | No | No | No | N/A |
| | 2 Police protection? | Pages 3.14-6 and 3.14-7 | No | No | No | N/A |
| | 3 Schools? | Pages 3.14-6 and 3.14-7 | No | No | No | N/A |
| | 4 Parks? | Pages 3.14-6 and 3.14-7 | No | No | No | N/A |
| | 5 Other public facilities? | Pages 3.14-6 and 3.14-7 | No | No | No | N/A |

## Original Project

The Final PEIR determined the Original Project would result in a potentially significant impact to fire and police protection services due to increases in emergency response times caused by temporary road closures during Original Project construction. This potentially significant impact would be reduced to a less-than-significant level following implementation of Mitigation Measure 3.16-1, which requires a traffic management plan during construction activities.

## Proposed CCT Expansion Project

The proposed CCT Expansion Project, like the Original Project, would not include residential or commercial development that would directly induce population growth or change existing demand for public services. The proposed CCT Expansion Project also would not expand future potable water supplies and therefore would not indirectly induce population growth such that population growth and associated additional demand of public services would be indirectly induced. As discussed in Section 3.9, *Hazards and Hazardous Materials*, the addition of construction vehicles to roadways surrounding the proposed CCT Expansion Project site would not interfere with emergency response operations. Therefore, the proposed CCT Expansion Project would result in no impact on public services, which would be a lesser level of impact than the Original Project.

## Effects and Mitigation Measures

The proposed CCT Expansion Project would not result in new significant impacts related to public services and would not increase the severity of significant impacts identified in the Final PEIR. Potential impacts would be less than significant, and no mitigation measures would be required.

# 3.16 Recreation

| | Where was Impact Analyzed in the Final PEIR? | Do Proposed Changes Require Major Revisions to the Final PEIR? | Do New Circumstances Require Major Revisions to the Final PEIR? | Any New Information Resulting in New or Substantially More Severe Significant Impacts? | Do Final PEIR Mitigation Measures Address and/or Resolve Impacts? |
|---|---|---|---|---|---|
| Would the project: | | | | | |
| a. 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? | Page 3.15-3 | No | No | No | N/A |
| b. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? | Page 3.15-4 | No | No | No | N/A |

## Original Project

The Final PEIR determined the Original Project would result in no impact regarding the increased use of existing recreational facilities such that physical deterioration would be accelerated and no impact involving the construction or expansion of recreational facilities that might have an adverse physical effect on the environment. The Final PEIR determined the Original Project would have a potentially significant impact to recreational facilities during construction due to potential noise, vibration, and roadway closures that could affect right-of-way of nearby recreational facilities. However, this potentially significant impact would be reduced to a less-than-significant level following implementation of Mitigation Measures 3.1-1a, 3.1-1b, 3.12-1a, 3.12-1c, and 3.15-1. These measures would require restoration of disturbed areas associated with pipeline and associated belowground facility installation to their pre-construction conditions (3.1-1a), design of aboveground facilities to minimize visual interruptions (3.1-1b), construction noise reduction (3.12-1a and 3.12-1c), and minimization of storage of construction equipment near recreational facilities (3.15-1).

## Proposed CCT Expansion Project

The nearest recreational facility to the proposed CCT Expansion Project site is the La Costa Canyon Park, located approximately 1.5 miles southwest of the proposed CCT Expansion Project site. The proposed CCT Expansion Project, like the Original Project, would not directly or indirectly induce population growth such that demand for existing neighborhood or regional parks or other recreational facilities would increase. The proposed CCT Expansion Project would not increase or require the construction or expansion of recreational facilities. Therefore, the proposed CCT

Expansion Project would have no impact on recreational facilities, which would be a lesser level of impact than the Original Project.

## Effects and Mitigation Measures

The proposed CCT Expansion Project would not result in new significant impacts related to recreation and would not increase the severity of significant impacts identified in the Final PEIR. Potential impacts would be less than significant, and no mitigation measures would be required.

# 3.17 Transportation

| | | Where was Impact Analyzed in the Final PEIR? | Do Proposed Changes Require Major Revisions to the Final PEIR? | Do New Circumstances Require Major Revisions to the Final PEIR? | Any New Information Resulting in New or Substantially More Severe Significant Impacts? | Do Final PEIR Mitigation Measures Address and/or Resolve Impacts? |
|---|---|---|---|---|---|---|
| Would the project: | | | | | | |
| a. | Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities? | Pages 3.16-4 through 3.16-7 | No | No | No | N/A |
| b. | Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)? | N/A | No | No | No | N/A |
| c. | Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)? | Pages 3.16-5 and 3.16-6 | No | No | No | N/A |
| d. | Result in inadequate emergency access? | Page 3.16-6 | No | No | No | N/A |

## Original Project

The Final PEIR determined the Original Project would result in potentially significant impacts involving conflict with applicable circulation system programs, plans, ordinances, and policies; transportation hazards due to incompatible uses; and inadequate emergency access. This determination was primarily informed by the Original Project's construction activities in roadway rights-of-way, temporary changes to intersections and roadways during construction, and construction-related lane closures and traffic that could impede emergency access. However, potentially significant impacts were determined to be mitigated to a less-than-significant level following implementation of Mitigation Measures 3.8-7, 3.16-1, and 3.16-4, which require maintenance of emergency response strategies during construction (3.8-7), preparation of a Traffic Management Plan during construction (3.16-1), and preparation of a Rail Crossing Plan (3.16-4).

## Proposed CCT Expansion Project

Construction vehicles would access the proposed CCT Expansion Project site via ingress and egress gates at 7941 Corintia Street in Carlsbad. Construction workers would park on the proposed CCT Expansion Project site at the MWRF, or beyond the eastern access gate, adjacent to South Rancho Santa Fe Road. The proposed CCT Expansion Project would increase traffic on local roadways through the addition of construction vehicles; however, this impact would be temporary and would

cease upon the completion of construction activities. As discussed in Section 3.9, *Hazards and Hazardous Materials*, the addition of construction vehicles to roadways surrounding the proposed CCT Expansion Project site would not interfere with emergency response operations. The proposed CCT Expansion Project would not involve changes to the existing roadway system, including construction within roadway rights-of-way or lane closures, that would alter existing circulation patterns. Therefore, the proposed CCT Expansion Project would result in less-than-significant impacts involving conflicts with circulation system programs, plans, policies, and ordinances; transportation hazards; and inadequate emergency access, and no mitigation would be required, which would be a lesser level of impact than the Original Project.

CEQA Guidelines Section 15064.3(b), which was added to the CEQA Guidelines as part of the update adopted by the State in November 2018, defines acceptable criteria for analyzing transportation impacts under CEQA. It states that land use projects with vehicle miles traveled (VMT) exceeding an applicable threshold of significance may result in a significant transportation impact and that projects that decrease VMT compared to existing conditions should be presumed to have a less-than-significant transportation impact. The Final PEIR, certified in 2015 prior to the 2018 CEQA Guidelines updates, did not include a VMT analysis. Nevertheless, the proposed CCT Expansion Project would expand the treatment capacity of the existing MWRF but would not require additional employees who would increase VMT associated with MWRF operations. Therefore, the proposed CCT Expansion Project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3(b), and impacts would be less than significant.

## Effects and Mitigation Measures

The proposed CCT Expansion Project would not result in new significant impacts related to transportation and would not increase the severity of significant impacts identified in the Final PEIR. Potential impacts would be less than significant, and no mitigation measures would be required.

# 3.18 Tribal Cultural Resources

| | Where was Impact Analyzed in the Final PEIR? | Do Proposed Changes Require Major Revisions to the Final PEIR? | Do New Circumstances Require Major Revisions to the Final PEIR? | Any New Information Resulting in New or Substantially More Severe Significant Impacts? | Do Final PEIR Mitigation Measures Address and/or Resolve Impacts? |
|---|---|---|---|---|---|
| Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in a Public Resources Code Section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: | | | | | |
| 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)? | Pages 3.5-11 through 3.5-14; 3.5-16; 3.5-17 | No | No | No | Yes |
| 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. | Pages 3.5-11 through 3.5-14; 3.5-16; 3.5-17 | No | No | No | Yes |

Although not included in the Final PEIR, a discussion of tribal cultural resources is included in this Addendum pursuant to the most recent version of the CEQA Guidelines. Changes to the CEQA Guidelines requiring analysis of tribal cultural resources took effect July 2015. Because the Draft PEIR was published prior to July 2015, an analysis of impacts to tribal cultural resources was not required. The analysis below is included for informational purposes.

## Original Project

Impacts related to tribal cultural resources were not analyzed as a stand-alone issue area in the Final PEIR. However, the Final PEIR analyzed impacts to cultural resources, which include archaeological resources that may be considered tribal cultural resources. The Final PEIR determined the Original Project would result in a potentially significant impact to buried

archaeological resources due to excavation during Original Project construction that could damage or destroy buried resources. However, this potentially significant impact was determined to be mitigated to a less-than-significant level following implementation of Mitigation Measures 3.5-2a, 3.5-2b, 3.5-2c, 3.5-2d, and 3.5-2e, which require preparation of a Phase I Archaeological Resources Assessment (3.5-2a), preparation of a Phase II Archaeological Resources Assessment (3.5-2b), archaeological sensitivity training for construction personnel (3.5-2c), archaeological resource monitoring during construction (3.5-2d), and unanticipated discovery protocols if archaeological resources are encountered (3.5-2e).

## Proposed CCT Expansion Project

The following analysis is based on a Cultural Resources Assessment prepared for the proposed CCT Expansion Project by Rincon Consultants, Inc. in September 2023 (Rincon Consultants, Inc. 2023). As part of the Cultural Resources Assessment, Rincon requested a SLF search from the NAHC in January 2023 as well as a contact list of Native Americans culturally affiliated with the proposed CCT Expansion Project site vicinity.

The NAHC responded to Rincon's SLF request on February 15, 2023, stating that the results of the SLF search were positive, with instructions to contact the San Luis Rey Band of Mission Indians. A positive SLF result is returned if any resources of Native American significance are identified within the Public Lands Survey System section that includes the proposed CCT Expansion Project site, but no specific locational information is provided. As required by Mitigation Measure 3.5-2c of the Final PEIR, Rincon Archaeologist Mark Strother conducted Native American outreach following receipt of the positive SLF result. During a telephone call on September 13, 2023, Ms. Mojado reviewed the California Historical Resources Information System records search results with Mr. Strother. Following this review, Ms. Mojado verbally requested that the SLR Band participate in monitoring of initial project-related ground disturbance associated with the proposed CCT Expansion Project.

Although no known tribal cultural resources are within the proposed CCT Expansion Project site, the sensitivity of the proposed CCT Expansion Project site for resources of Native American origin is heightened by the positive SLF result and the results of outreach to the SLR Band, who requested Native American monitoring during initial project-related ground disturbance. Therefore, as with the Original Project, Mitigation Measures 3.5-2c, 3.5-2d, 3.5-2e, and 3.5-4 from the Final PEIR would be required. Impacts to tribal cultural resources would be reduced to a less-than-significant level following implementation of these mitigation measures.

## Effects and Mitigation Measures

The proposed CCT Expansion Project would not result in new significant impacts related to tribal cultural resources and would not increase the severity of significant impacts identified in the Final PEIR. Potential impacts would be less than significant with mitigation incorporated.

As with the Original Project, Mitigation Measures 3.5-2c, 3.5-2d, 3.5-2e, and 3.5-4 outlined in Section 3.5, *Cultural Resources*, of the Final PEIR would be required for the proposed CCT Expansion Project to reduce potential impacts to tribal cultural resources to a less-than-significant level, with minor clarifications to reflect project-specific details. The text of these mitigation measures is included in Section 3.5, *Cultural Resources*, of this Addendum.

# 3.19 Utilities and Service Systems

| | Where was Impact Analyzed in the Final PEIR? | Do Proposed Changes Require Major Revisions to the Final PEIR? | Do New Circumstances Require Major Revisions to the Final PEIR? | Any New Information Resulting in New or Substantially More Severe Significant Impacts? | Do Final PEIR Mitigation Measures Address and/or Resolve Impacts? |
|---|---|---|---|---|---|
| Would the project: | | | | | |
| a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects? | Pages 3.17-6 and 3.17-7 | No | No | No | N/A |
| b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years? | Page 3.17-7 | No | No | No | N/A |
| 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? | Page 3.17-6 | No | No | No | N/A |
| 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? | Page 3.17-5 | No | No | No | N/A |
| e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste? | Page 3.17-5 | No | No | No | N/A |

## Original Project

The Final PEIR determined the Original Project would result in a potentially significant impact involving the construction of new stormwater drainage facilities. This determination was primarily informed by the Original Project's potential for aboveground facilities to affect drainage on a long-term basis. However, this potentially significant impact was determined to be mitigated to a less-than-significant level following implementation of Mitigation Measure 3.9-4, which requires improvement of stormwater capacity at aboveground facilities. Additionally, the Final PEIR determined the Original Project would have less-than-significant impacts involving the construction or expansion of new water or wastewater facilities, the exceedance of wastewater treatment capacity, and insufficient water supplies. The Final PEIR also determined the Original Project would have no impact involving solid waste generation and compliance with solid waste regulations.

## Proposed CCT Expansion Project

The proposed CCT Expansion Project would expand the treatment capacity of the MWRF, an existing wastewater treatment facility, the environmental effects of which are analyzed in this Addendum. As discussed throughout this Addendum, the proposed CCT Expansion Project would not result in significant and unavoidable environmental impacts. Therefore, the proposed CCT Expansion Project would not result in the expansion of a wastewater treatment facility that would cause significant environmental effects, and no additional impacts would occur.

The proposed CCT Expansion Project would not require a new source of water or increase water consumption at the MWRF. The proposed CCT Expansion Project may result in minor utility relocations to accommodate the chlorine contact tank expansion, but these relocations would occur within the proposed CCT Expansion Project site and their environmental impacts have been evaluated throughout this Addendum. In addition, although the proposed CCT Expansion Project would result in an increase in electricity consumption at the MWRF, no new or expanded electric power facilities are anticipated to be required to serve this additional demand. Thus, the proposed CCT Expansion Project would not necessitate the construction or expansion of new water, electric power, natural gas, or telecommunications facilities. Impacts would be less than significant, and no mitigation would be required, similar to the Original Project.

The proposed CCT Expansion Project site is currently paved, and construction on the site would not result in the addition of impervious surfaces that could result in additional flows to stormwater drainage facilities. As such, the proposed CCT Expansion Project would not necessitate the construction or expansion of new stormwater drainage facilities. Impacts would be less than significant, and no mitigation would be required, which would be a lesser level of impact than the Original Project.

Following construction of the proposed CCT Expansion Project, operational activities at the MWRF would be substantially similar to existing conditions. The MWRF would generate similar levels of solid waste that would be adequately served by existing local infrastructure and would be remain in compliance with federal, state, and local management and reduction statutes and regulations related to solid waste. Therefore, similar to the Original Project, the proposed CCT Expansion Project would have no impact involving the generation of excess solid waste or conflict with solid waste regulations.

## Effects and Mitigation Measures

The proposed CCT Expansion Project would not result in new significant impacts related to utilities or service systems and would not increase the severity of significant impacts identified in the Final PEIR. Potential impacts would be less than significant, and no mitigation measures would be required.

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# 3.20 Wildfire

| | Where was Impact Analyzed in the Final PEIR? | Do Proposed Changes Require Major Revisions to the Final PEIR? | Do New Circumstances Require Major Revisions to the Final PEIR? | Any New Information Resulting in New or Substantially More Severe Significant Impacts? | Do Final PEIR Mitigation Measures Address and/or Resolve Impacts? |
|---|---|---|---|---|---|
| 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? | Pages 3.8-15 and 3.8-16 | No | No | No | Yes |
| 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? | Pages 3.8-15 and 3.8-16 | No | No | No | Yes |
| 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? | Pages 3.8-15 and 3.8-16 | No | No | No | Yes |
| d. Expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes? | Pages 3.8-15 and 3.8-16 | No | No | No | Yes |

The Original Project's wildfire impacts were evaluated in Section 3.9, *Hazards and Hazardous Materials*, of the Final PEIR. Although a separate chapter evaluating wildfire impacts was not included in the Final PEIR, a separate discussion of wildfire is included in this Addendum pursuant to the most recent version of the CEQA Guidelines in which wildfire is included in the Appendix G checklist as a separate resource category.

## Original Project

The Final PEIR determined the Original Project would result in a potentially significant impact involving the potential exposure of people or structures to wildland fires. This determination was informed by the Original Project's location within fire hazard zones. However, this potentially significant impact was determined to be mitigated to a less-than-significant level following implementation of Mitigation Measure 3.8-8, which requires implementation of construction best management practices to prevent fire hazards.

## Proposed CCT Expansion Project

As discussed in Section 3.9, *Hazards and Hazardous Materials*, the proposed CCT Expansion Project site is located within a Very High Fire Hazard Severity Zone (California Department of Forestry and Fire Protection 2023). The proposed CCT Expansion Project would involve expansion of the chlorine contact tanks within the existing developed boundary of the MWRF and would not include components that would exacerbate post-fire risks of flooding/landslides or require installation or maintenance of associated infrastructure that would result in temporary or ongoing impacts to the environment. However, construction activities may have the potential to exacerbate fire risk, given the location of the proposed CCT Expansion Project site in a Very High Fire Hazard Severity Zone. Consequently, although the proposed CCT Expansion Project would not include the construction of habitable structures, there remains a potential for MWRF workers to be exposed to wildfires. Therefore, Mitigation Measure 3.8-8 from the Final PEIR would be required for the proposed CCT Expansion Project, which would reduce wildfire risk through implementation of best management practices for fire prevention during construction activities. Similar to the Original Project, following implementation of this mitigation measure, impacts related to wildfires would be reduced to a less-than-significant level.

## Effects and Mitigation Measures

The proposed CCT Expansion Project would not result in new significant impacts related to wildfire and would not increase the severity of significant impacts identified in the Final PEIR. Potential impacts would be less than significant with mitigation incorporated.

As with the Original Project, Mitigation Measure 3.8-8 outlined in Section 3.8, *Hazards and Hazardous Materials*, of the Final PEIR would be required for the proposed CCT Expansion Project to reduce potential impacts involving wildfires to a less-than-significant level, with minor clarifications to reflect project-specific details. The text of this mitigation measure is included in Section 3.9, *Hazards and Hazardous Materials*, of this Addendum.

# 3.21 Mandatory Findings of Significance

| | | Where was Impact Analyzed in the Final PEIR? | Do Proposed Changes Require Major Revisions to the Final PEIR? | Do New Circumstances Require Major Revisions to the Final PEIR? | Any New Information Resulting in New or Substantially More Severe Significant Impacts? | Do Final PEIR Mitigation Measures Address and/or Resolve Impacts? |
|---|---|---|---|---|---|---|
| a. | Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | Pages 5-19 through 5-23 | No | No | No | Yes |
| 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)? | Pages 5-23 and 5-24 | No | No | No | Yes |
| c. | Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? | Page 5-24 | No | No | No | Yes |

As discussed throughout Sections 3.1 through 3.20, the proposed CCT Expansion Project would result in no new or substantially more severe significant direct or indirect impacts beyond those identified in the previously certified Final PEIR for the Original Project. No new reasonably foreseeable future projects have been identified within proximity to the proposed CCT Expansion Project site that were not previously considered in the cumulative impacts analysis in the Final PEIR. Therefore, the proposed CCT Expansion Project would have no new or substantially more severe significant impacts in terms of its potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory; or have potentially significant cumulative impacts. Mitigation measures from the Final PEIR would reduce potential environmental effects that may affect human beings, as discussed in Section 3.3, *Air Quality*, 3.9, *Hazards and Hazardous Materials*, Section 3.13, *Noise*, and Section 3.20, *Wildfire*, such that these impacts would be less than significant.

# 4 Conclusion

As discussed in detail in the preceding sections, potential impacts associated with the Modified Project are consistent with potential impacts characterized and mitigated for in the certified Final PEIR for the Original Project. Substantive revisions to the Final EIR are not necessary because no new significant environmental impacts or significant environmental impacts of substantially greater severity than previously described would occur as a result of the proposed CCT Expansion Project. Therefore, the following determinations have been found to be applicable:

- No further evaluation of environmental impacts is required for the proposed CCT Expansion Project;
- No Subsequent EIR is necessary pursuant to CEQA Guidelines Section 15162; and
- This Addendum is the appropriate level of environmental analysis and documentation for the proposed CCT Expansion Project in accordance with CEQA Guidelines Section 15164.

Therefore, Vallecitos Water District concludes that the analyses conducted, the conclusions reached, and the mitigation measures in the Final PEIR certified on October 21, 2015, by Olivenhain Municipal Water District, remain valid. The proposed CCT Expansion Project would remain subject to all applicable, previously-adopted mitigation measures included in the certified Final PEIR for the Original Project, as outlined throughout this Addendum and with minor modifications to reflect project-specific details and recent changes in regulations. An updated MMRP that includes the only the mitigation measures applicable to the proposed CCT Expansion Project with the project-specific modifications detailed throughout this Addendum is included as Appendix C. Pursuant to CEQA Guidelines Section 15164(c), this Addendum will be included in the public record for the proposed CCT Expansion Project. Documents related to this Addendum will be available at Vallecitos Water District at 201 Vallecitos De Oro, San Marcos, California 92069.

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# Appendix A

Air Quality and Greenhouse Gas Modeling

# MWRP Chlorine Contact Basin Detailed Report

## Table of Contents

# 1. Basic Project Information

## 1.1. Basic Project Information

| Data Field | Value |
|---|---|
| Project Name | MWRP Chlorine Contact Basin |
| Construction Start Date | 5/1/2024 |
| Operational Year | 2025 |
| Lead Agency | — |
| Land Use Scale | Project/site |
| Analysis Level for Defaults | County |
| Windspeed (m/s) | 2.20 |
| Precipitation (days) | 20.4 |
| Location | 33.10348668600014, -117.22808796767174 |
| County | San Diego |
| City | Carlsbad |
| Air District | San Diego County APCD |
| Air Basin | San Diego |
| TAZ | 6274 |
| EDFZ | 12 |
| Electric Utility | San Diego Gas & Electric |
| Gas Utility | San Diego Gas & Electric |
| App Version | 2022.1.1.20 |

## 1.2. Land Use Types

| Land Use Subtype | Size | Unit | Lot Acreage | Building Area (sq ft) | Landscape Area (sq ft) | Special Landscape Area (sq ft) | Population | Description |
|---|---|---|---|---|---|---|---|---|

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Other Non-Asphalt Surfaces | 6.89 | 1000sqft | 0.16 | 0.00 | 0.00 | 0.00 | — | — |

## 1.3. User-Selected Emission Reduction Measures by Emissions Sector

| Sector | # | Measure Title |
|---|---|---|
| Construction | C-2* | Limit Heavy-Duty Diesel Vehicle Idling |
| Construction | C-10-A | Water Exposed Surfaces |
| Construction | C-10-B | Water Active Demolition Sites |
| Construction | C-11 | Limit Vehicle Speeds on Unpaved Roads |

* Qualitative or supporting measure. Emission reductions not included in the mitigated emissions results.

# 2. Emissions Summary

## 2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Un/Mit. | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.75 | 0.58 | 6.87 | 6.94 | 0.02 | 0.27 | 1.36 | 1.56 | 0.25 | 0.53 | 0.72 | — | 2,576 | 2,576 | 0.13 | 0.28 | 3.78 | 2,665 |
| Mit. | 0.75 | 0.58 | 6.87 | 6.94 | 0.02 | 0.27 | 0.76 | 0.96 | 0.25 | 0.26 | 0.45 | — | 2,576 | 2,576 | 0.13 | 0.28 | 3.78 | 2,665 |
| % Reduced | — | — | — | — | — | — | 44% | 38% | — | 51% | 38% | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.67 | 0.56 | 5.60 | 6.98 | 0.01 | 0.26 | 0.00 | 0.26 | 0.23 | 0.00 | 0.23 | — | 1,305 | 1,305 | 0.05 | 0.01 | 0.00 | 1,309 |
| Mit. | 0.67 | 0.56 | 5.60 | 6.98 | 0.01 | 0.26 | 0.00 | 0.26 | 0.23 | 0.00 | 0.23 | — | 1,305 | 1,305 | 0.05 | 0.01 | 0.00 | 1,309 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| % Reduced | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.33 | 0.27 | 2.80 | 3.22 | 0.01 | 0.11 | 0.38 | 0.49 | 0.10 | 0.14 | 0.24 | — | 790 | 790 | 0.04 | 0.05 | 0.30 | 805 |
| Mit. | 0.33 | 0.27 | 2.80 | 3.22 | 0.01 | 0.11 | 0.22 | 0.33 | 0.10 | 0.07 | 0.17 | — | 790 | 790 | 0.04 | 0.05 | 0.30 | 805 |
| % Reduced | — | — | — | — | — | — | 42% | 33% | — | 49% | 28% | — | — | — | — | — | — | — |
| Annual (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.06 | 0.05 | 0.51 | 0.59 | < 0.005 | 0.02 | 0.07 | 0.09 | 0.02 | 0.03 | 0.04 | — | 131 | 131 | 0.01 | 0.01 | 0.05 | 133 |
| Mit. | 0.06 | 0.05 | 0.51 | 0.59 | < 0.005 | 0.02 | 0.04 | 0.06 | 0.02 | 0.01 | 0.03 | — | 131 | 131 | 0.01 | 0.01 | 0.05 | 133 |
| % Reduced | — | — | — | — | — | — | 42% | 33% | — | 49% | 28% | — | — | — | — | — | — | — |

## 2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Year | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily - Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2024 | 0.75 | 0.57 | 6.87 | 6.64 | 0.02 | 0.27 | 1.36 | 1.56 | 0.25 | 0.53 | 0.72 | — | 2,576 | 2,576 | 0.13 | 0.28 | 3.78 | 2,665 |
| 2025 | 0.68 | 0.58 | 5.14 | 6.94 | 0.01 | 0.22 | 0.15 | 0.34 | 0.20 | 0.03 | 0.21 | — | 1,305 | 1,305 | 0.05 | 0.01 | 0.62 | 1,309 |
| Daily - Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2024 | 0.67 | 0.56 | 5.60 | 6.98 | 0.01 | 0.26 | 0.00 | 0.26 | 0.23 | 0.00 | 0.23 | — | 1,305 | 1,305 | 0.05 | 0.01 | 0.00 | 1,309 |
| 2025 | 0.62 | 0.52 | 5.14 | 6.94 | 0.01 | 0.22 | 0.00 | 0.22 | 0.20 | 0.00 | 0.20 | — | 1,305 | 1,305 | 0.05 | 0.01 | 0.00 | 1,309 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2024 | 0.33 | 0.27 | 2.80 | 3.22 | 0.01 | 0.11 | 0.38 | 0.49 | 0.10 | 0.14 | 0.24 | — | 790 | 790 | 0.04 | 0.05 | 0.30 | 805 |
| 2025 | 0.27 | 0.23 | 2.01 | 2.72 | < 0.005 | 0.09 | 0.03 | 0.11 | 0.08 | 0.01 | 0.09 | — | 484 | 484 | 0.02 | < 0.005 | 0.05 | 486 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2024 | 0.06 | 0.05 | 0.51 | 0.59 | < 0.005 | 0.02 | 0.07 | 0.09 | 0.02 | 0.03 | 0.04 | — | 131 | 131 | 0.01 | 0.01 | 0.05 | 133 |
| 2025 | 0.05 | 0.04 | 0.37 | 0.50 | < 0.005 | 0.02 | < 0.005 | 0.02 | 0.01 | < 0.005 | 0.02 | — | 80.1 | 80.1 | < 0.005 | < 0.005 | 0.01 | 80.4 |

## 2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Year | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily - Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2024 | 0.75 | 0.57 | 6.87 | 6.64 | 0.02 | 0.27 | 0.76 | 0.96 | 0.25 | 0.26 | 0.45 | — | 2,576 | 2,576 | 0.13 | 0.28 | 3.78 | 2,665 |
| 2025 | 0.68 | 0.58 | 5.14 | 6.94 | 0.01 | 0.22 | 0.15 | 0.34 | 0.20 | 0.03 | 0.21 | — | 1,305 | 1,305 | 0.05 | 0.01 | 0.62 | 1,309 |
| Daily - Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2024 | 0.67 | 0.56 | 5.60 | 6.98 | 0.01 | 0.26 | 0.00 | 0.26 | 0.23 | 0.00 | 0.23 | — | 1,305 | 1,305 | 0.05 | 0.01 | 0.00 | 1,309 |
| 2025 | 0.62 | 0.52 | 5.14 | 6.94 | 0.01 | 0.22 | 0.00 | 0.22 | 0.20 | 0.00 | 0.20 | — | 1,305 | 1,305 | 0.05 | 0.01 | 0.00 | 1,309 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2024 | 0.33 | 0.27 | 2.80 | 3.22 | 0.01 | 0.11 | 0.22 | 0.33 | 0.10 | 0.07 | 0.17 | — | 790 | 790 | 0.04 | 0.05 | 0.30 | 805 |
| 2025 | 0.27 | 0.23 | 2.01 | 2.72 | < 0.005 | 0.09 | 0.03 | 0.11 | 0.08 | 0.01 | 0.09 | — | 484 | 484 | 0.02 | < 0.005 | 0.05 | 486 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2024 | 0.06 | 0.05 | 0.51 | 0.59 | < 0.005 | 0.02 | 0.04 | 0.06 | 0.02 | 0.01 | 0.03 | — | 131 | 131 | 0.01 | 0.01 | 0.05 | 133 |
| 2025 | 0.05 | 0.04 | 0.37 | 0.50 | < 0.005 | 0.02 | < 0.005 | 0.02 | 0.01 | < 0.005 | 0.02 | — | 80.1 | 80.1 | < 0.005 | < 0.005 | 0.01 | 80.4 |

## 2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Un/Mit. | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.00 | < 0.005 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1,885 | 1,885 | 0.11 | 0.01 | 0.00 | 1,891 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.00 | < 0.005 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1,885 | 1,885 | 0.11 | 0.01 | 0.00 | 1,891 |
| Average Daily (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.00 | < 0.005 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1,885 | 1,885 | 0.11 | 0.01 | 0.00 | 1,891 |
| Annual (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.00 | < 0.005 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 312 | 312 | 0.02 | < 0.005 | 0.00 | 313 |

## 2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Sector | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | 0.00 | < 0.005 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Energy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 1,885 | 1,885 | 0.11 | 0.01 | — | 1,891 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.00 | < 0.005 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1,885 | 1,885 | 0.11 | 0.01 | 0.00 | 1,891 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | — | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Energy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 1,885 | 1,885 | 0.11 | 0.01 | — | 1,891 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.00 | < 0.005 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1,885 | 1,885 | 0.11 | 0.01 | 0.00 | 1,891 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | 0.00 | < 0.005 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Energy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 1,885 | 1,885 | 0.11 | 0.01 | — | 1,891 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.00 | < 0.005 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1,885 | 1,885 | 0.11 | 0.01 | 0.00 | 1,891 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | 0.00 | < 0.005 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Energy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 312 | 312 | 0.02 | < 0.005 | — | 313 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.00 | < 0.005 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 312 | 312 | 0.02 | < 0.005 | 0.00 | 313 |

## 2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Sector | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | 0.00 | < 0.005 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Energy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 1,885 | 1,885 | 0.11 | 0.01 | — | 1,891 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.00 | < 0.005 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1,885 | 1,885 | 0.11 | 0.01 | 0.00 | 1,891 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | — | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Energy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 1,885 | 1,885 | 0.11 | 0.01 | — | 1,891 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.00 | < 0.005 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1,885 | 1,885 | 0.11 | 0.01 | 0.00 | 1,891 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | 0.00 | < 0.005 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Energy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 1,885 | 1,885 | 0.11 | 0.01 | — | 1,891 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.00 | < 0.005 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1,885 | 1,885 | 0.11 | 0.01 | 0.00 | 1,891 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | 0.00 | < 0.005 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 312 | 312 | 0.02 | < 0.005 | — | 313 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.00 | < 0.005 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 312 | 312 | 0.02 | < 0.005 | 0.00 | 313 |

# 3. Construction Emissions Details

## 3.1. Demolition and Utility Relocation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.61 | 0.51 | 4.69 | 5.79 | 0.01 | 0.19 | — | 0.19 | 0.17 | — | 0.17 | — | 852 | 852 | 0.03 | 0.01 | — | 855 |
| Dust From Material Movement | — | — | — | — | — | — | 0.82 | 0.82 | — | 0.42 | 0.42 | — | — | — | — | — | — | — |
| Demolition | — | — | — | — | — | — | 0.27 | 0.27 | — | 0.04 | 0.04 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.15 | 0.12 | 1.13 | 1.40 | < 0.005 | 0.05 | — | 0.05 | 0.04 | — | 0.04 | — | 205 | 205 | 0.01 | < 0.005 | — | 206 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dust From Material Movement | — | — | — | — | — | — | 0.20 | 0.20 | — | 0.10 | 0.10 | — | — | — | — | — | — | — |
| Demolition | — | — | — | — | — | — | 0.06 | 0.06 | — | 0.01 | 0.01 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.02 | 0.21 | 0.25 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 34.0 | 34.0 | < 0.005 | < 0.005 | — | 34.1 |
| Dust From Material Movement | — | — | — | — | — | — | 0.04 | 0.04 | — | 0.02 | 0.02 | — | — | — | — | — | — | — |
| Demolition | — | — | — | — | — | — | 0.01 | 0.01 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.05 | 0.04 | 0.03 | 0.49 | 0.00 | 0.00 | 0.08 | 0.08 | 0.00 | 0.02 | 0.02 | — | 96.8 | 96.8 | < 0.005 | < 0.005 | 0.39 | 98.3 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.06 | 0.02 | 1.00 | 0.36 | < 0.005 | 0.01 | 0.19 | 0.20 | 0.01 | 0.05 | 0.06 | — | 742 | 742 | 0.04 | 0.12 | 1.59 | 780 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.11 | 0.00 | 0.00 | 0.02 | 0.02 | 0.00 | < 0.005 | < 0.005 | — | 22.2 | 22.2 | < 0.005 | < 0.005 | 0.04 | 22.5 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | 0.01 | < 0.005 | 0.25 | 0.09 | < 0.005 | < 0.005 | 0.04 | 0.05 | < 0.005 | 0.01 | 0.02 | — | 179 | 179 | 0.01 | 0.03 | 0.17 | 188 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.02 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 3.68 | 3.68 | < 0.005 | < 0.005 | 0.01 | 3.73 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.05 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 29.6 | 29.6 | < 0.005 | < 0.005 | 0.03 | 31.1 |

## 3.2. Demolition and Utility Relocation (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.61 | 0.51 | 4.69 | 5.79 | 0.01 | 0.19 | — | 0.19 | 0.17 | — | 0.17 | — | 852 | 852 | 0.03 | 0.01 | — | 855 |
| Dust From Material Movement | — | — | — | — | — | — | 0.32 | 0.32 | — | 0.16 | 0.16 | — | — | — | — | — | — | — |
| Demolition | — | — | — | — | — | — | 0.17 | 0.17 | — | 0.03 | 0.03 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.15 | 0.12 | 1.13 | 1.40 | < 0.005 | 0.05 | — | 0.05 | 0.04 | — | 0.04 | — | 205 | 205 | 0.01 | < 0.005 | — | 206 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dust From Material Movement | — | — | — | — | — | — | 0.08 | 0.08 | — | 0.04 | 0.04 | — | — | — | — | — | — | — |
| Demolition | — | — | — | — | — | — | 0.04 | 0.04 | — | 0.01 | 0.01 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.02 | 0.21 | 0.25 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 34.0 | 34.0 | < 0.005 | < 0.005 | — | 34.1 |
| Dust From Material Movement | — | — | — | — | — | — | 0.01 | 0.01 | — | 0.01 | 0.01 | — | — | — | — | — | — | — |
| Demolition | — | — | — | — | — | — | 0.01 | 0.01 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.05 | 0.04 | 0.03 | 0.49 | 0.00 | 0.00 | 0.08 | 0.08 | 0.00 | 0.02 | 0.02 | — | 96.8 | 96.8 | < 0.005 | < 0.005 | 0.39 | 98.3 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.06 | 0.02 | 1.00 | 0.36 | < 0.005 | 0.01 | 0.19 | 0.20 | 0.01 | 0.05 | 0.06 | — | 742 | 742 | 0.04 | 0.12 | 1.59 | 780 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.11 | 0.00 | 0.00 | 0.02 | 0.02 | 0.00 | < 0.005 | < 0.005 | — | 22.2 | 22.2 | < 0.005 | < 0.005 | 0.04 | 22.5 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

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| Hauling | 0.01 | < 0.005 | 0.25 | 0.09 | < 0.005 | < 0.005 | 0.04 | 0.05 | < 0.005 | 0.01 | 0.02 | — | 179 | 179 | 0.01 | 0.03 | 0.17 | 188 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.02 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 3.68 | 3.68 | < 0.005 | < 0.005 | 0.01 | 3.73 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.05 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 29.6 | 29.6 | < 0.005 | < 0.005 | 0.03 | 31.1 |

## 3.3. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.60 | 0.50 | 4.60 | 5.56 | 0.01 | 0.24 | — | 0.24 | 0.22 | — | 0.22 | — | 858 | 858 | 0.03 | 0.01 | — | 861 |
| Dust From Material Movement | — | — | — | — | — | — | 0.54 | 0.54 | — | 0.06 | 0.06 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.03 | 0.26 | 0.32 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 49.4 | 49.4 | < 0.005 | < 0.005 | — | 49.5 |
| Dust From Material Movement | — | — | — | — | — | — | 0.03 | 0.03 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.05 | 0.06 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 8.17 | 8.17 | < 0.005 | < 0.005 | — | 8.20 |
| Dust From Material Movement | — | — | — | — | — | — | 0.01 | 0.01 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.02 | 0.02 | 0.02 | 0.25 | 0.00 | 0.00 | 0.04 | 0.04 | 0.00 | 0.01 | 0.01 | — | 48.4 | 48.4 | < 0.005 | < 0.005 | 0.19 | 49.2 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.13 | 0.04 | 2.25 | 0.80 | 0.01 | 0.03 | 0.42 | 0.45 | 0.03 | 0.12 | 0.15 | — | 1,670 | 1,670 | 0.09 | 0.27 | 3.59 | 1,755 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.01 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 2.65 | 2.65 | < 0.005 | < 0.005 | < 0.005 | 2.69 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.01 | < 0.005 | 0.13 | 0.05 | < 0.005 | < 0.005 | 0.02 | 0.03 | < 0.005 | 0.01 | 0.01 | — | 96.1 | 96.1 | 0.01 | 0.02 | 0.09 | 101 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 0.44 | 0.44 | < 0.005 | < 0.005 | < 0.005 | 0.45 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.02 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 15.9 | 15.9 | < 0.005 | < 0.005 | 0.01 | 16.7 |

## 3.4. Site Preparation (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.60 | 0.50 | 4.60 | 5.56 | 0.01 | 0.24 | — | 0.24 | 0.22 | — | 0.22 | — | 858 | 858 | 0.03 | 0.01 | — | 861 |
| Dust From Material Movement | — | — | — | — | — | — | 0.21 | 0.21 | — | 0.02 | 0.02 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.03 | 0.26 | 0.32 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 49.4 | 49.4 | < 0.005 | < 0.005 | — | 49.5 |
| Dust From Material Movement | — | — | — | — | — | — | 0.01 | 0.01 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.05 | 0.06 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 8.17 | 8.17 | < 0.005 | < 0.005 | — | 8.20 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dust From Material Movement | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.02 | 0.02 | 0.02 | 0.25 | 0.00 | 0.00 | 0.04 | 0.04 | 0.00 | 0.01 | 0.01 | — | 48.4 | 48.4 | < 0.005 | < 0.005 | 0.19 | 49.2 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.13 | 0.04 | 2.25 | 0.80 | 0.01 | 0.03 | 0.42 | 0.45 | 0.03 | 0.12 | 0.15 | — | 1,670 | 1,670 | 0.09 | 0.27 | 3.59 | 1,755 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.01 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 2.65 | 2.65 | < 0.005 | < 0.005 | < 0.005 | 2.69 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.01 | < 0.005 | 0.13 | 0.05 | < 0.005 | < 0.005 | 0.02 | 0.03 | < 0.005 | 0.01 | 0.01 | — | 96.1 | 96.1 | 0.01 | 0.02 | 0.09 | 101 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 0.44 | 0.44 | < 0.005 | < 0.005 | < 0.005 | 0.45 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.02 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 15.9 | 15.9 | < 0.005 | < 0.005 | 0.01 | 16.7 |

## 3.5. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.67 | 0.56 | 5.60 | 6.98 | 0.01 | 0.26 | — | 0.26 | 0.23 | — | 0.23 | — | 1,305 | 1,305 | 0.05 | 0.01 | — | 1,309 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.12 | 0.10 | 1.01 | 1.26 | < 0.005 | 0.05 | — | 0.05 | 0.04 | — | 0.04 | — | 235 | 235 | 0.01 | < 0.005 | — | 236 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.02 | 0.02 | 0.18 | 0.23 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 38.9 | 38.9 | < 0.005 | < 0.005 | — | 39.0 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.6. Building Construction (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.67 | 0.56 | 5.60 | 6.98 | 0.01 | 0.26 | — | 0.26 | 0.23 | — | 0.23 | — | 1,305 | 1,305 | 0.05 | 0.01 | — | 1,309 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.12 | 0.10 | 1.01 | 1.26 | < 0.005 | 0.05 | — | 0.05 | 0.04 | — | 0.04 | — | 235 | 235 | 0.01 | < 0.005 | — | 236 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.02 | 0.02 | 0.18 | 0.23 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 38.9 | 38.9 | < 0.005 | < 0.005 | — | 39.0 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.7. Building Construction (2025) - Unmitigated

### Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Road Equipment | 0.62 | 0.52 | 5.14 | 6.94 | 0.01 | 0.22 | — | 0.22 | 0.20 | — | 0.20 | — | 1,305 | 1,305 | 0.05 | 0.01 | — | 1,309 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.62 | 0.52 | 5.14 | 6.94 | 0.01 | 0.22 | — | 0.22 | 0.20 | — | 0.20 | — | 1,305 | 1,305 | 0.05 | 0.01 | — | 1,309 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.15 | 0.12 | 1.21 | 1.63 | < 0.005 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 306 | 306 | 0.01 | < 0.005 | — | 307 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.02 | 0.22 | 0.30 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 50.7 | 50.7 | < 0.005 | < 0.005 | — | 50.9 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.8. Building Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.62 | 0.52 | 5.14 | 6.94 | 0.01 | 0.22 | — | 0.22 | 0.20 | — | 0.20 | — | 1,305 | 1,305 | 0.05 | 0.01 | — | 1,309 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.62 | 0.52 | 5.14 | 6.94 | 0.01 | 0.22 | — | 0.22 | 0.20 | — | 0.20 | — | 1,305 | 1,305 | 0.05 | 0.01 | — | 1,309 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.15 | 0.12 | 1.21 | 1.63 | < 0.005 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 306 | 306 | 0.01 | < 0.005 | — | 307 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.02 | 0.22 | 0.30 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 50.7 | 50.7 | < 0.005 | < 0.005 | — | 50.9 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.9. Paving and Site Restoration (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.61 | 0.51 | 4.37 | 5.31 | 0.01 | 0.19 | — | 0.19 | 0.18 | — | 0.18 | — | 823 | 823 | 0.03 | 0.01 | — | 826 |
| Paving | — | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.11 | 0.09 | 0.79 | 0.96 | < 0.005 | 0.04 | — | 0.04 | 0.03 | — | 0.03 | — | 149 | 149 | 0.01 | < 0.005 | — | 149 |
| Paving | — | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.02 | 0.02 | 0.14 | 0.18 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 24.7 | 24.7 | < 0.005 | < 0.005 | — | 24.7 |
| Paving | — | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.08 | 0.07 | 0.05 | 0.81 | 0.00 | 0.00 | 0.15 | 0.15 | 0.00 | 0.03 | 0.03 | — | 166 | 166 | 0.01 | 0.01 | 0.62 | 169 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.13 | 0.00 | 0.00 | 0.03 | 0.03 | 0.00 | 0.01 | 0.01 | — | 28.6 | 28.6 | < 0.005 | < 0.005 | 0.05 | 29.0 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.02 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 4.74 | 4.74 | < 0.005 | < 0.005 | 0.01 | 4.80 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.10. Paving and Site Restoration (2025) - Mitigated

### Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.61 | 0.51 | 4.37 | 5.31 | 0.01 | 0.19 | — | 0.19 | 0.18 | — | 0.18 | — | 823 | 823 | 0.03 | 0.01 | — | 826 |
| Paving | — | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.11 | 0.09 | 0.79 | 0.96 | < 0.005 | 0.04 | — | 0.04 | 0.03 | — | 0.03 | — | 149 | 149 | 0.01 | < 0.005 | — | 149 |
| Paving | — | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.02 | 0.02 | 0.14 | 0.18 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 24.7 | 24.7 | < 0.005 | < 0.005 | — | 24.7 |
| Paving | — | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.08 | 0.07 | 0.05 | 0.81 | 0.00 | 0.00 | 0.15 | 0.15 | 0.00 | 0.03 | 0.03 | — | 166 | 166 | 0.01 | 0.01 | 0.62 | 169 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.13 | 0.00 | 0.00 | 0.03 | 0.03 | 0.00 | 0.01 | 0.01 | — | 28.6 | 28.6 | < 0.005 | < 0.005 | 0.05 | 29.0 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.02 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 4.74 | 4.74 | < 0.005 | < 0.005 | 0.01 | 4.80 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

# 4. Operations Emissions Details

## 4.1. Mobile Emissions by Land Use

### 4.1.1. Unmitigated

Mobile source emissions results are presented in Sections 2.6. No further detailed breakdown of emissions is available.

### 4.1.2. Mitigated

Mobile source emissions results are presented in Sections 2.5. No further detailed breakdown of emissions is available.

## 4.2. Energy

### 4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Other Non-Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | — | 1,885 | 1,885 | 0.11 | 0.01 | — | 1,891 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 1,885 | 1,885 | 0.11 | 0.01 | — | 1,891 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Other Non-Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | — | 1,885 | 1,885 | 0.11 | 0.01 | — | 1,891 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 1,885 | 1,885 | 0.11 | 0.01 | — | 1,891 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Other Non-Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | — | 312 | 312 | 0.02 | < 0.005 | — | 313 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 312 | 312 | 0.02 | < 0.005 | — | 313 |

### 4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Other Non-Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | — | 1,885 | 1,885 | 0.11 | 0.01 | — | 1,891 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 1,885 | 1,885 | 0.11 | 0.01 | — | 1,891 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Other Non-Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | — | 1,885 | 1,885 | 0.11 | 0.01 | — | 1,891 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 1,885 | 1,885 | 0.11 | 0.01 | — | 1,891 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Other Non-Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | — | 312 | 312 | 0.02 | < 0.005 | — | 313 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 312 | 312 | 0.02 | < 0.005 | — | 313 |

### 4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Other Non-Asphalt Surfaces | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Other Non-Asphalt Surfaces | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Other Non-Asphalt Surfaces | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |

### 4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Other Non-Asphalt Surfaces | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Other Non-Asphalt Surfaces | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Other Non-Asphalt Surfaces | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |

## 4.3. Area Emissions by Source

### 4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Source | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | — | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | — | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Landscape Equipme | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.00 | < 0.005 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | — | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | — | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | — | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | — | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.00 | < 0.005 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |

### 4.3.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Source | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Consumer | — | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | — | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.00 | < 0.005 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | — | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | — | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | — | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | — | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.00 | < 0.005 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |

## 4.4. Water Emissions by Land Use

### 4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Other Non-Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Other Non-Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Other Non-Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |

### 4.4.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Other Non-Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Other Non-Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Other Non-Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |

## 4.5. Waste Emissions by Land Use

### 4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Other Non-Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Other Non-Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Other Non-Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |

### 4.5.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Other Non-Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Other Non-Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Other Non-Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |

## 4.6. Refrigerant Emissions by Land Use

### 4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

### 4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

## 4.7. Offroad Emissions By Equipment Type

### 4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Equipment Type | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

### 4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Equipment Type | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

## 4.8. Stationary Emissions By Equipment Type

### 4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Equipment Type | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

### 4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Equipment Type | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

## 4.9. User Defined Emissions By Equipment Type

### 4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Equipment Type | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

### 4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Equipment Type | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

## 4.10. Soil Carbon Accumulation By Vegetation Type

### 4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Vegetation | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

### 4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

### 4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Species | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Avoided | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Sequestered | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Removed | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Avoided | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Sequestered | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Removed | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Avoided | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Sequestered | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Removed | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

## 4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Vegetation | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

### 4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

### 4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Species | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Avoided | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Sequestered | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Remove | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Avoided | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Sequestered | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Removed | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Avoided | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Sequestered | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Removed | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

# 5. Activity Data

## 5.1. Construction Schedule

| Phase Name | Phase Type | Start Date | End Date | Days Per Week | Work Days per Phase | Phase Description |
|---|---|---|---|---|---|---|
| Demolition and Utility Relocation | Demolition | 5/1/2024 | 8/31/2024 | 5.00 | 88.0 | — |
| Site Preparation | Site Preparation | 9/1/2024 | 9/30/2024 | 5.00 | 21.0 | — |
| Building Construction | Building Construction | 10/1/2024 | 4/30/2025 | 5.00 | 152 | — |
| Paving and Site Restoration | Paving | 5/1/2025 | 7/31/2025 | 5.00 | 66.0 | — |

## 5.2. Off-Road Equipment

### 5.2.1. Unmitigated

| Phase Name | Equipment Type | Fuel Type | Engine Tier | Number per Day | Hours Per Day | Horsepower | Load Factor |
|---|---|---|---|---|---|---|---|
| Demolition and Utility Relocation | Tractors/Loaders/Backhoes | Diesel | Average | 2.00 | 6.00 | 84.0 | 0.37 |
| Demolition and Utility Relocation | Rubber Tired Dozers | Diesel | Average | 1.00 | 1.00 | 367 | 0.40 |
| Demolition and Utility Relocation | Concrete/Industrial Saws | Diesel | Average | 1.00 | 8.00 | 33.0 | 0.73 |
| Site Preparation | Graders | Diesel | Average | 1.00 | 8.00 | 148 | 0.41 |
| Site Preparation | Tractors/Loaders/Backhoes | Diesel | Average | 1.00 | 8.00 | 84.0 | 0.37 |
| Building Construction | Cranes | Diesel | Average | 1.00 | 4.00 | 367 | 0.29 |
| Building Construction | Forklifts | Diesel | Average | 2.00 | 6.00 | 82.0 | 0.20 |
| Building Construction | Tractors/Loaders/Backhoes | Diesel | Average | 2.00 | 8.00 | 84.0 | 0.37 |
| Paving and Site Restoration | Tractors/Loaders/Backhoes | Diesel | Average | 1.00 | 7.00 | 84.0 | 0.37 |
| Paving and Site Restoration | Cement and Mortar Mixers | Diesel | Average | 4.00 | 6.00 | 10.0 | 0.56 |
| Paving and Site Restoration | Pavers | Diesel | Average | 1.00 | 7.00 | 81.0 | 0.42 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Paving and Site Restoration | Rollers | Diesel | Average | 1.00 | 7.00 | 36.0 | 0.38 |

### 5.2.2. Mitigated

| Phase Name | Equipment Type | Fuel Type | Engine Tier | Number per Day | Hours Per Day | Horsepower | Load Factor |
|---|---|---|---|---|---|---|---|
| Demolition and Utility Relocation | Tractors/Loaders/Backhoes | Diesel | Average | 2.00 | 6.00 | 84.0 | 0.37 |
| Demolition and Utility Relocation | Rubber Tired Dozers | Diesel | Average | 1.00 | 1.00 | 367 | 0.40 |
| Demolition and Utility Relocation | Concrete/Industrial Saws | Diesel | Average | 1.00 | 8.00 | 33.0 | 0.73 |
| Site Preparation | Graders | Diesel | Average | 1.00 | 8.00 | 148 | 0.41 |
| Site Preparation | Tractors/Loaders/Backhoes | Diesel | Average | 1.00 | 8.00 | 84.0 | 0.37 |
| Building Construction | Cranes | Diesel | Average | 1.00 | 4.00 | 367 | 0.29 |
| Building Construction | Forklifts | Diesel | Average | 2.00 | 6.00 | 82.0 | 0.20 |
| Building Construction | Tractors/Loaders/Backhoes | Diesel | Average | 2.00 | 8.00 | 84.0 | 0.37 |
| Paving and Site Restoration | Tractors/Loaders/Backhoes | Diesel | Average | 1.00 | 7.00 | 84.0 | 0.37 |
| Paving and Site Restoration | Cement and Mortar Mixers | Diesel | Average | 4.00 | 6.00 | 10.0 | 0.56 |
| Paving and Site Restoration | Pavers | Diesel | Average | 1.00 | 7.00 | 81.0 | 0.42 |
| Paving and Site Restoration | Rollers | Diesel | Average | 1.00 | 7.00 | 36.0 | 0.38 |

## 5.3. Construction Vehicles

### 5.3.1. Unmitigated

| Phase Name | Trip Type | One-Way Trips per Day | Miles per Trip | Vehicle Mix |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| Demolition and Utility Relocation | — | — | — | — |
| Demolition and Utility Relocation | Worker | 10.0 | 12.0 | LDA,LDT1,LDT2 |
| Demolition and Utility Relocation | Vendor | — | 7.63 | HHDT,MHDT |
| Demolition and Utility Relocation | Hauling | 10.1 | 20.0 | HHDT |
| Demolition and Utility Relocation | Onsite truck | — | — | HHDT |
| Site Preparation | — | — | — | — |
| Site Preparation | Worker | 5.00 | 12.0 | LDA,LDT1,LDT2 |
| Site Preparation | Vendor | — | 7.63 | HHDT,MHDT |
| Site Preparation | Hauling | 22.8 | 20.0 | HHDT |
| Site Preparation | Onsite truck | — | — | HHDT |
| Building Construction | — | — | — | — |
| Building Construction | Worker | 0.00 | 12.0 | LDA,LDT1,LDT2 |
| Building Construction | Vendor | 0.00 | 7.63 | HHDT,MHDT |
| Building Construction | Hauling | 0.00 | 20.0 | HHDT |
| Building Construction | Onsite truck | — | — | HHDT |
| Paving and Site Restoration | — | — | — | — |
| Paving and Site Restoration | Worker | 17.5 | 12.0 | LDA,LDT1,LDT2 |
| Paving and Site Restoration | Vendor | — | 7.63 | HHDT,MHDT |
| Paving and Site Restoration | Hauling | 0.00 | 20.0 | HHDT |
| Paving and Site Restoration | Onsite truck | — | — | HHDT |

### 5.3.2. Mitigated

| Phase Name | Trip Type | One-Way Trips per Day | Miles per Trip | Vehicle Mix |
|---|---|---|---|---|
| Demolition and Utility Relocation | — | — | — | — |
| Demolition and Utility Relocation | Worker | 10.0 | 12.0 | LDA,LDT1,LDT2 |
| Demolition and Utility Relocation | Vendor | — | 7.63 | HHDT,MHDT |
| Demolition and Utility Relocation | Hauling | 10.1 | 20.0 | HHDT |

| | | | | |
|---|---|---|---|---|
| Demolition and Utility Relocation | Onsite truck | — | — | HHDT |
| Site Preparation | — | — | — | — |
| Site Preparation | Worker | 5.00 | 12.0 | LDA,LDT1,LDT2 |
| Site Preparation | Vendor | — | 7.63 | HHDT,MHDT |
| Site Preparation | Hauling | 22.8 | 20.0 | HHDT |
| Site Preparation | Onsite truck | — | — | HHDT |
| Building Construction | — | — | — | — |
| Building Construction | Worker | 0.00 | 12.0 | LDA,LDT1,LDT2 |
| Building Construction | Vendor | 0.00 | 7.63 | HHDT,MHDT |
| Building Construction | Hauling | 0.00 | 20.0 | HHDT |
| Building Construction | Onsite truck | — | — | HHDT |
| Paving and Site Restoration | — | — | — | — |
| Paving and Site Restoration | Worker | 17.5 | 12.0 | LDA,LDT1,LDT2 |
| Paving and Site Restoration | Vendor | — | 7.63 | HHDT,MHDT |
| Paving and Site Restoration | Hauling | 0.00 | 20.0 | HHDT |
| Paving and Site Restoration | Onsite truck | — | — | HHDT |

## 5.4. Vehicles

### 5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

## 5.5. Architectural Coatings

| Phase Name | Residential Interior Area Coated (sq ft) | Residential Exterior Area Coated (sq ft) | Non-Residential Interior Area Coated (sq ft) | Non-Residential Exterior Area Coated (sq ft) | Parking Area Coated (sq ft) |
|---|---|---|---|---|---|

## 5.6. Dust Mitigation

### 5.6.1. Construction Earthmoving Activities

| Phase Name | Material Imported (Cubic Yards) | Material Exported (Cubic Yards) | Acres Graded (acres) | Material Demolished (Ton of Debris) | Acres Paved (acres) |
|---|---|---|---|---|---|
| Demolition and Utility Relocation | — | 4,920 | 5.50 | 1,100 | — |
| Site Preparation | 3,820 | 0.00 | 10.5 | 0.00 | — |
| Paving and Site Restoration | 0.00 | 0.00 | 0.00 | 0.00 | 0.16 |

### 5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

## 5.7. Construction Paving

| Land Use | Area Paved (acres) | % Asphalt |
|---|---|---|
| Other Non-Asphalt Surfaces | 0.16 | 0% |

## 5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

| Year | kWh per Year | CO2 | CH4 | N2O |
|---|---|---|---|---|
| 2024 | 0.00 | 589 | 0.03 | < 0.005 |
| 2025 | 0.00 | 589 | 0.03 | < 0.005 |

## 5.9. Operational Mobile Sources

### 5.9.1. Unmitigated

| Land Use Type | Trips/Weekday | Trips/Saturday | Trips/Sunday | Trips/Year | VMT/Weekday | VMT/Saturday | VMT/Sunday | VMT/Year |
|---|---|---|---|---|---|---|---|---|
| Total all Land Uses | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

### 5.9.2. Mitigated

| Land Use Type | Trips/Weekday | Trips/Saturday | Trips/Sunday | Trips/Year | VMT/Weekday | VMT/Saturday | VMT/Sunday | VMT/Year |
|---|---|---|---|---|---|---|---|---|
| Total all Land Uses | NaN | NaN | NaN | NaN | NaN | NaN | NaN | NaN |

## 5.10. Operational Area Sources

### 5.10.1. Hearths

#### 5.10.1.1. Unmitigated

#### 5.10.1.2. Mitigated

### 5.10.2. Architectural Coatings

| Residential Interior Area Coated (sq ft) | Residential Exterior Area Coated (sq ft) | Non-Residential Interior Area Coated (sq ft) | Non-Residential Exterior Area Coated (sq ft) | Parking Area Coated (sq ft) |
|---|---|---|---|---|
| 0 | 0.00 | 0.00 | 0.00 | 413 |

### 5.10.3. Landscape Equipment

| Season | Unit | Value |
|---|---|---|
| Snow Days | day/yr | 0.00 |
| Summer Days | day/yr | 180 |

### 5.10.4. Landscape Equipment - Mitigated

| Season | Unit | Value |
|---|---|---|
| Snow Days | day/yr | 0.00 |
| Summer Days | day/yr | 180 |

## 5.11. Operational Energy Consumption

### 5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

| Land Use | Electricity (kWh/yr) | CO2 | CH4 | N2O | Natural Gas (kBTU/yr) |
|---|---|---|---|---|---|
| Other Non-Asphalt Surfaces | 1,168,000 | 589 | 0.0330 | 0.0040 | 0.00 |

### 5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

| Land Use | Electricity (kWh/yr) | CO2 | CH4 | N2O | Natural Gas (kBTU/yr) |
|---|---|---|---|---|---|
| Other Non-Asphalt Surfaces | 1,168,000 | 589 | 0.0330 | 0.0040 | 0.00 |

## 5.12. Operational Water and Wastewater Consumption

### 5.12.1. Unmitigated

| Land Use | Indoor Water (gal/year) | Outdoor Water (gal/year) |
|---|---|---|
| Other Non-Asphalt Surfaces | 0.00 | 0.00 |

### 5.12.2. Mitigated

| Land Use | Indoor Water (gal/year) | Outdoor Water (gal/year) |
|---|---|---|
| Other Non-Asphalt Surfaces | 0.00 | 0.00 |

## 5.13. Operational Waste Generation

### 5.13.1. Unmitigated

| Land Use | Waste (ton/year) | Cogeneration (kWh/year) |
|---|---|---|
| Other Non-Asphalt Surfaces | 0.00 | — |

### 5.13.2. Mitigated

| Land Use | Waste (ton/year) | Cogeneration (kWh/year) |
|---|---|---|
| Other Non-Asphalt Surfaces | 0.00 | — |

## 5.14. Operational Refrigeration and Air Conditioning Equipment

### 5.14.1. Unmitigated

| Land Use Type | Equipment Type | Refrigerant | GWP | Quantity (kg) | Operations Leak Rate | Service Leak Rate | Times Serviced |
|---|---|---|---|---|---|---|---|

### 5.14.2. Mitigated

| Land Use Type | Equipment Type | Refrigerant | GWP | Quantity (kg) | Operations Leak Rate | Service Leak Rate | Times Serviced |
|---|---|---|---|---|---|---|---|

## 5.15. Operational Off-Road Equipment

### 5.15.1. Unmitigated

| Equipment Type | Fuel Type | Engine Tier | Number per Day | Hours Per Day | Horsepower | Load Factor |
|---|---|---|---|---|---|---|

### 5.15.2. Mitigated

| Equipment Type | Fuel Type | Engine Tier | Number per Day | Hours Per Day | Horsepower | Load Factor |
|---|---|---|---|---|---|---|

## 5.16. Stationary Sources

### 5.16.1. Emergency Generators and Fire Pumps

| Equipment Type | Fuel Type | Number per Day | Hours per Day | Hours per Year | Horsepower | Load Factor |
|---|---|---|---|---|---|---|

### 5.16.2. Process Boilers

| Equipment Type | Fuel Type | Number | Boiler Rating (MMBtu/hr) | Daily Heat Input (MMBtu/day) | Annual Heat Input (MMBtu/yr) |
|---|---|---|---|---|---|

## 5.17. User Defined

| Equipment Type | Fuel Type |
|---|---|

## 5.18. Vegetation

### 5.18.1. Land Use Change

#### 5.18.1.1. Unmitigated

| Vegetation Land Use Type | Vegetation Soil Type | Initial Acres | Final Acres |
|---|---|---|---|

#### 5.18.1.2. Mitigated

| Vegetation Land Use Type | Vegetation Soil Type | Initial Acres | Final Acres |
|---|---|---|---|

### 5.18.1. Biomass Cover Type

#### 5.18.1.1. Unmitigated

| Biomass Cover Type | Initial Acres | Final Acres |
|---|---|---|

#### 5.18.1.2. Mitigated

| Biomass Cover Type | Initial Acres | Final Acres |
|---|---|---|

### 5.18.2. Sequestration

#### 5.18.2.1. Unmitigated

| Tree Type | Number | Electricity Saved (kWh/year) | Natural Gas Saved (btu/year) |
|---|---|---|---|

#### 5.18.2.2. Mitigated

| Tree Type | Number | Electricity Saved (kWh/year) | Natural Gas Saved (btu/year) |
|---|---|---|---|

# 6. Climate Risk Detailed Report

## 6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

| Climate Hazard | Result for Project Location | Unit |
|---|---|---|
| Temperature and Extreme Heat | 12.2 | annual days of extreme heat |
| Extreme Precipitation | 3.70 | annual days with precipitation above 20 mm |
| Sea Level Rise | 0.00 | meters of inundation depth |
| Wildfire | 4.94 | annual hectares burned |

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

## 6.2. Initial Climate Risk Scores

| Climate Hazard | Exposure Score | Sensitivity Score | Adaptive Capacity Score | Vulnerability Score |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| Temperature and Extreme Heat | N/A | N/A | N/A | N/A |
| Extreme Precipitation | N/A | N/A | N/A | N/A |
| Sea Level Rise | 1 | 0 | 0 | N/A |
| Wildfire | 1 | 0 | 0 | N/A |
| Flooding | 0 | 0 | 0 | N/A |
| Drought | N/A | N/A | N/A | N/A |
| Snowpack Reduction | N/A | N/A | N/A | N/A |
| Air Quality Degradation | N/A | N/A | N/A | N/A |

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

## 6.3. Adjusted Climate Risk Scores

| Climate Hazard | Exposure Score | Sensitivity Score | Adaptive Capacity Score | Vulnerability Score |
|---|---|---|---|---|
| Temperature and Extreme Heat | N/A | N/A | N/A | N/A |
| Extreme Precipitation | N/A | N/A | N/A | N/A |
| Sea Level Rise | 1 | 1 | 1 | 2 |
| Wildfire | 1 | 1 | 1 | 2 |
| Flooding | 1 | 1 | 1 | 2 |
| Drought | N/A | N/A | N/A | N/A |
| Snowpack Reduction | N/A | N/A | N/A | N/A |
| Air Quality Degradation | N/A | N/A | N/A | N/A |

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

### 6.4. Climate Risk Reduction Measures

# 7. Health and Equity Details

## 7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

| Indicator | Result for Project Census Tract |
|---|---|
| Exposure Indicators | — |
| AQ-Ozone | 32.1 |
| AQ-PM | 22.4 |
| AQ-DPM | 26.8 |
| Drinking Water | 19.0 |
| Lead Risk Housing | 8.58 |
| Pesticides | 31.3 |
| Toxic Releases | 21.1 |
| Traffic | 34.9 |
| Effect Indicators | — |
| CleanUp Sites | 0.00 |
| Groundwater | 30.9 |
| Haz Waste Facilities/Generators | 19.2 |
| Impaired Water Bodies | 51.2 |
| Solid Waste | 0.00 |
| Sensitive Population | — |
| Asthma | 4.01 |
| Cardio-vascular | 26.4 |
| Low Birth Weights | 3.34 |
| Socioeconomic Factor Indicators | — |

| | |
|---|---|
| Education | 31.7 |
| Housing | 59.3 |
| Linguistic | 11.3 |
| Poverty | 15.6 |
| Unemployment | 25.2 |

## 7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

| Indicator | Result for Project Census Tract |
|---|---|
| Economic | — |
| Above Poverty | 77.60810984 |
| Employed | 53.24008726 |
| Median HI | 83.10021814 |
| Education | — |
| Bachelor's or higher | 88.15603747 |
| High school enrollment | 11.8311305 |
| Preschool enrollment | 47.50417041 |
| Transportation | — |
| Auto Access | 96.70216861 |
| Active commuting | 20.15911716 |
| Social | — |
| 2-parent households | 89.18259977 |
| Voting | 92.35211087 |
| Neighborhood | — |
| Alcohol availability | 70.24252534 |
| Park access | 27.93532658 |
| Retail density | 32.68317721 |

| | |
|---|---|
| Supermarket access | 34.85179007 |
| Tree canopy | 54.43346593 |
| Housing | — |
| Homeownership | 65.03272167 |
| Housing habitability | 62.27383549 |
| Low-inc homeowner severe housing cost burden | 38.82971898 |
| Low-inc renter severe housing cost burden | 61.34992942 |
| Uncrowded housing | 96.93314513 |
| Health Outcomes | — |
| Insured adults | 78.05723085 |
| Arthritis | 27.4 |
| Asthma ER Admissions | 94.0 |
| High Blood Pressure | 38.5 |
| Cancer (excluding skin) | 12.2 |
| Asthma | 80.2 |
| Coronary Heart Disease | 51.0 |
| Chronic Obstructive Pulmonary Disease | 68.2 |
| Diagnosed Diabetes | 78.0 |
| Life Expectancy at Birth | 95.7 |
| Cognitively Disabled | 99.0 |
| Physically  Disabled | 87.9 |
| Heart Attack ER Admissions | 72.6 |
| Mental Health Not Good | 84.7 |
| Chronic Kidney Disease | 64.9 |
| Obesity | 75.7 |
| Pedestrian Injuries | 42.9 |
| Physical Health Not Good | 85.2 |

| | |
|---|---|
| Stroke | 70.4 |
| Health Risk Behaviors | — |
| Binge Drinking | 21.6 |
| Current Smoker | 86.5 |
| No Leisure Time for Physical Activity | 88.8 |
| Climate Change Exposures | — |
| Wildfire Risk | 35.1 |
| SLR Inundation Area | 81.6 |
| Children | 33.8 |
| Elderly | 27.8 |
| English Speaking | 84.0 |
| Foreign-born | 31.4 |
| Outdoor Workers | 95.9 |
| Climate Change Adaptive Capacity | — |
| Impervious Surface Cover | 64.8 |
| Traffic Density | 19.2 |
| Traffic Access | 23.0 |
| Other Indices | — |
| Hardship | 15.2 |
| Other Decision Support | — |
| 2016 Voting | 94.3 |

## 7.3. Overall Health & Equity Scores

| Metric | Result for Project Census Tract |
|---|---|
| CalEnviroScreen 4.0 Score for Project Location (a) | 4.00 |
| Healthy Places Index Score for Project Location (b) | 77.0 |
| Project Located in a Designated Disadvantaged Community (Senate Bill 535) | No |

| | |
|---|---|
| Project Located in a Low-Income Community (Assembly Bill 1550) | No |
| Project Located in a Community Air Protection Program Community (Assembly Bill 617) | No |

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

## 7.4. Health & Equity Measures

No Health & Equity Measures selected.

## 7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

## 7.6. Health & Equity Custom Measures

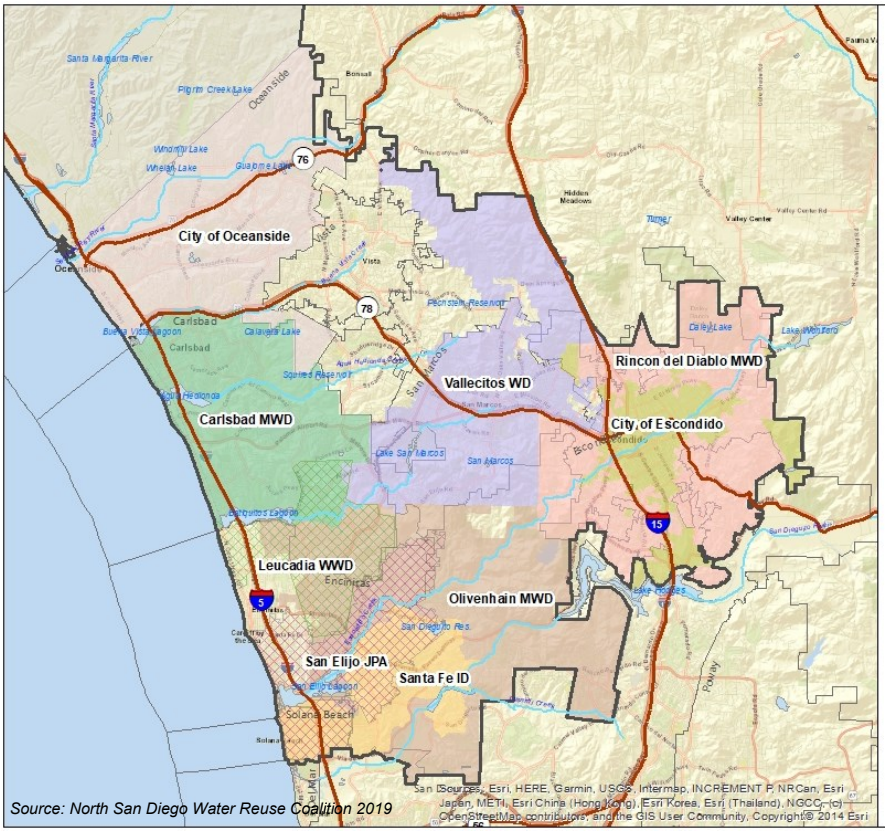
No Health & Equity Custom Measures created.

# 8. User Changes to Default Data

| Screen | Justification |
|---|---|
| Construction: Construction Phases | per project description. Paving and site restoration phases combined. |
| Construction: Dust From Material Movement | Soil export assumed to occur during demolition/utility relocation phase |
| Operations: Energy Use | 3,200 kWh per day per project description. 3,200 x 365 days = 1,168,000 kWh per year |

# Appendix B

Biological Assessment




# North San Diego Water Reuse Coalition Regional Recycled Water Program

## Biological Assessment for Select Projects

*prepared for*

**Olivenhain Municipal Water District**
1966 Olivenhain Road
Encinitas, California 92024

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**August 2023**

RINCON CONSULTANTS, INC.
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## Appendices

# Acronyms and Abbreviations

| | |
|---|---|
| BA | Biological Assessment |
| Caltrans | California Department of Transportation |
| CDFW | California Department of Fish and Wildlife |
| CEQA | California Environmental Quality Act |
| CFR | Code of Federal Regulations |
| Coalition | North San Diego Water Reuse Coalition |
| CNPS | California Native Plant Society |
| CWA | Clean Water Act |
| FESA | Federal Endangered Species Act |
| HCP | Habitat Conservation Plan |
| IPaC | Information for Planning and Conservation |
| JPA | Joint Powers Authority |
| MHCP | Multiple Habitat Conservation Plan |
| MSCP | Multiple Species Conservation Plan |
| MWD | Municipal Water District |
| NCCP | Natural Community Conservation Plan |
| NEPA | National Environmental Policy Act |
| NOAA | National Oceanic and Atmospheric Administration |
| Rincon | Rincon Consultants, Inc. |
| USACE | United States Army Corps of Engineers |
| USBR | United States Bureau of Reclamation |
| USFWS | United States Fish and Wildlife Service |
| WD | Water District |
| WIIN | Water Infrastructure Improvement for the Nation |

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# 1 Introduction

This Biological Assessment (BA) has been prepared to support technical review by the United States Bureau of Reclamation (USBR) through the WaterSMART: Title XVI Water Infrastructure Improvement for the Nation (WIIN) Water Reclamation and Reuse funding program for select projects included in the North San Diego Water Reuse Coalition's (Coalition) Regional Recycled Water Program (Proposed Action). The Coalition consists of eight water and wastewater agencies in northern San Diego County: Carlsbad Municipal Water District (MWD), City of Escondido, City of Oceanside, Leucadia MWD, Olivenhain MWD, Rincon del Diablo MWD, San Elijo Joint Powers Authority (JPA), and Vallecitos Water District (WD). The Coalition is proposing to implement the *Regional Recycled Water Program: 2020 Project* (proposed project), which is a regional effort that includes interagency connections to increase the capacity and connectivity of the Coalition partners combined recycled water storage and distribution systems. The Proposed Action involves upgrades to existing recycled water facilities and installation of new recycled water facilities throughout northern San Diego County.

The purpose of this BA is to determine to what extent the Proposed Action may affect species that are federally listed as candidate, threatened, or endangered and federally designated or proposed critical habitat (see Appendix A). Of the federally listed species and critical habitats considered, the analysis focuses on those species and habitats that have potential to occur in the Action Area - coastal California gnatcatcher (*Polioptila californica californica*) and its critical habitat, southwestern willow flycatcher (*Empidonax traillii extimus*), least Bell's vireo (*Vireo bellii pusillus*), and light-footed Ridgway's rail (*Rallus longirostris levipes*).

Table 5Table 1 provides a summary of the project components evaluated in this report. Information provided by the Coalition and California Environmental Quality Act (CEQA) documentation for certain project components were the primary reference for the description of the Proposed Action. Project components are located generally in north San Diego County in the cities of Carlsbad, Escondido, Encinitas, and San Diego as well as unincorporated San Diego County. Figure 1 shows the locations of project components in a regional context, and Figure 2 through Figure 16 show the locations of project components at a local scale.

**Table 1 Project Components by Agency**

| Agency | Project Component | Summary of Project |
|---|---|---|
| **City of Escondido** | Component 1 | Installation of tertiary treatment upgrades at the Hale Avenue Resource Recovery Facility. |
| **Olivenhain Municipal Water District** | Component 1 | Installation of an approximately 1,475-linear-foot, eight-inch pipeline from Morgan Run Golf Course Recycled Water Meter to Surf Cup Field |
| | Component 2 | Installation of an approximately 4,580-linear-foot, six-inch pipeline along Manchester Avenue. |
| | Component 3 | Installation of an approximately 2,650-linear-foot, eight-inch mainline extension along South El Camino Real. |
| | Component 4 | Installation of an approximately 2,796-linear-foot, six-inch pipeline extension along Calle Barcelona. |
| | Component 5 | Installation of an approximately 351-linear-foot, six-inch pipeline along Via San Clemente. |

| Agency | Project Component | Summary of Project |
|---|---|---|
| | Component 6 | Installation of an approximately 763-linear-foot, four-inch pipeline extension in Village Park Recreation Club #1 |
| | Component 7 | Installation of an approximately 310-linear-foot, six-inch pipeline extension in Village Park Townhomes #1. |
| | Component 8 | Installation of an approximately 1,180-linear-foot, six-inch pipeline in Summerhill Homeowners Association. |
| | Component 9 | Installation of the Rancho Paseana connection and flow control meter. |
| | Component 10 | Installation of the Main Extension 153 flow control meter. |
| | Component 11 | Installation of service laterals via open trenching. |
| | Component 13 | Replacement of the 4S Ranch Neighborhood 1 Pump Station. |
| **San Elijo Joint Powers Authority** | Component 3 | Installation of approximately 1,000-linear-feet of 16-inch pipeline from the Wanket Tank to Quail Gardens Drive. |
| | Component 4 | Installation of approximately 800-linear-feet, eight-inch pipeline and approximately 2,250-linear-feet of six-inch pipeline along Birmingham Drive. |
| | Component 5 | Installation of service laterals. |
| | Component 6 | Rehabilitation of Wanket Tank, a three-million-gallon reservoir at Encinitas Ranch Golf Course. |
| | Component 11 | Installation of treatment upgrades and stormwater diversion and capture infrastructure at the San Elijo Water Campus. |
| | Component 12 | Installation of approximately 1,300-linear-feet of pipeline in Requeza Street as well as a booster pump station and approximately 5,600-linear-feet of pipeline in the Encinitas Ranch Homeowner's Association along Quail Gardens Drive, Paseo de las Flores, and Lynwood Drive. |
| **Rincon del Diablo Municipal Water District** | Component 1 | This component involves demolition of the existing pumps and tank, and installation of new pumps, a tank, a variable frequency drive, piping, and enclosure. Construction staging/laydown areas are generally sited within developed areas and the roadway right-of-way. |
| | Component 2 | Replacement of three 15-horsepower pumps at the North Iris Recycled Water Pump Station, replacement of a hydropneumatic tank, and installation of a new retaining wall and a new approximately 130-square-foot enclosure. |
| **Vallecitos Water District** | Component 1 | Expansion of the chlorine contact chamber at Meadowlark Water Reclamation Facility to approximately 6.5 million gallons per day. |

Results of the assessment for federally listed species occurring in the region are summarized in Table 2. The analysis indicated that the Proposed Action may affect four federally listed species and one federally designated critical habitat. Specifically, the federally endangered light-footed Ridgway's rail, federally endangered least Bell's vireo, federally endangered southwestern willow flycatcher, and federally threatened coastal California gnatcatcher and designated critical habitat for coastal California gnatcatcher occur or may occur (respectively) and may be affected by the Proposed Action. The species' biological characteristics and status in the Action Area is described in Section 4, *Federally Listed Species and Designated Critical Habitat*. An effects analysis is provided in Section 5, *Effects Analysis*, and the proposed Conservation Measures are described in Section 6, *Conservation Measures*.

**Table 2 Summary of Federally Listed Species and Critical Habitat Potential to Occur by Project Component**

| | | City of Escondido | Olivenhain MWD | | | | | | | Rincon del Diablo MWD | | San Elijo JPA | | | | Vallecitos WD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Scientific Name<br>Common Name** | **Federal Status** | **Component 1** | **Component 1 & 9** | **Component 2 & 3** | **Component 4 & 5** | **Component 6, 7 & 8** | **Component 10** | **Component 11** | **Component 13** | **Component 1** | **Component 2** | **Component 3 & 6** | **Components 4 & 5** | **Component 11** | **Component 12** | **Component 1** |
| **Invertebrates** | | | | | | | | | | | | | | | | |
| *Branchinecta sandiegonensis*<br>San Diego Fairy Shrimp | **E** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** |
| *Danaus plexippus*<br>monarch butterfly | **C** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** |
| *Euphydryas editha quino (=E. e. wrighti)*<br>Quino Checkerspot Butterfly | **E** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** |
| *Lycaena hermes*<br>Hermes Copper Butterfly | **T** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** |
| *Streptocephalus woottoni*<br>Riverside Fairy Shrimp | **E** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** |
| **Amphibians** | | | | | | | | | | | | | | | | |
| *Anaxyrus californicus*<br>*Arroyo (=arroyo Southwestern) Toad* | **E** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** |
| **Birds** | | | | | | | | | | | | | | | | |
| *Empidonax traillii extimus*<br>southwestern willow flycatcher | **E** | **Y** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **Y** | **N** | **N** | **N** | **Y** |
| *Charadrius nivosus nivosus*<br>Western Snowy Plover | **T** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** | **N** |
| *Polioptila californica californica*<br>Coastal California Gnatcatcher | **T** | **Y** | **Y** | **Y** | **N** | **N** | **N** | **N** | **N** | **Y** | **N** | **Y** | **N** | **N** | **N** | **N** |

| | | City of Escondido | Olivenhain MWD | | | | | | | Rincon del Diablo MWD | | San Elijo JPA | | | | Vallecitos WD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Scientific Name**<br>**Common Name** | **Federal Status** | **Component 1** | **Component 1 & 9** | **Component 2 & 3** | **Component 4 & 5** | **Component 6, 7 & 8** | **Component 10** | **Component 11** | **Component 13** | **Component 1** | **Component 2** | **Component 3 & 6** | **Components 4 & 5** | **Component 11** | **Component 12** | **Component 1** |
| *Rallus longirostris levipes*<br>Light-footed Ridgway's rail | E | N | Y | Y | N | N | N | N | N | N | N | Y | N | N | N | N |
| *Sterna antillarum browni*<br>California Least Tern | E | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N |
| *Vireo bellii pusillus*<br>least Bell's vireo | E | Y | N | N | N | N | N | N | N | N | N | Y | N | N | N | Y |
| **Mammals** | | | | | | | | | | | | | | | | |
| *Perognathus longimembris pacificus*<br>Pacific Pocket Mouse | E | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N |
| **Plants** | | | | | | | | | | | | | | | | |
| *Acanthomintha ilicifolia*<br>San Diego Thornmint | T | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N |
| *Arctostaphylos glandulosa ssp. crassifolia*<br>Del Mar Manzanita | E | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N |
| *Ambrosia pumila*<br>San Diego Ambrosia | E | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N |
| *Astragalus tener* var. *titi*<br>Coastal Dunes Milk-vetch | E | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N |
| *Baccharis vanessae*<br>Encinitas Baccharis | T | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N |
| *Berberis nevinii*<br>Nevin's Barberry | E | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N |

| Scientific Name<br>Common Name | Federal Status | City of Escondido | Olivenhain MWD | | | | | | | Rincon del Diablo MWD | | San Elijo JPA | | | | Vallecitos WD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Component 1 | Component 1 & 9 | Component 2 & 3 | Component 4 & 5 | Component 6, 7 & 8 | Component 10 | Component 11 | Component 13 | Component 1 | Component 2 | Component 3 & 6 | Components 4 & 5 | Component 11 | Component 12 | Component 1 |
| *Brodiaea filifolia*<br>Thread-leaved Brodiaea | T | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N |
| *Chorizanthe orcuttiana*<br>Orcutt's Spineflower | E | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N |
| *Eryngium aristulatum var. parishii*<br>San Diego Button-celery | E | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N |
| *Monardella viminea*<br>Willowy Monardella | E | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N |
| *Navarretia fossalis*<br>Spreading Navarretia | T | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N |
| *Orcuttia californica*<br>California Orcutt Grass | E | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N |
| *Pogogyne abramsii*<br>San Diego Mesa-mint | E | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N |
| **Critical Habitats** | | | | | | | | | | | | | | | | |
| *Polioptila californica californica*<br>Coastal California Gnatcatcher | F | N | N | Y | N | N | N | N | N | N | N | Y | N | Y | N | N |

N = no potential to be affected by project component

Y = may be affected by project component

Where it was determined that the Proposed Action would have no potential to affect a listed species (Table 2), that species is not discussed further in this BA. This BA has been prepared in accordance with legal requirements found in Section 7(a)(2) of the Federal Endangered Species Act (FESA; 16 United States Code 1536[c]) and interagency implementing regulations at 50 Code of Federal Regulations (CFR) Part 402 and may serve to facilitate Section 7 consultation between the USBR and the United States Fish and Wildlife Service (USFWS).

# 1.1 Legal and Regulatory Background

## 1.1.1 National Environmental Policy Act

The National Environmental Policy Act (NEPA) of 1969 (40 CFR Section 1500-1508) set precedence for completion of environmental analysis documents on federal agency projects, or on independent projects on public lands that have potential to significantly impact air quality, water quality, soils and wildlife and botanical resources. Analysis is completed at 1 of 3 different levels; 1) Categorical Exclusion, 2) Environmental Assessment, and 3) Environmental Impact Statement based on the complexity of a project and the severity of anticipated significant impacts. This BA may be used to support the Forest Service's NEPA determination.

## 1.1.2 Federal Endangered Species Act

Section 7 of the FESA and its implementing regulations (50 CFR 402) require each federal agency to review its actions to determine whether an action "may affect" federally listed, proposed, and candidate species or critical habitat. When a federal action may affect a listed species or designated critical habitat, the action agency is required to consult with the USFWS and/or National Oceanic and Atmospheric Administration National Marine Fisheries Service, as appropriate for the species that may be affected. Generally, the USFWS implements the FESA for terrestrial and freshwater species, and National Marine Fisheries Service implements the FESA for marine and anadromous species.

## 1.1.3 Migratory Bird Treaty Act

This treaty with Canada, Mexico and Japan makes it unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, or kill migratory birds. The law applies to the removal of nests (such as swallow nests on bridges) occupied by migratory birds during the breeding season. California Fish and Game Code Sections 3503 and 3503.5 (protection of birds' nests) and 3513 (taking Migratory Bird Treaty Act birds) also prohibit the destruction of any nest, egg, or nestling.

## 1.1.4 Executive Order 13112

Executive Order 13112 required that federal agencies not authorize activities which would likely cause the spread of invasive species. Executive Order 13112 resulted in the National Strategy and Implementation for Invasive Species Management. Under the executive order, federal agencies cannot authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species in the United States or elsewhere unless all reasonable measures to minimize risk of harm have been analyzed and considered.

## 1.2 Consultation and Documentation to Date

- Rincon obtained an updated official Information for Planning and Conservation (IPaC) species list from USFWS on April 28, 2023 (Appendix A).
- On January 27, 2017, USFWS issued the Informal Section 7 Consultation on the San Elijo Joint Powers Authority Recycled Water Phase II Project, San Diego County, California (FWS-SDG-17B0015-17I0052) for San Elijo JPA project components requesting concurrence with the determination that the San Elijo JPA Recycled Water Phase II Project (Project) is not likely to adversely affect the federally threatened coastal California gnatcatcher and its designated critical habitat, the federally threatened Encinitas baccharis (*Baccharis vanessae*), and the federally endangered least Bell's vireo, Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. c*rassifolia*), and Orcutt's spineflower (*Chorizanthe orcuttiana*), in accordance with Section 7 of FESA, as amended (16 United States Code 1531 et seq.) (USFWS 2017a).
- On March 5, 2019, Anita Hayworth, PhD, of Dudek communicated with Patrick Gower at USFWS Region 8 (760-431-9440 ext 352, Patrick_Gower@FWS.gov) with regards to the Olivenhain MWD Project Component 1 with regards to light-footed Ridgway's rail.
- San Elijo JPA proposes several recycled water pipelines extensions to serve existing land uses and relocations resulting from the development of the California Department of Transportation (Caltrans) North Coast Corridor Project as well as minor upgrades to facilities within the San Elijo Water Campus. The recycled water pipeline extensions within Encinitas Ranch and Requeza Street would allow for conversion of several existing residential subdivisions and recreational trails to recycled water use. The recycled water relocations within Carol View Drive and Manchester Avenue would occur in response to the Caltrans North Coast Corridor (NCC) Project; both components are located within Caltrans right-of-way and within previously analyzed impact areas for the Caltrans North Coast Corridor Project Environmental Impact Report/Environmental Impact Statement. Facility upgrades at the San Elijo Water Campus would include tertiary system upgrades and water reuse storage expansion.
- The USFWS also provided a Biological Opinion for the Interstate 5 North Coast Corridor Project, dated December 31, 2012, which reviews the project's effects on federally listed species and critical habitat in accordance with Section 7 of FESA and also summarizes the extensive coordination between Caltrans and the USFWS.
- The North Coast Corridor Public Works Plan/Transportation and Resource Enhancement Program's Resource Enhancement and Mitigation Program (Dudek 2012P)
- Interstate 5 North Coast Corridor Project (FWS-SDG-08B0100-12F0547)
- Dudek. 2012. Final North Coast Corridor PWP/TREP Resource Enhancement Program. Revised October 2012.
- Interstate 5 North Coast Corridor Project NES (EA 11-235800) Manchester_Ave_I-5_NESR_Jan04.pdf (keepsandiegomoving.com)

## 1.3 Location of the Proposed Action

The Action Areas are described in Table 3 and are located throughout northern San Diego County, California (Figure 1 through Figure 16).

## Table 3 Description of the Proposed Action and Action Areas (Project Components) by Agency

| Agency<br>Action Area | Proposed Action |
|---|---|
| **City of Escondido** | |
| Component 1 | Installation of tertiary treatment upgrades at the Hale Avenue Resource Recovery Facility. This component consists of replacement of the existing tertiary filters with a higher capacity tertiary sand filter system and modifications to the filter influent pump station to have increased pumping capacity. (Figure 2) |
| **Olivenhain MWD** | |
| Component 1 | Installation of an approximately 1,475-linear-foot, eight-inch pipeline from Morgan Run Golf Course Recycled Water Meter to Surf Cup Field. This component consists of installation of a pipeline via a combination of open trenching and horizontal directional drilling below the creek. This component also involves installation of piping improvements on the western and eastern termini of the pipeline as well as site restoration following completion. (Figure 3) |
| Component 2 | Installation of an approximately 4,580-linear-foot, six-inch pipeline along Manchester Avenue. This component consists of installation of a pipeline via open trenching with all construction activities, including staging/laydown, within the paved roadway with pump stations along the roadside at approximately every 250 feet. (Figure 4) |
| Component 3 | Installation of an approximately 2,650-linear-foot, eight-inch mainline extension along South El Camino Real. This component consists of installation of a pipeline via open trenching with all construction activities, including staging/laydown, entirely within the paved roadway. (Figure 4) |
| Component 4 | Installation of an approximately 2,796-linear-foot, six-inch pipeline extension along Calle Barcelona. This component consists of installation of a pipeline via open trenching with all construction activities, including staging/laydown, entirely within the paved roadway. (Figure 5) |
| Component 5 | Installation of an approximately 351-linear-foot, six-inch pipeline along Via San Clemente. This component consists of installation of a pipeline via open trenching with all construction activities, including staging/laydown, entirely within the paved roadway. (Figure 5) |
| Component 6 | Installation of an approximately 763-linear-foot, four-inch pipeline extension in Village Park Recreation Club #1. This component consists of installation of a pipeline via open trenching with all construction activities, including staging/laydown, entirely within the paved roadway. (Figure 6) |
| Component 7 | Installation of an approximately 310-linear-foot, six-inch pipeline extension in. This component consists of installation of a pipeline via open trenching with all construction activities, including staging/laydown, entirely within the paved roadway. (Figure 6) |
| Component 8 | Installation of an approximately 1,180-linear-foot, six-inch pipeline in Summerhill Homeowners Association. This component consists of installation of a pipeline via open trenching with all construction activities, including staging/laydown, entirely within the paved roadway. (Figure 6) |
| Component 9 | Installation of the Rancho Paseana connection and flow control meter. This component involves installation of an approximately six-inch by eight-inch connection, three-inch meter and flow control facility, chainlink enclosure, and electrical/instrumentation components. Access to the construction area is provided from Via de Santa Fe to the north of the project site. (Figure 4) |
| Component 10 | Installation of the Main Extension 153 flow control meter. This component involves installation of a meter vault, meter piping, 14-inch gate valves, pipe connections, anchor blocks, and bollards as well as site restoration following completion of construction. The construction area is accessed via an unpaved road off San Dieguito Road to the south of the project site. Construction equipment staging for this component is within unpaved, disturbed areas and avoids vegetated areas. (Figure 7) |
| Component 11 | Installation of service laterals via open trenching. This component involves installation of service laterals via open trenching. |
| Component 13 | Replacement of the 4S Ranch Neighborhood 1 Pump Station. This component consists of replacement of the pump station, which involves demolition of existing infrastructure, earthwork, installation of site piping and pumps, modifications to the existing operating wet well, construction of the pump station building, rehabilitation of the surge tank, installation of surge control and |

| Agency Action Area | Proposed Action |
|---|---|
| | emergency power generation equipment, and installation of electrical and telemetry components. Access to the construction site is provided from the roadway leading from the southern terminus of 4S Ranch Parkway. All construction activities, including staging and laydown, are sited within the fenced footprint of the existing facility and the access road. (Figure 8) |
| **Rincon Del Diablo** | |
| Component 1 | Replacement of three 30-horsepower pumps at the Beethoven Recycled Water Pump Station, replacement of a hydropneumatic tank, and installation of a new approximately 165-square-foot enclosure. This component involves demolition of the existing pumps and tank, and installation of new pumps, a tank, a variable frequency drive, piping, and enclosure. Construction staging/laydown areas are generally sited within developed areas and the roadway right-of-way. (Figure 9) |
| Component 2 | Replacement of three 15-horsepower pumps at the North Iris Recycled Water Pump Station, replacement of a hydropneumatics. This component involves demolition of the existing pumps and tank and installation of new pumps, a tank, a variable frequency drive, piping, a retaining wall, and enclosure. Construction staging/laydown areas are generally sited within developed areas and the roadway right-of-way. (Figure 10) |
| **San Elijo Joint Powers Authority** | |
| Component 3 | Installation of approximately 1,000-linear-feet of 16-inch pipeline from the Wanket Tank to Quail Gardens Drive. This component involves installation of a pipeline via open trenching and construction of a booster pump station. (Figure 11) |
| Component 4 | Installation of approximately 800-linear-feet, eight-inch pipeline and approximately 2,250-linear-feet of six-inch pipeline along Birmingham Drive. This component involves installation of a pipeline via open trenching with all construction activities, including staging/laydown, occurring entirely within the paved roadway. (Figure 12) |
| Component 5 | Installation of service laterals. This component involves installation of a pipeline via open trenching with all construction activities, including staging/laydown, occurring entirely within the paved roadway. This component involves installation of service laterals via open trenching. |
| Component 6 | Rehabilitation of Wanket Tank, a three-million-gallon reservoir at Encinitas Ranch Golf Course. This component involves completion of repairs to concrete and coatings on the interior and exterior of the tank. This component also includes replacement and/or installation of various appurtenances (e.g., meters, valves) as well as electrical instrumentation and controls and installation of recycled water pipelines, service laterals, a community fill station, and an electrical power connection adjacent to the tank. In addition, this component involves repair of asphalt and landscaping around the site. (Figure 11) |
| Component 11 | Installation of treatment upgrades and stormwater diversion and capture infrastructure at the San Elijo Water Campus. This component involves the installation of treatment upgrades (turbo blowers, fine bubble diffusers, coarse air mixing system, internal mixed liquor recycle system, aeration basin baffling, and a surface wasting system) to convert the San Elijo water reclamation facility from a conventional carbon oxidation biological process to a nitrification and partial denitrification process. In addition, this component involves construction of stormwater diversion and capture infrastructure with low impact development techniques, such as bioretention swales and basins, to direct runoff to centralize capture basins that will be pumped to the water recycling facility for treatment and reuse. The construction staging/laydown area is in the developed areas of the San Elijo Water Campus. (Figure 13) |
| Component 12 | Installation of approximately 1,300-linear-feet of pipeline in Requeza Street as well as a booster pump station and approximately 5,600-linear-feet of pipeline in the Encinitas Ranch Homeowner's Association along Quail Gardens Drive, Paseo de las Flores, and Lynwood Drive. This component involves installation of a pipeline via open trenching with all construction activities, including staging/laydown, occurring primarily within the paved roadways in addition to three construction staging/laydown areas, two of which are adjacent to the roadway within the Encinitas Ranch Golf Course property and one of which is located within a dirt lot 397 Requeza Street. (Figure 14 and Figure 15) |

| Agency Action Area | Proposed Action |
|---|---|
| **Vallecitos MWD** | |
| Component 1 | Expansion of the chlorine contact chamber to approximately 6.5 million gallons per day. This component involves expansion of the existing chlorine contact basins at the Meadowlark Water Reclamation Facility within the boundary of the plant facility with construction staging/laydown occurring at three developed/disturbed locations throughout the facility. (Figure 16) |

## 1.4 Purpose of the Proposed Action

The Coalition consists of eight water and wastewater agencies in northern San Diego County: Carlsbad MWD, City of Escondido, City of Oceanside, Leucadia MWD, Olivenhain MWD, Rincon del Diablo MWD, San Elijo JPA, and Vallecitos WD. The Coalition is proposing to implement the *Regional Recycled Water Program: 2020 Project* (proposed project), which is a regional effort that includes interagency connections to increase the capacity and connectivity of the Coalition partners' combined recycled water storage and distribution systems. A Program Environmental Impact Report for this project was certified by Olivenhain MWD's Board of Directors in October 2015 (Coalition 2015). In early 2017, the Coalition prepared a Regional Recycled Water Program: 2020 Project Feasibility Study, which was approved by UBSR in October 2017. In FY 2021 and FY2022, the Coalition applied for and received funding from the United States Bureau of Reclamation (USBR) through the WaterSMART: Title XVI WIIN Water Reclamation and Reuse Projects. Gaps were found in existing technical studies for several project components, and consultation with USFWS had yet to be completed. As a result, USBR requested preparation of a supplemental BA for these project components to support its compliance with NEPA and associated USFWS consultation as part of grant funding request RA22AS00115.

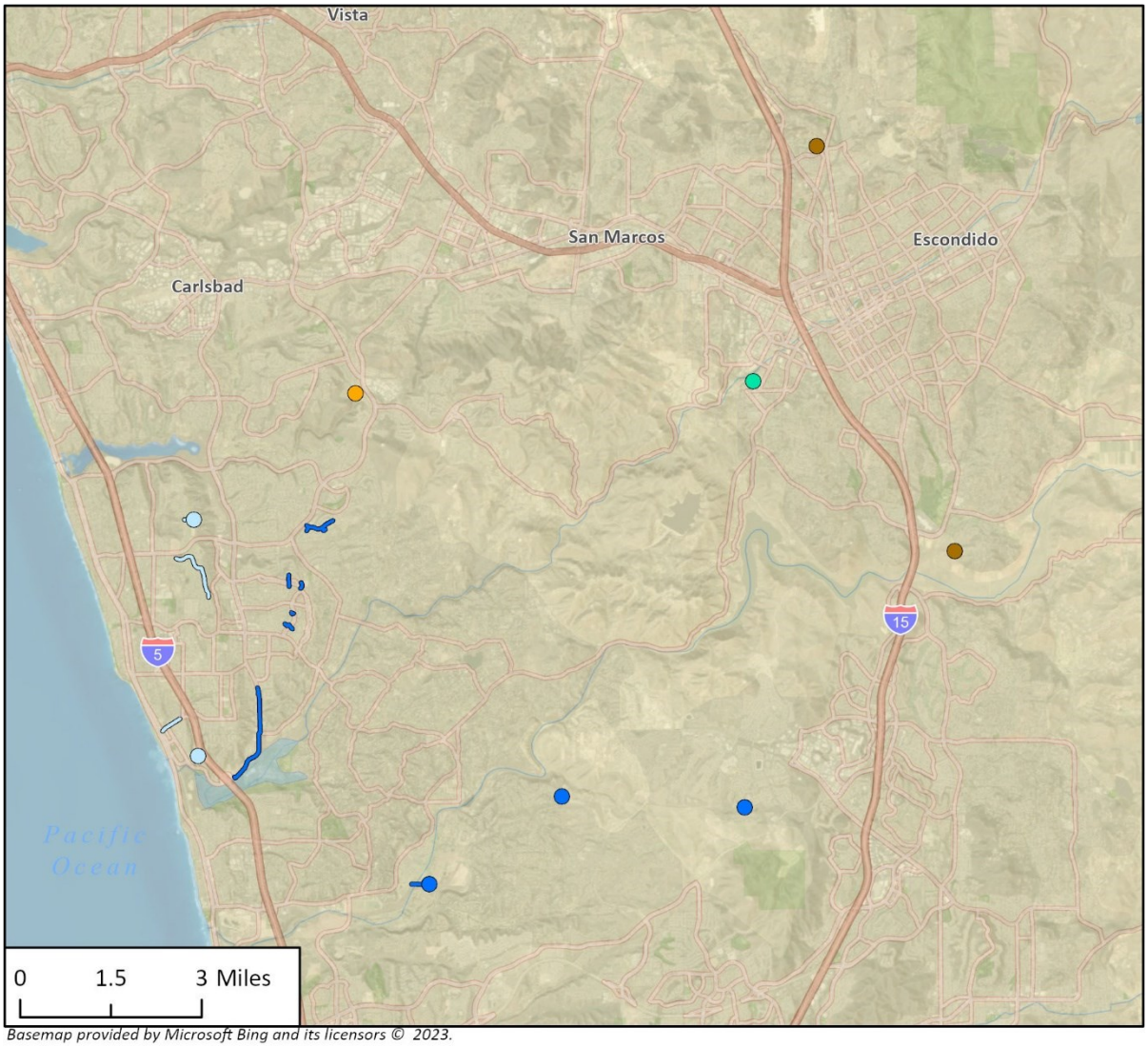
## 1.5 Description of the Proposed Action

Construction of the Proposed Action entails the activities described previously in Table 1 and Table 3, all of which would be confined to the Action Area. The purpose of the staging areas is to stockpile pipe and other construction materials, store equipment, and park vehicles. Staging areas are restricted to the Action Area. Reclamation's Standard Operating Procedures, as outlined in its *Facilities Instructions, Standards, and Techniques, Volume 1-2* (2000) and the *Reclamation Manual*'s Directives and Standards, would be applied during construction activities to minimize environmental effects, and would be implemented by construction personnel and included in contract specifications.

## 1.6 Action Area

As defined in 50 CFR 402.02, the "Action Area" includes all areas to be directly and indirectly affected by the Proposed Action, and not merely the immediate area involved in the action. The Action Area includes all work areas for construction activities and operations associated with the Proposed Action. A 200-foot buffer of the Action Area was surveyed during biological surveys and is considered the Biological Study Area. Project components are located generally in north San Diego County in the cities of Carlsbad, Escondido, Encinitas, and San Diego as well as unincorporated San Diego County. Figure 1 shows the locations of project components in a regional context, and Figure 2 through Figure 16 show the locations of project components at a local scale.

**Figure 1 Regional Project Location**




*Basemap provided by Microsoft Bing and its licensors © 2023.*

**Project Component by Agency**

- San Elijo JPA
- Olivenhain MWD
- City of Escondido
- Rincon del Diablo MWD
- Vallecitos WD
- Olivenhain MWD
- San Elijo JPA

N

## Figure 2 City of Escondido – Component 1 Location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22-13916 EPS
Fig 2 Project Location

**Figure 3 Olivenhain MWD – Components 1 and 9 Location**


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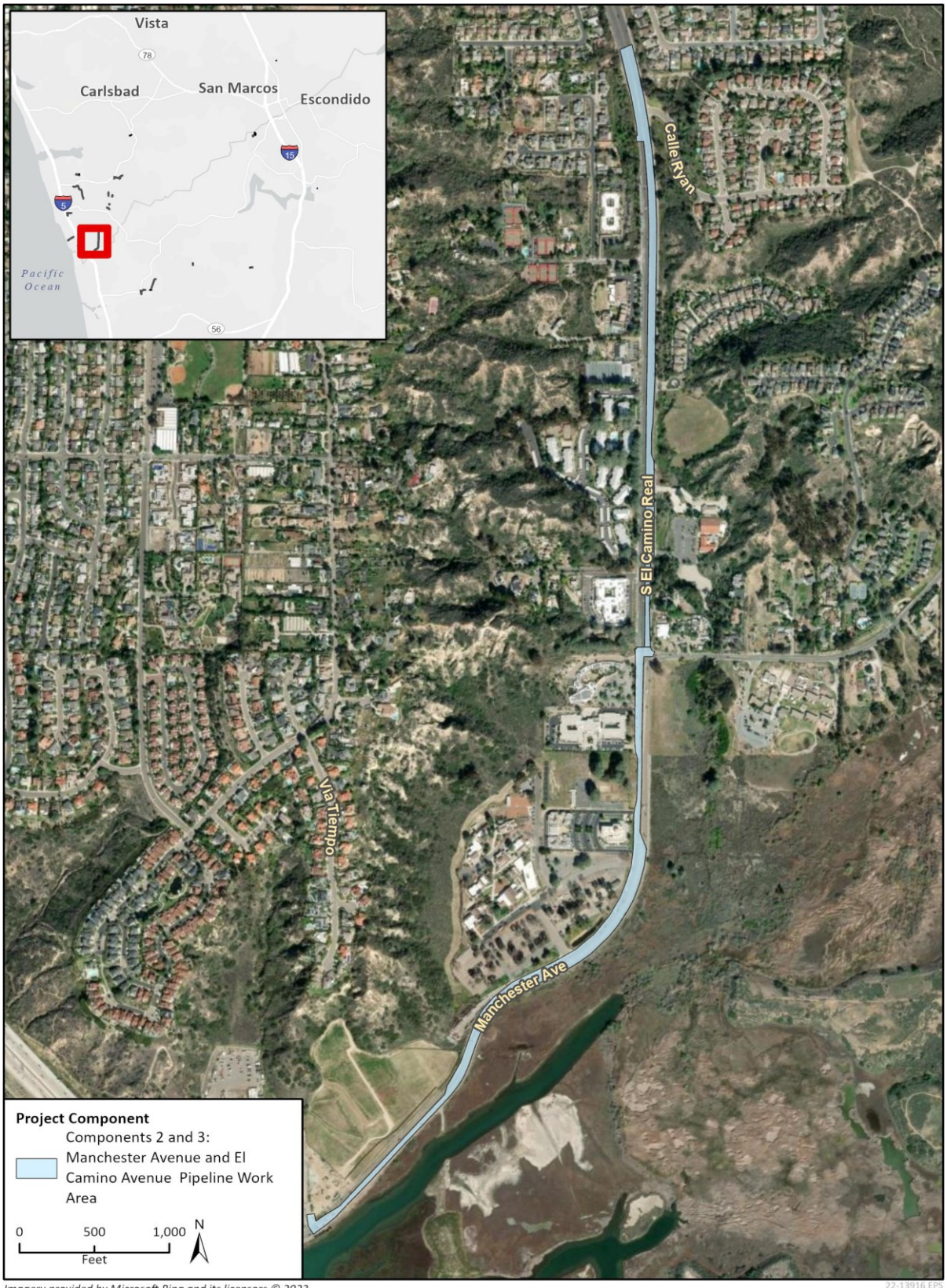
22-13916 EPS
Fig 2 Project Location

**Figure 4 Olivenhain MWD – Components 2 and 3 Location**

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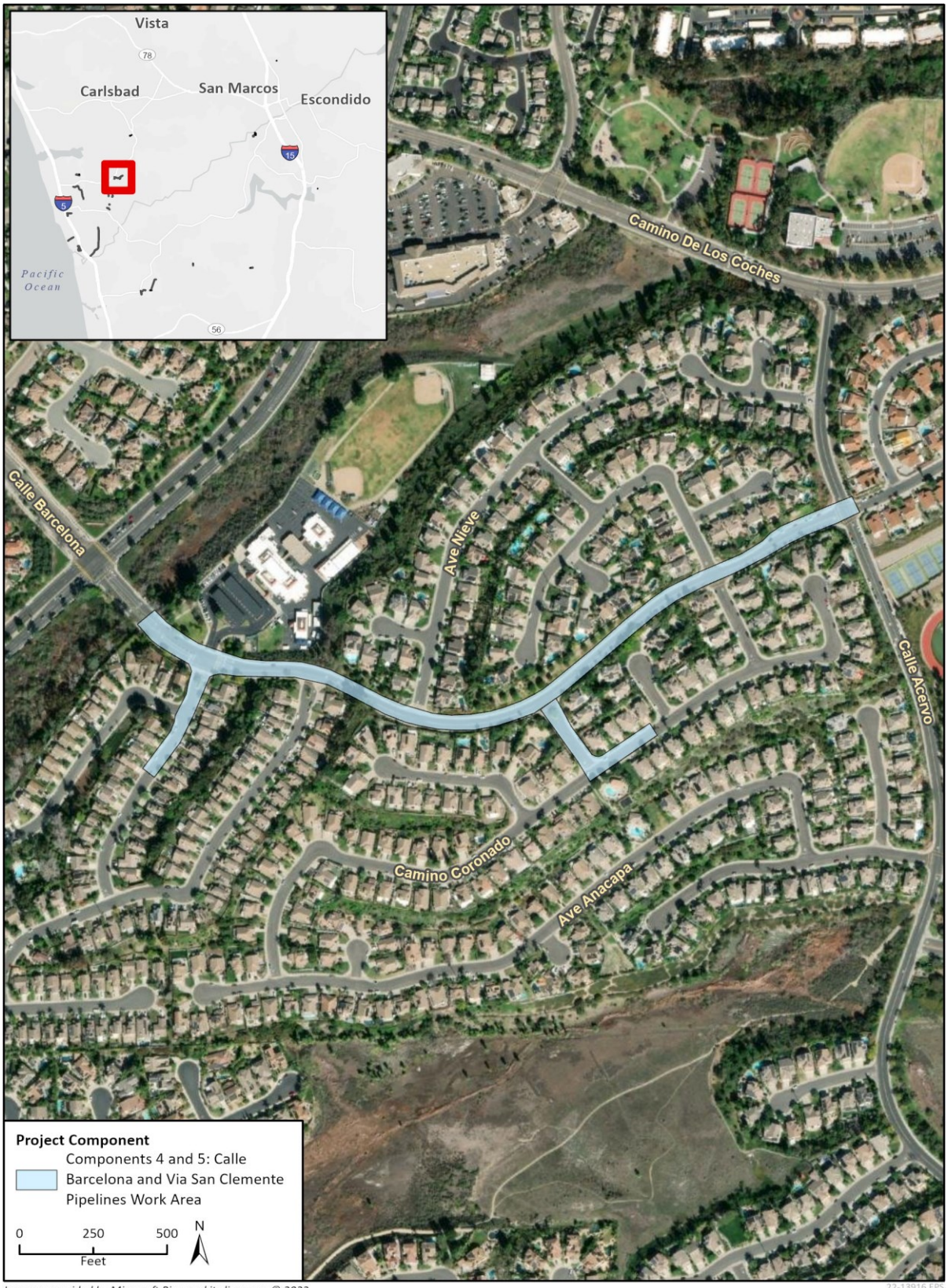
22-13916 EPS
Fig 2 Project Location

**Figure 5 Olivenhain MWD – Components 4 and 5 Location**

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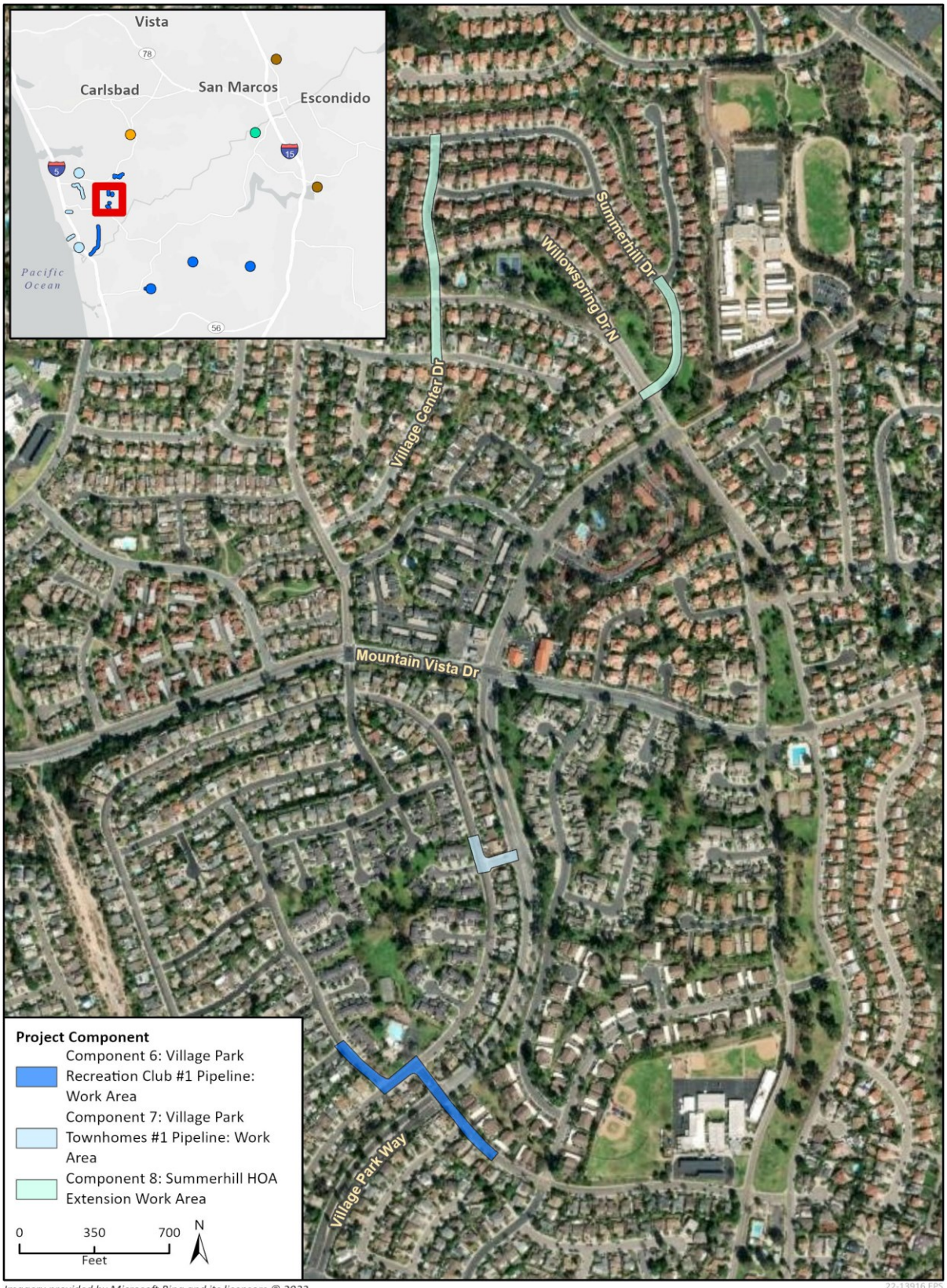
22-13916 EPS
Fig 2 Project Location

**Figure 6 Olivenhain MWD – Components 6, 7, and 8 Location**

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22-13916 EPS
Fig 2 Project Location

**Figure 7 Olivenhain MWD – Component 10 Location**


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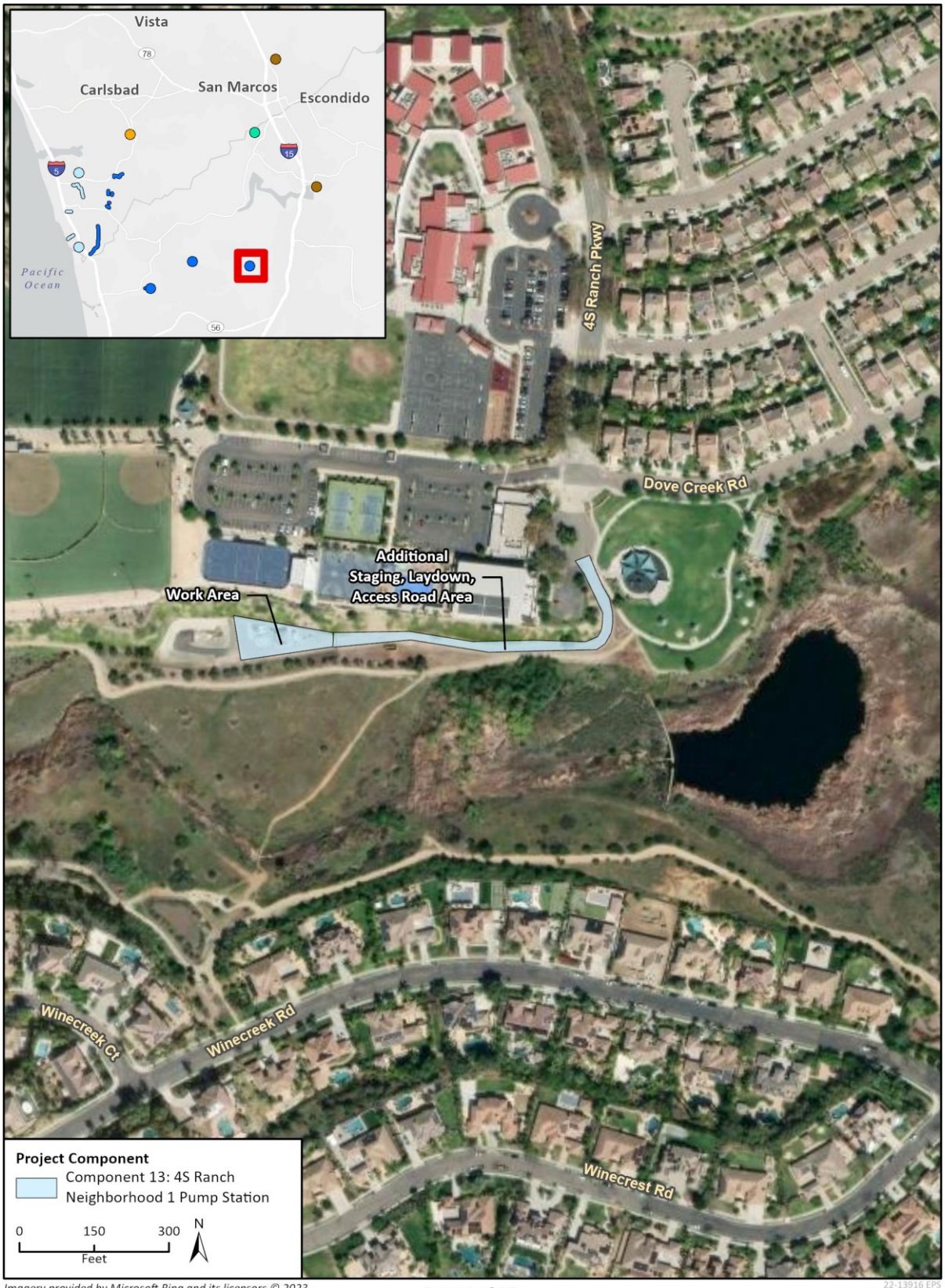
22-13916 EPS
Fig 2 Project Location

**Figure 8 Olivenhain MWD – Component 13 Location**

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22-13916 EPS
Fig 2 Project Location

**Figure 9 Rincon del Diablo MWD – Component 1 Location**


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Fig 2 Project Location

## Figure 10 Rincon del Diablo MWD – Component 2 Location


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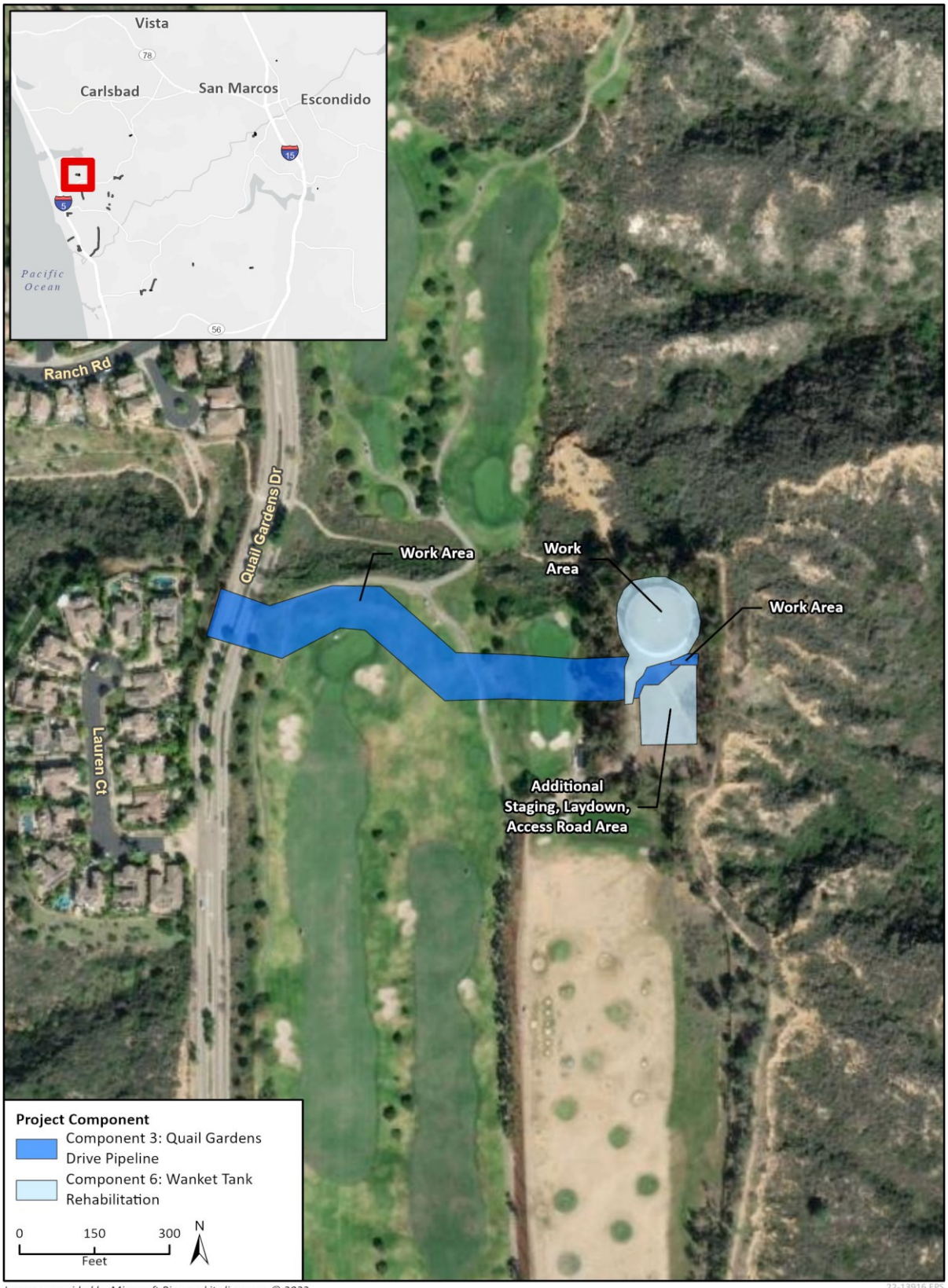
Fig 2 Project Location

**Figure 11 San Elijo JPA – Components 3 and 6 Location**

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22-13916 EPS
Fig 2 Project Location

## Figure 12 San Elijo JPA – Component 4 Location

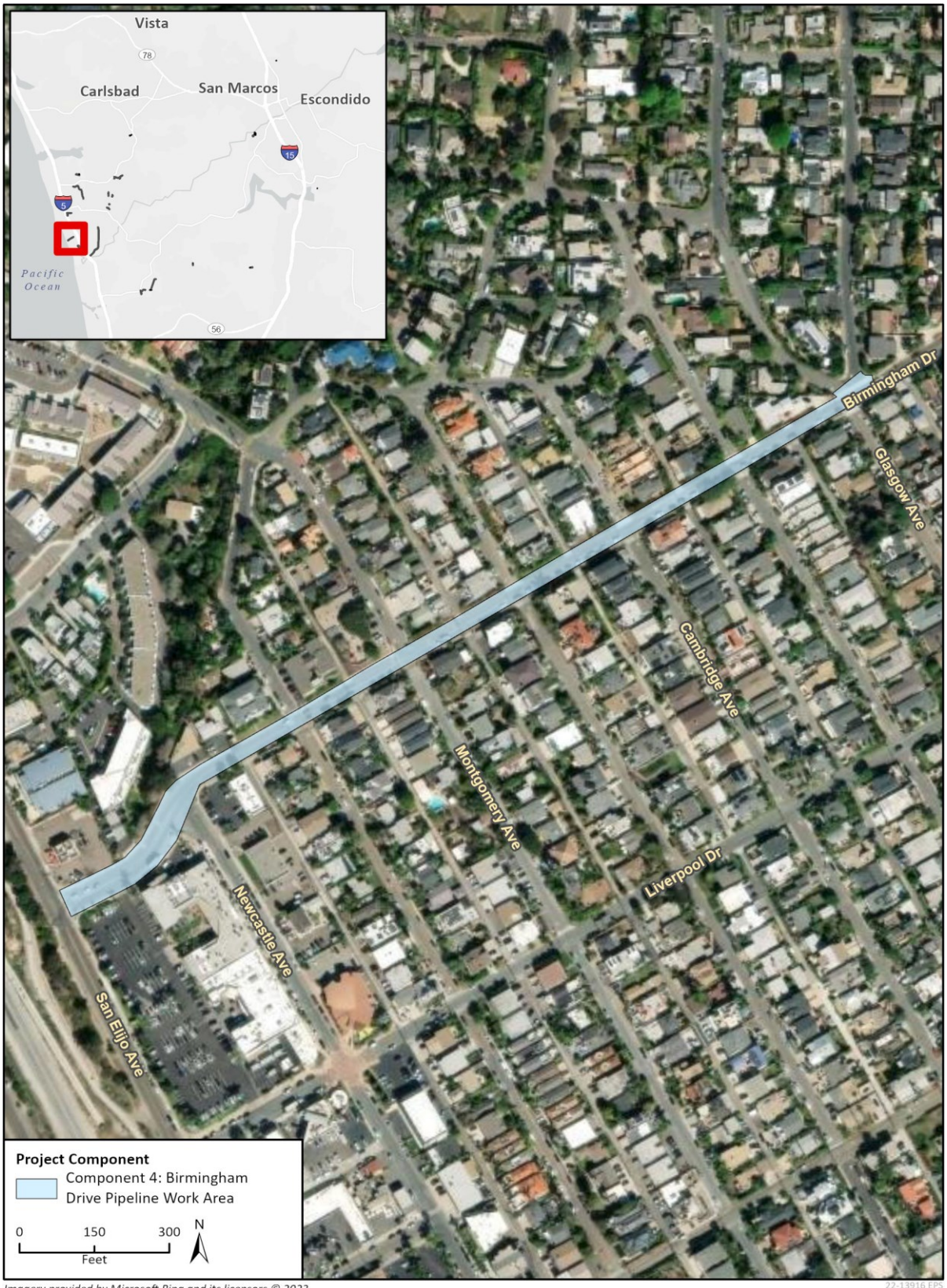


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Fig 2 Project Location

**Figure 13 San Elijo JPA – Component 11 Location**

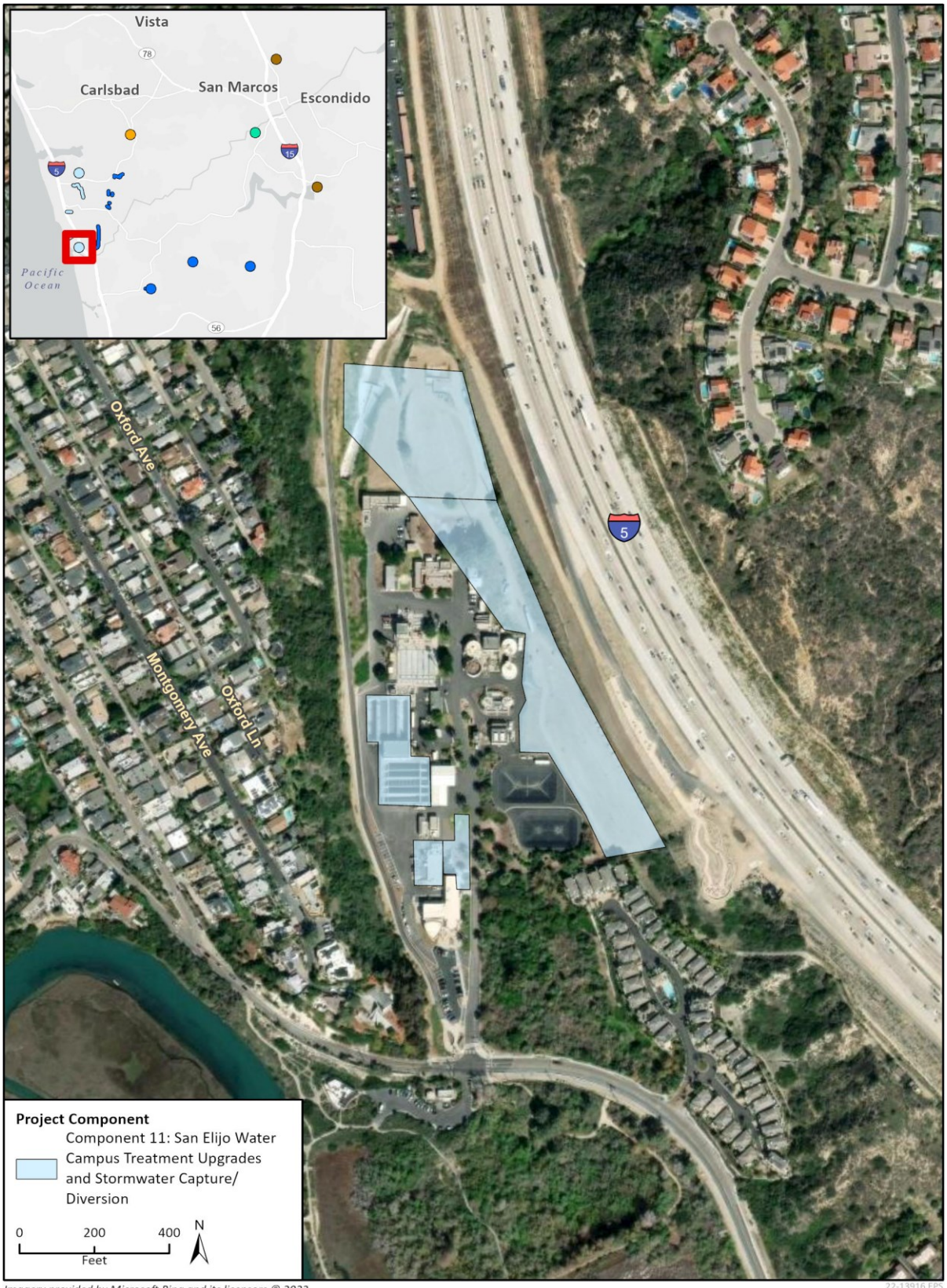
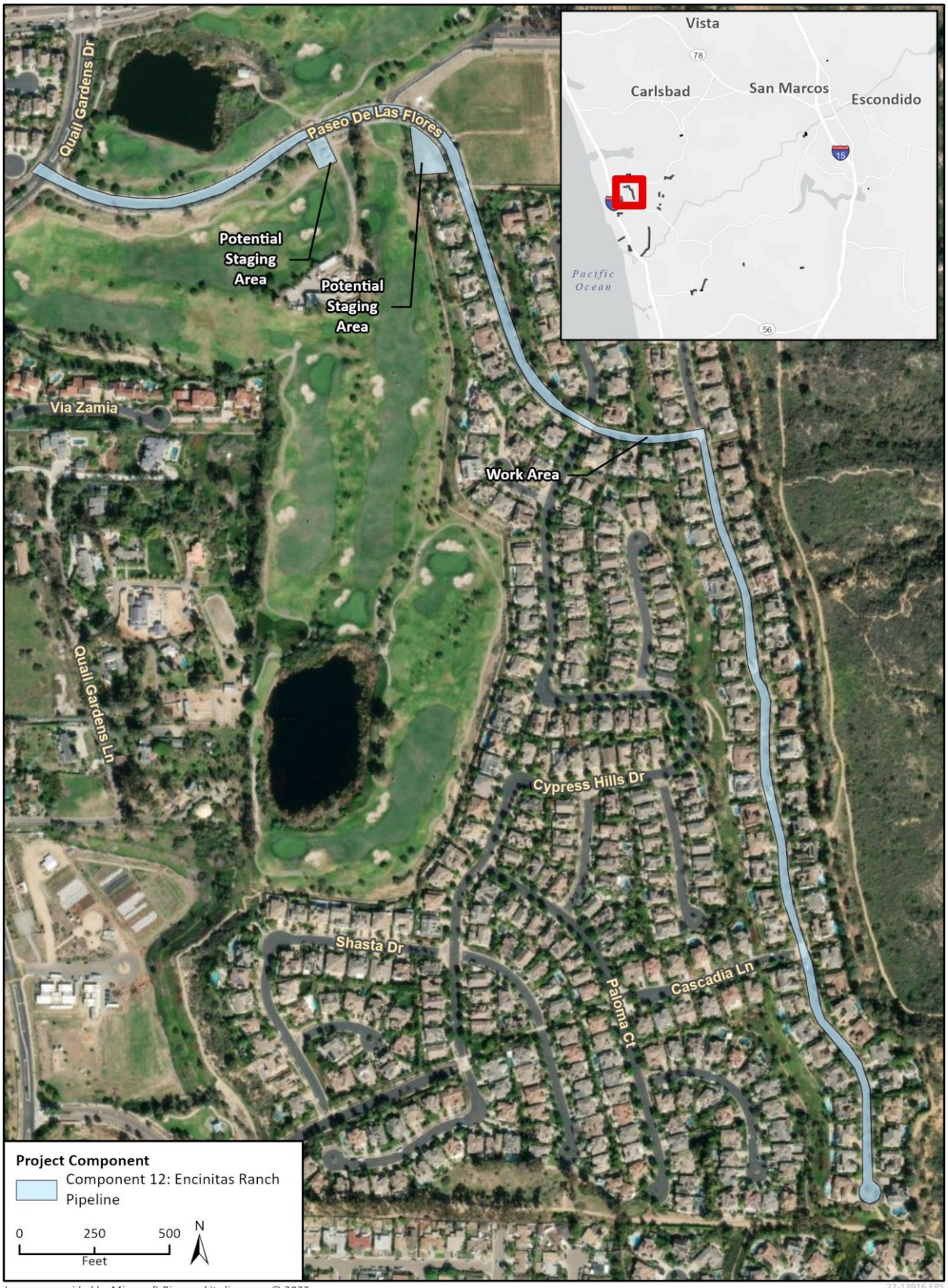


**Figure 14 San Elijo JPA – Component 12 Encinitas Ranch Pipeline Location**

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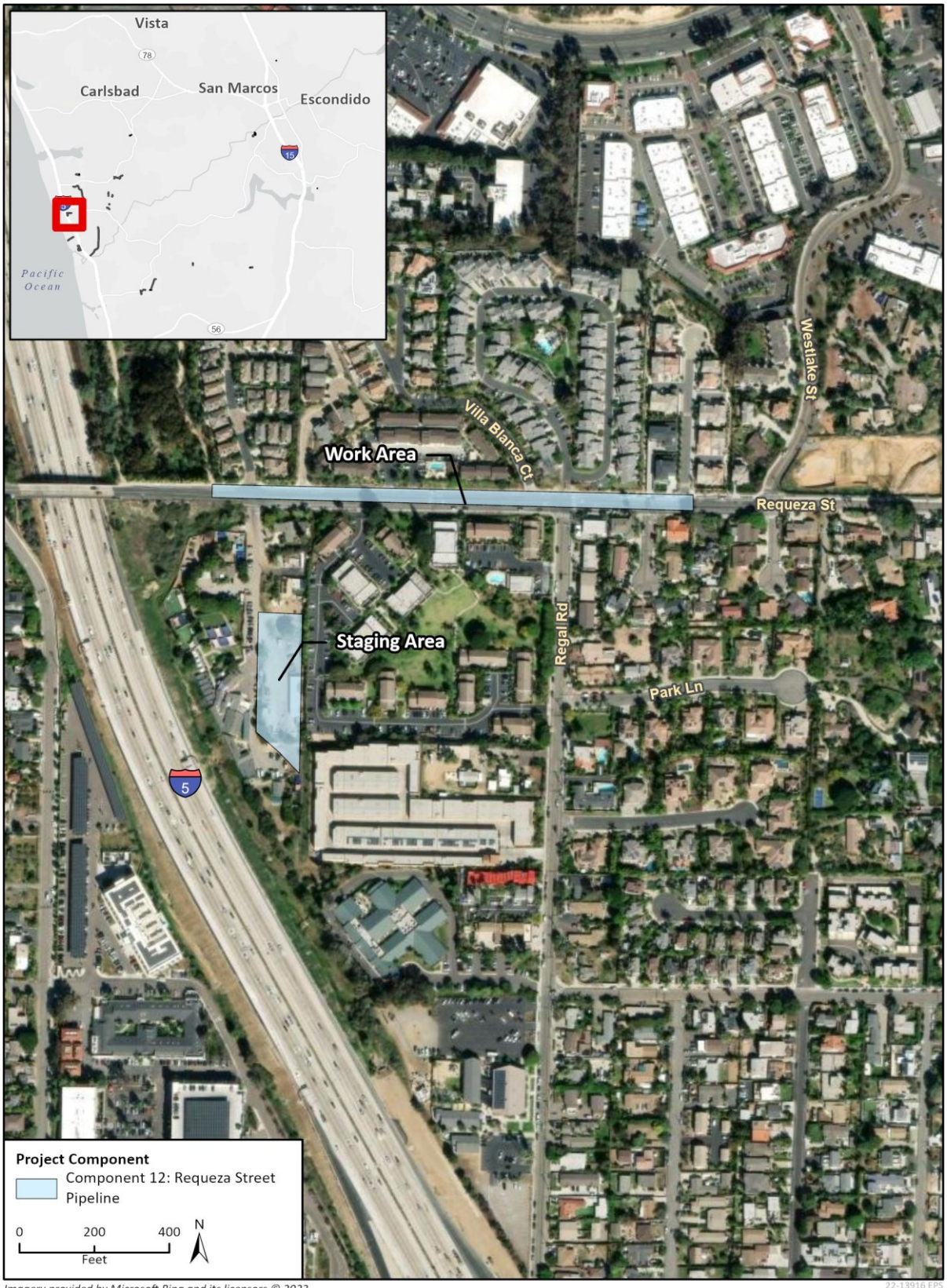
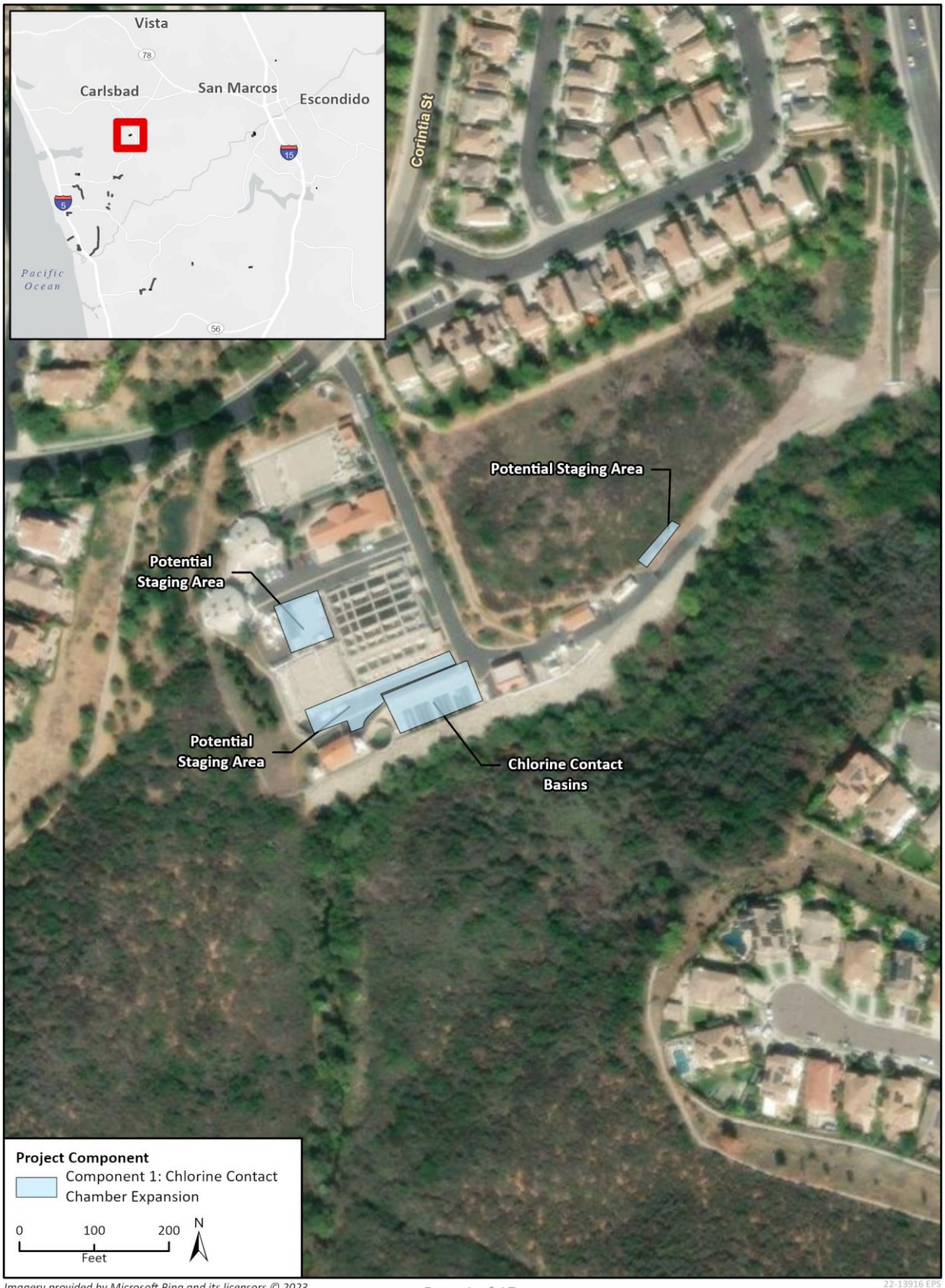
22-13916 EPS
Fig 2 Project Location

**Figure 15 San Elijo JPA – Component 12 Requeza Street Pipeline Location**



## Figure 16 Vallecitos WD – Component 1 Location

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Page 1 of 15

22-13916 EPS
Fig 2 Project Location

# 2 Methodology

## 2.1 Literature Review

A search of the California Natural Diversity Database (California Department of Fish and Wildlife [CDFW] 2023a) and California Native Plant Society (CNPS) Rare and Endangered Plant Inventory was conducted (CNPS 2023). An IPaC Trust Resource Report was generated on April 28, 2023 (Appendix A). General biological reconnaissance surveys were conducted in spring 2023 (see Section 2.2, *Reconnaissance Site Visits*). A review of the USFWS Critical Habitat Portal was conducted during preparation of the BA (USFWS 2023a). Biological studies and CEQA documentation already completed for the Action Area were review including:

- North San Diego Water Reuse Coalition. 2015. Regional Recycled Water Program Environmental Impact Report. Prepared by RMC Water & Environment.
- San Elijo JPA. 2022. Biological Resources Assessment for the Wanket Recycled Water Line Project. December. Prepared by Helix Environmental Planning.
- Olivenhain MWD. 2019. Biological Letter Report for Manchester Avenue Recycled Water Line. June. Prepared by Recon.
- San Elijo JPA. 2016. Final Mitigated Negative Declaration for the Recycled Water Pipeline and Facility Upgrades. May.
- Olivenhain MWD. 2018. Final Initial Study and Mitigated Negative Declaration for the 153A Recycled Water Pipeline Extension. December. Prepared by Woodard & Curran.

## 2.2 Reconnaissance Site Visits

Existing biological surveys and data collected were utilized to prepare this BA. Additionally, a single biological site reconnaissance of each location was completed in 2023. No focused or protocol surveys were conducted. A summary of the 2023 site visits is provided in Table 4.

## Table 4 Site Visits by Component

| Date | Personnel | Agency | Component |
|---|---|---|---|
| 2/16/2023 | Jacob Hargis | City of Escondido | #1: HAARF Facility |
| 2/16/2023 | Jacob Hargis | Rincon Del Diablo | #1: Beethoven Recycled Water Pump Station |
| 2/16/2023 | Jacob Hargis | Rincon Del Diablo | #2: North Iris Recycled Water Pump Station |
| 2/17/2023 | Jacob Hargis | Olivenhain MWD | #12: 4S Ranch Neighborhood 1 Pump Station |
| 2/17/2023 | Jacob Hargis | Olivenhain MWD | #1: Morgan Run Golf Course to Surf Cup Field Pipeline |
| 2/17/2023 | Jacob Hargis | Olivenhain MWD | #9: Rancho Paseana Connection |
| 2/17/2023 | Jacob Hargis | Olivenhain MWD | #10: Main Extension 153 Flow Control Meter |
| 2/17/2023<br>2/21/2023<br>2/27/2023 | Jacob Hargis | Olivenhain MWD | #2 and #3: Manchester Avenue and El Camino Avenue Pipeline |
| 2/21/2023 | Jacob Hargis | San Elijo JPA | #6: Wanket Tank Rehabilitation |
| 2/21/2023 | Jacob Hargis | San Elijo JPA | #3: Quail Gardens Drive Pipeline |
| 2/21/2023 | Jacob Hargis | Vallecitos WD | #1: Chlorine Contact Chamber Expansion |
| 2/27/2023 | Jacob Hargis | San Elijo JPA | #4 and #5: Birmingham Drive Pipeline |
| 3/6/2023 | Jacob Hargis | Olivenhain MWD | #4 and #5: Calle Barcelona and Via San Clemente Pipelines |
| 3/6/2023 | Jacob Hargis | Olivenhain MWD | #6: Village Park Recreation Club #1 Pipeline |
| 3/6/2023 | Jacob Hargis | Olivenhain MWD | #7: Village Park Townhomes #1 Pipeline |
| 3/6/2023 | Jacob Hargis | Olivenhain MWD | #8 and #11: Summerhill Homeowners Association Extension |
| 4/20/2023 | Jacob Hargis | San Elijo JPA | #11: San Elijo Water Campus Upgrades |
| 4/20/2023 | Jacob Hargis | San Elijo JPA | #12: Encinitas Ranch and Requeza Street Pipelines |

# 3 Action Area Environmental Baseline

## 3.1 Vegetation and Other Land Cover

Thirteen vegetation communities and three land cover types occur within the Action Area and/or the Biological Study Area. Vegetation community characterizations were based on the classification systems presented in *A Manual of California Vegetation, Second Edition* (Sawyer et al. 2009); but have been modified slightly to reflect the existing site conditions most accurately. Plant species nomenclature and taxonomy used for the Action Area follow treatments within Baldwin et al. (2012). Descriptions of plant communities encountered in the study area are detailed below and include the identifier code from the *Draft Vegetation Communities of San Diego County* (Oberbauer et al. 2008). Several communities found in the Biological Study Area are categorized as sensitive by CDFW in the CNDDB, the San Diego County Multiple Habitat Conservation Plan (MHCP), the draft North County Multiple Species Conservation Plan (MSCP), and/or the South County MSCP plans, as noted in the descriptions below.

The majority of the Biological Study Area covers the linear portion of the Proposed Action following city streets and other developed areas with no remaining native plant communities. As such, vegetation maps of those areas were not prepared. Those areas of the Biological Study Area that had some degree of natural or semi-naturalized plant communities were studied in further detail. A summary of the vegetation communities and land cover types documented within each component of the Action Area and Biological Study Area is provided in Table 5 and Table 6, respectively.

### Agriculture Land 18000

Lands that support an active agricultural operation may be classified as Agriculture Land areas are disturbed and do not usually contain any native vegetation. Some nonnative grassland was associated with fallow agricultural fields in the Biological Study Area.

### Urban/Developed Land 12000

Areas that have been constructed upon or otherwise physically altered to an extent that native vegetation is no longer supported. Developed land is characterized by permanent or semi-permanent structures, pavement or hardscape, and landscaped areas that often require irrigation. Areas where no natural land is evident due to a large amount of debris or other materials being placed upon it may also be considered Urban/Developed. Developed lands consist mainly of landscaped grass and paved paths within the golf course, Quail Gardens Drive, ornamental vegetation, and residential development at the far west of the Action Area. Ornamental plantings are also considered under Urban/Developed Lands.

### Non-native Grassland 42200

Non-native grassland consists of dense-to-sparse cover of nonnative annual grasses, often associated with species of showy-flowered, native annual forbs, especially in years of high rainfall. This vegetation community is a disturbance-related community most often found in old fields or openings in native scrub habitats that occur on fine-textured, usually clay soils. These soils are moist or even waterlogged during the winter rainy season and very dry during the summer and fall. In San Diego County the presence of wild oats (*Avena* spp.*), brome* (*Bromus* spp.)*, filaree* (*Erodium* spp.),

and mustards (*Brassica* sp.) are common indicators. In some areas, depending on past disturbance and annual rainfall, annual forbs may be the dominant species; however, it is presumed that grasses will soon dominate. Germination occurs with the onset of the late fall rains; growth, flowering, and seed-set occur from winter through spring. With a few exceptions, the plants are dead through the summer-fall dry season, persisting as seeds. Invasive species such as fennel (*Foeniculum vulgare*) and mustard are often associated with this vegetative community as a lesser component.

## Disturbed Habitat 11300

Disturbed areas have been physically disturbed and are no longer recognizable as a native or naturalized vegetation association. Disturbed areas often consist of dirt roads, unvegetated areas with compacted bare ground, or areas of sparse vegetation with evidence of recent human activities limiting natural processes from occurring. Typically, if vegetation is present it is nearly always composed of non-native plant species such as ornamentals, ruderal species or exotic species that take advantage of disturbance.

## Eucalyptus Woodland 79100

Eucalyptus habitats range from single-species thickets with little or no shrubby understory to scattered trees over a well-developed herbaceous and shrubby understory. In most cases, eucalyptus forms a dense stand with a closed canopy. Eucalyptus species produces a large amount of leaf and bark litter, the chemical and physical characteristics of which limit the ability of other species to grow in the understory, decreasing floristic diversity. Overstory composition is typically limited to one species of the genus, or mixed stands composed of several Eucalyptus species; few native overstory species are present within eucalyptus planted areas, except in small, cleared pockets. Eucalyptus woodland is dominated by eucalyptus (*Eucalyptus* spp.) trees, which surround the existing San Elijo JPA Wanket Tank (Component #6).

## Diegan Coastal Sage Scrub 32500

Diegan coastal sage scrub has a state rarity rank of S4 and is a proposed MHCP Group C habitat. Although its state rarity rank is S4, it would still be considered sensitive because it is locally limited in distribution and provides habitat to sensitive wildlife species. Within the survey area, it occurs as large patches where the survey area extends through large expanses of this vegetation community on the slopes in the northern, central, and southern portions of the survey area. The large expanse in the northern portion occurs west of El Camino Real on slopes surrounding housing developments. A large expanse of Diegan coastal sage scrub similarly occurs on slopes adjacent to housing in the southern portion of the survey area, northwest of Manchester Avenue. In the central portion of the survey area, a large expanse of this vegetation community occurs west of Manchester Avenue, adjacent to southern coastal salt marsh within the San Elijo Lagoon. Diegan coastal sage scrub also occurs as small patches in the central and northern portions of the survey area where stands of mature native shrubs persist among disturbed habitat. Diegan coastal sage scrub west of El Camino Real in the northern portion of the survey area appears to have been restored. The plant species observed within this vegetation community, including those observed as dominant, vary between the different patches throughout the survey area. However, the most common dominant species are California encelia (*Encelia californica*), black sage (*Salvia mellifera*), California sagebrush (*Artemisia californica*), and broom baccharis (*Baccharis sarothroides*). The large expanses of Diegan coastal sage scrub are considered high quality habitat, with the small patches among disturbed habitat considered moderate-quality habitat. The Diegan coastal sage scrub within the study area is

dominated by California sagebrush (*Artemisia californica*) and California coast sunflower (*Encelia californica*).

The Diegan Coastal Sage Scrub: Baccharis dominated (32530) has been included within this community time. Diegan Coastal Sage Scrub: Baccharis is similar to Diegan coastal sage scrub but dominated by coyote bush (*Baccharis pilularis*) and is usually found on disturbed or nutrient-poor soils. This community is categorized as a sensitive community in the CNDDB and targeted for conservation in the MHCP and MSCP plans.

## Southern Mixed Chaparral 37120

Broad-leaved sclerophyll shrubs, 1.5-3 m tall. Occasionally with patches of bare soil or forming a mosaic with Venturan Coastal Sage Scrub (32300) or Riversidean Sage Scrub (32700). In San Diego County, this is dominated by bluecolored lilacs, especially Ramona lilac (*Ceanothus tomentosus* var. *olivaceus*) as well as chaparral white thorn (*C. leucodermis*), hairy ceanothus (*C. oliganthus*); other Ceanothus species generally indicate other chaparral types. Dry, rocky, often steep slopes with little soil and moderate temperatures. Slopes are typically south-facing in northern California but north-facing in the south. Often adjacent to and on moister sites than Chamise Chaparral (37200). Transitional from the chaparral habitats of California to the coastal semi-desert of Baja California Norte. In San Diego County, it generally occurs east of Southern Maritime Chaparral and west of Montane Chaparral. Southern maritime chaparral is a fairly low and open chaparral only found in weathered sands within the coastal fog belt. It is dominated by wart-stemmed ceanothus (*Ceanothus verrucosus*) and Del Mar manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*). Del Mar manzanita was documented outside the Action Area but in the adjacent Biological Study Area at the Wanket Tank site (San Elijo JPA Component 3). This community is categorized as a sensitive community in the CNDDB and targeted for conservation in the MHCP and MSCP plans.

## Southern Riparian Forest 61300

Southern riparian forest consists of dense riparian forests that cannot be differentiated to other categories. This vegetation community is found along streams and rivers and is comprised of stands of western sycamore (*Platanus racemosa)* and/or cottonwood species (*Populus* spp.) as well as many other wetland plants. This community has a State rarity rank of S3 and is categorized as proposed MHCP Group A habitat.

## Southern Willow Scrub 63320

Southern willow scrub, a riparian community, is associated with streams and creeks and is comprised of dense thickets of broad-leafed, winter-deciduous shrubs and trees dominated by several types of willow (*Salix* spp.), with scattered emergent Fremont cottonwood (*Populus fremontii*) and western sycamore (*P. racemosa*). Most stands are too dense to allow much understory development. This community is categorized as a sensitive community in the CNDDB and targeted for conservation in the MHCP and MSCP plans, state rarity rank S4, and proposed MHCP Group A habitat.

## Coastal and Valley Freshwater Marsh 54210

The coastal and valley freshwater marsh vegetation community is dominated by perennial, emergent monocots up to four to five meters tall , which often form completely closed canopies. This community is usually dominated by rushes (*Scirpus* spp.) and/or cattails (*Typha* spp.). These are

generally quiet areas, lacking significant current, permanently flooded by fresh water, rather than brackish, alkaline, or variable, with prolonged saturation permits accumulation of deep, peaty soils.

## Coastal Salt Marsh 52100

These areas are typically flooded during high tides or strong winter storms. Most plants in this community are low-growing, salt-tolerant succulents called halophytes. Among the common dominant species are pickleweed, alkali heath, and saltgrass, with cordgrass (*Spartina foliosa*), salty susan (*Jaumea carnosa*), and estuary sea-blite (*Suaeda esteroa*). Coastal salt marsh vegetation is very important for wildlife. Several rare and endangered species of birds (e.g., light-footed Ridgway's rail, Belding's savannah sparrow) and plants are dependent upon it for survival. The remaining areas of this community represent only a small remnant of what originally existed in San Diego County. Coastal salt marsh is found in and around the coastal lagoons at San Elijo Lagoon, which is in proximity to Olivenhain MWD Components 2 and 3.

## Estuarine 64130

Estuarine habitats occur on periodically and permanently flooded substrates and open water portions of semi-enclosed coastal waters where tidal seawater is diluted by flowing fresh water. Salinity and depth vary dramatically in estuarine habitats, resulting in high species richness but low diversity of phyla. Estuarine habitats commonly occur along the San Diego County at the drowned mouths of perennial rivers tributary to the Pacific Ocean. Open water habitat is deeper water that is unvegetated or may have subtidal vegetation such as eelgrass. The open water habitat of an estuarine habitat type is considered jurisdictional waters of the U.S. but is not considered a wetland because it does not support a plant community. Open water habitat is important foraging and resting areas for many bird species and also provides important fish and invertebrate habitat. Estuarine habitat can be found in all the coastal lagoons at San Elijo Lagoon.

**Table 5 Summary of Vegetation and Other Land Cover in Action Area by Project Component**

| Agency | Project Component | Agricultural Lands | Urban/Developed | Ornamental | Non-Native Grassland | Disturbed Habitat | Eucalyptus Woodland | Diegan Coastal Sage Scrub | Southern Maritime Chaparral | Southern Mixed Chapparal | Southern Riparian Forest | Southern Willow Scrub | Coastal Freshwater Marsh | Coastal Salt Marsh | Estuarine |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| City of Escondido | Component 1 | | X | X | X | X | X | | | | X | | | | |
| Olivenhain MWD | Component 1 | X | X | | X | X | | X | | | | | X | | |
| | Component 2 | | X | X | X | X | | | | | X | | | X | X |
| | Component 3 | | X | X | X | X | | | | | X | | | X | X |
| | Component 4 | | X | X | | | | | | | | | | | |
| | Component 5 | | X | X | | | | | | | | | | | |
| | Component 6 | | X | X | | | | | | | | | | | |
| | Component 7 | | X | X | | | | | | | | | | | |
| | Component 8 | | X | X | | | | | | | | | | | |
| | Component 9 | | | | | X | | | | | | | X | | |
| | Component 10 | | | | | X | | X | | | | | | | |
| | Component 11 | | X | X | X | X | | | | | X | | | X | X |
| | Component 12 | | X | X | X | X | | | | | | | | | |
| San Elijo JPA | Component 3 | | X | | | X | X | | | | | | | | |
| | Component 4 | | X | | | | X | | | | | | | | |
| | Component 5 | | X | | | | X | | | | | | | | |
| | Component 6 | | X | | | | | | | | | | | | |
| | Component 11 | | X | X | X | X | | X | | | | | | | |
| | Component 12 | | X | X | X | X | | | | | | | | | |
| Rincon del Diablo MWD | Component 1 | | X | X | | | | X | | | | | | | |
| | Component 2 | | X | X | | | | | | | | | | | |
| Vallecitos WD | Component 1 | | X | | | | | X | X | | | | | | |

**Table 6 Summary of Vegetation and Other Land Cover in Biological Study Area by Project Component**

| Agency | Project Component | Agricultural Lands | Urban/Developed | Ornamental | Disturbed Habitat | Non-Native Grassland | Eucalyptus Woodland | Diegan Coastal Sage Scrub | Southern Maritime Chaparral | Southern Mixed Chapparal | Southern Riparian Forest | Southern Willow Scrub | Coastal Freshwater Marsh | Coastal Salt Marsh | Estuarine |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| City of Escondido | Component 1 | | X | X | X | X | X | X | | | X | X | | | |
| Olivenhain MWD | Component 1 | | | | X | X | | X | | | | | X | | |
| | Component 2 | X | X | X | X | X | X | X | | | X | X | | X | X |
| | Component 3 | X | X | X | X | X | X | X | | | X | X | | X | X |
| | Component 4 | | X | X | | | X | X | | | | X | | | |
| | Component 5 | | X | X | | | X | X | | | | X | | | |
| | Component 6 | | X | X | | | | | | | | | | | |
| | Component 7 | | X | X | | | | | | | | | | | |
| | Component 8 | | X | X | | | | | | | | | | | |
| | Component 9 | X | X | | X | | | | | | | | X | | |
| | Component 10 | | | | X | | X | X | | | | X | | | |
| | Component 11 | | | | | | | X | | | | | | | |
| | Component 12 | | X | X | X | X | | | | | | X | | | |
| San Elijo JPA | Component 3 | | X | | X | | X | X | X | X | | X | X | | |
| | Component 4 | | X | X | | | X | X | | | | X | | | |
| | Component 5 | | X | X | | | | | | | | | | | |
| | Component 6 | | X | X | | | | | | | | | | | |
| | Component 11 | | X | X | X | X | | X | | | | X | | | |
| | Component 12 | | X | X | X | X | | X | | | | X | | | |
| Rincon del Diablo MWD | Component 1 | | X | X | | | | X | | | | | | | |
| | Component 2 | | X | X | | | | | | | | | | | |
| Vallecitos WD | Component 1 | | X | | | | | X | X | | | X | | | |

# 4 Federally Listed Species and Designated Critical Habitat in the Action Area

Based on the results of the literature review, field survey efforts, and the characterization of habitats in the Action Area performed during the field surveys, Rincon evaluated the potential for federally listed species to occur in the Action Area. Results of the assessment are summarized in Table 2. The analysis indicated that some components of the Proposed Action may affect four federally listed species and one federally designated critical habitat. Specifically, the federally endangered light-footed Ridgway's rail, federally threatened coastal California gnatcatcher and designated critical habitat for coastal California gnatcatcher, the federally endangered least Bell's vireo, and the federally endangered southwestern willow flycatcher occur or may occur (respectively) and may be affected by the Proposed Action. Table 7 shows the components of the Proposed Action that potentially may affect one or more federally listed species and/or designated critical habitats. As stated in Section 1, *Introduction*, those components of the Proposed Action that were determined to have no potential to affect listed species (see Table 2) are not discussed.

The remaining species from the IPaC species list (Appendix A) are excluded from further analysis due to one or more of the following factors: lack of suitable habitat, negative survey findings, and/or current known distribution (presumed extirpation, isolation, and/or remoteness of known populations from the Action Area). These species are not expected to occur in the Action Area and would not be affected by the Proposed Action. The Action Area does not contain designated critical habitat (other than for coastal California gnatcatcher), proposed critical habitat, or species proposed for listing as threatened or endangered, and these resources are not discussed further in this BA.

**Table 7 Summary of Federally Listed Species and Critical Habitat by Project Component**

| | | City of Escondido | Olivenhain MWD | | Rincon del Diablo MWD | San Elijo JPA | | Vallecitos WD |
|---|---|---|---|---|---|---|---|---|
| **Scientific Name**<br>**Common Name** | **Federal Status** | **Component 1** | **Components 1 & 9** | **Components 2 & 3** | **Component 1** | **Components 3 & 6** | **Component 11** | **Component 1** |
| **Birds** | | | | | | | | |
| *Empidonax traillii extimus*<br>southwestern willow flycatcher | **E** | **Y** | **N** | **N** | **N** | **Y** | **N** | **Y** |
| *Polioptila californica californica*<br>Coastal California Gnatcatcher | **T** | **Y** | **Y** | **Y** | **Y** | **Y** | **Y** | **N** |
| *Rallus longirostris levipes*<br>Light-footed Ridgway's rail | **E** | **N** | **Y** | **Y** | **N** | **Y** | **N** | **N** |
| *Vireo bellii pusillus*<br>least Bell's vireo | **E** | **Y** | **N** | **N** | **N** | **Y** | **N** | **Y** |
| **Critical Habitats** | | | | | | | | |
| *Polioptila californica californica*<br>Coastal California Gnatcatcher | **F** | **N** | **N** | **Y** | **N** | **Y** | **Y** | **N** |

E = endangered

T = threatened

F = federally designated

N = no potential to be affected by project component

Y = may be affected by project component

# 4.1 Light-footed Ridgway's Rail

The light-footed Ridgway's rail (*Rallus obsoletus levipes*), formerly the light-footed clapper rail (*R. longirostris levipes*), was federally listed as threatened on March 30, 1993 (58 Federal Register 16742). The light-footed Ridgway's rail currently inhabits a handful of coastal marshes, lagoons and some freshwater habitats from southern Ventura County, California, southward to northern Baja California, Mexico. It was listed as endangered in 1969, and the ongoing threat to the species is habitat degradation associated with hydrology modifications, pollution, sea level rise and non-native invasive species (USFWS 2020).

The birds forage throughout the estuary and surrounding habitats and are known to feed at vegetated marsh edge-mudflat ecotones, along muddy creek banks, in freshwater vegetation, in ditches and ponded water, and more rarely in upland areas and in open mudflats (USFWS 1985b, p. 8; Zembal and Fancher 1988, p. 960; Zembal et al. 1989, p. 41 as cited in USFWS 2020).

## Suitable Habitat and Potential to Occur in the Action Area

Light-foot Ridgway's rail have been documented in and adjacent to the Action Areas at the Olivenhain MWD Components 1, 2, 3, and 9 (Konecny 2012).

## 4.2 Coastal California Gnatcatcher

The coastal California gnatcatcher (*Polioptila californica californica*) was federally listed as threatened on March 30, 1993 (58 Federal Register 16742) (USFWS 2010c). Critical habitat was designated on October 24, 2000 (65 Fed. Reg. 63680) and revised on December 19, 2007 (72 Federal Register 72010). Coastal California gnatcatcher is a CDFW Species of Special Concern (CDFW 2023b).

The historic breeding distribution of coastal California gnatcatcher extends from northwest Baja California, Mexico to Ventura County. The species current range extends west into Ventura County near Oxnard (i.e., the northwestern edge of the Santa Monica Mountains, south of Camarillo) (eBird 2020). Populations have been recorded from southwestern Orange County to San Diego County, but the subspecies southern range limit is not precisely defined because it intergrades with a different California gnatcatcher subspecies (USFWS 2010). Within its range, the historical and current distribution of coastal California gnatcatcher is scattered, although it may be locally common where suitable habitat occurs (USFWS 2010). The action area is in the northern portion of the species current range.

### Suitable Habitat and Potential to Occur in the Action Area

Coastal California gnatcatchers have been documented in and adjacent to the Action Area at the City of Escondido Component 1, Olivenhain MWD Components 1, 2, 3, and 9, Rincon del Diablo MWD Component 1, and San Elijio JPA Components 3, 6, and 11.

Federally designated critical habitat is present at Olivenhain MWD Components 2 and 3 and San Elijio JPA Components 3, 6, 11.

## 4.3 Least Bell's Vireo

Least Bell's vireo (*Vireo bellii pusillus*) was federally listed as endangered on May 2, 1986 (51 Federal Register 16474). Critical habitat was federally designated on February 2, 1994 (59 Federal Register 4845) (USFWS 2006). Least Bell's vireo was listed as endangered by the State of California on October 2, 1980 (CDFW 2023c).

Four subspecies of Bell's vireo are recognized. The least Bell's vireo (*V. b. pusillus*), addressed in this BA, breeds in California and northwestern Baja California, Mexico (Unitt 1984, Howell and Webb 1995). The eastern Bell's vireo (*V. b. bellii*) occurs in the central U.S., the Texas vireo (*V. b. medius*) in southwestern Texas and eastern Mexico, and the Arizona Bell's vireo (*V. b. arizonae*) in Arizona, Utah, Nevada, California (along the Colorado River), and Sonora, Mexico. During migration (March to April and August to early November), different subspecies may occur in southern California. Only least Bell's vireo breeds in the Biological Study Area.

Historically, least Bell's vireo ranged from coastal southern California through the Sacramento and San Joaquin Valleys as far north as Red Bluff (Tehama County) with populations also occurring along streams in the foothills of the Sierra Nevada, Owens Valley, Death Valley, and in the Mojave Desert (USFWS 1998). Least Bell's vireos are known to occur throughout southern California during the breeding season, from Santa Barbara County southward and breeding occurrences have been documented around the Santa Clara River (Ventura County), the Mojave River (San Bernardino County), and southwest into San Diego County (Kus 2002). Isolated migrant individuals and breeding pairs are documented in Kern, Monterey, San Benito, and Stanislaus Counties; however, these counties do not support sustained populations (Kus 1998). The highest population densities occur in

San Diego and Riverside Counties, particularly at Camp Pendleton (San Diego County) and Prado Basin on the Santa Ana River (Riverside County).

### Suitable Habitat and Potential to Occur in the Action Area

Least bell's vireo have been documented adjacent to the Action Area at the City of Escondido Component 1, San Elijio JPA Components 3 and 6, and Vallecitos WD Component 1.

## 4.4 Southwestern Willow Flycatcher

Southwestern willow flycatcher (*Empidonax traillii extimus*) was federally listed as endangered with the USFWS on February 27, 1995 (62 Federal Register 10694) (USFWS 2014) and critical habitat was designated by the USFWS on February 4, 2013 (78 Federal Register 343) (USFWS 2014). The species was listed as endangered by the State of California on January 2, 1991 (CDFW 2023c).

Southwestern willow flycatcher breeds in areas from sea level to over 8,500 feet above mean sea level in riparian habitat along rivers, streams, or other wetlands (USFWS 2017). This species establishes nesting territories, builds nests, and forages in dense growths of riparian vegetation. Nests are typically placed in trees where plant growth is dense, where trees and shrubs have vegetation near ground level, and where there is a low-density canopy (USFWS 2017). Nesting habitat is typically comprised of Gooddings willow (*Salix gooddingii*), coyote willow (*Salix exigua*), arroyo willow (*Salix lasiolepis*), boxelder (*Acer negundo*), tamarisk (*Tamarix tamosissima*), and Russian olive (*Elaeagnus angustifolia*). Migrating southwestern willow flycatcher may utilize a variety of riparian habitats, including ones dominated by native or nonnative plants (USFWS 2017). Southwestern willow flycatcher are believed to exist as groups of metapopulations, which is defined as a group of geographically separate breeding populations connected to each other by immigration and emigration (USFWS 2017). Southwestern willow flycatcher populations are most stable where many connected sites or large populations exist (USFWS 2017). Southwestern willow flycatcher have higher site fidelity than nest fidelity but can move among sites within drainages (USFWS 2017).

Southwestern willow flycatcher begin breeding in late April to early May and nesting begins in late May and early June. Females typically lay three to four eggs per clutch and are incubated for approximately 12 days. This species typically only raise one brood per year (Sogge et. al. 2010, USFWS 2023b).

The known geographical area historically occupied by breeding southwestern willow flycatcher includes southern California, southern Nevada, southern Utah, southern Colorado, Arizona, New Mexico, western Texas, and extreme northwestern Mexico. The extent of the southwestern willow flycatcher's current breeding range is similar to the historical, but the quantity of suitable breeding habitat has been reduced (USFWS 2017).

### Suitable Habitat and Potential to Occur in the Action Area

Southwestern willow flycatcher have been documented adjacent to the Action Area at the City of Escondido Component 1, San Elijio JPA Components 3 and 6, and Vallecitos WD Component 1.

# 5 Effects Analysis

This analysis considers effects of the Proposed Action upon listed species, which include all consequences resulting from the Proposed Action or other activities that occur because of the Proposed Action. As defined by FESA, a consequence is caused by the Proposed Action if it would not occur but for the Proposed Action and it is reasonably certain to occur (50 CFR Section 402.02). The effects of the action analyzed herein describe consequences as direct or indirect. Direct effects are those direct or immediate effects of the Proposed Action on the species or its habitat. Indirect effects are caused by the Proposed Action but occur later in time. Both direct and indirect effects can be permanent or temporary.

Permanent consequences include the entire area where project components will permanently remove habitat or loss of ecological function. Temporary effects are those effects which occur only during construction and will not persist after the Proposed Action is complete. This includes impacts in areas where equipment, supplies, and other components of the Proposed Action will be staged as necessary to support the Proposed Action. Therefore, temporary effects are expected in areas including, but not limited to, laydown, storage, and similar areas. Temporary consequences may be short term in nature and do not result in long-term removal of habitat or loss of ecological function.

## 5.1 Effects of the Proposed Action on Federally Listed Species

As part of the Proposed Action, there are potential construction effects on federally listed species, including light-footed Ridgway's rail, coastal California gnatcatcher and its designated critical habitat, least Bell's vireo, and southwestern willow flycatcher. Most components of the Proposed Action involve upgrades to existing structures and/or installation of pipelines within developed or disturbed areas. As a result, no direct effects to habitat for these federally-listed species or critical habitat would occur.

However, sensitive habitats occupied by these listed species are located adjacent to the components identified in Section 4, *Federally Listed Species and Designated Critical Habitat*. Noise and vibration from construction activities occurring adjacent to occupied habitat during the nesting season could result in the disturbance of active nests that could lead to loss of eggs, chicks, abandonment, and/or general disruption of nesting activities. Adult passerines are highly mobile and therefore disruption of non-nesting vireo, gnatcatcher, and flycatcher individuals in adjacent habitat is anticipated to be minimal. Light-footed Ridgway's rails take shelter in marsh vegetation year-round. They are more ground-dwelling, and individuals could be disturbed by work activities within suitable habitat for Olivenhain Components 1, 2, 3 and 9. However, many of the project component work areas currently experience moderate to high levels of disturbance from roadways and maintenance activities that reduce the potential for project components to disturb these species. For example, Olivenhain MWD Components 2 and 3 are located along four-lane arterial roadways and, the western terminus of Olivenhain MWD Component 2 is approximately 500 feet east of the Interstate 5/Manchester Avenue interchange, both of which are major sources of ambient roadway noise. Active construction activities associated with North Coast Corridor project also contribute to existing ambient noise in the vicinity of Olivenhain MWD Component 2. In addition, City of Escondido Component 1 and Vallecitos WD are located at existing water

reclamation facilities adjacent to residential and industrial development, and Rincon del Diablo MWD Component 1 is located adjacent to a two-lane residential street on the edge of a residential neighborhood. Furthermore, San Elijo JPA Components 3 and 6 are located within and near a golf course and a two-lane arterial roadway, and San Elijo JPA Component 11 is located at an existing water reclamation facility adjacent to Interstate 5 and residential development.

Implementation of Conservation Measures listed in Section 6, *Conservation Measures*, will minimize potential adverse effects to listed species.

## 5.2 Cumulative Effects

Under FESA regulations, a Section 7 consultation must consider cumulative effects of future state or private activities, not involving federal activities, that are reasonably certain to occur in the Action Area. Future federal actions that are unrelated to the Proposed Action are not considered because they require separate consultations pursuant to Section 7 of FESA. Each component of the Proposed Action is considered to be an independent project. The Proposed Action will not result in take of federally listed species or adverse modification of designated critical habitat; therefore, cumulative effects analysis under Section 7 of FESA is not required. However, cumulative effects under NEPA do require analysis. The Proposed Action is part of the larger WaterSMART: Title XVI WIIN Water Reclamation and Reuse funding program; not all components are receiving federal funding and are thus not described within this BA.

# 6 Conservation Measures

As part of the Proposed Action, Conservation Measures are included to minimize potential effects on federally listed species that either occur on site or have the potential to occur on site. These measures are consistent with the mitigation measures adopted for certain components of the Proposed Action under CEQA by each respective agency.

## 6.1 Conservation Measures for Nesting Birds Protected under the Migratory Bird Treaty Act

These conservation measures apply to all project components.

### Avoidance of General Bird Breeding Season.

Removal and/or trimming of potential nesting habitat should be timed to avoid the general avian breeding season (January 15 to September 15) to the maximum extent possible. If construction cannot avoid the general avian breeding season, then a qualified biologist should be retained to conduct nesting bird surveys within 300 feet of the work area for raptors and 100 feet for passerine birds protected under the Migratory Bird Treaty Act prior to the start of construction activities to determine the presence or absence of nesting birds. If nesting birds are found to be present within the survey area, appropriate buffers will be placed around the nest until the young have fledged or the nest is no longer active.

## 6.2 Conservation Measures for Light-Footed Ridgway's Rail

For Olivenhain MWD Components 1, 2, 3, and 9, the following conservation measures for light-footed Ridgeway's rail include local agency-proposed practices as well as the measures required for minimization of adverse effects during construction. These measures are taken directly from the Mitigated Negative Declarations for the Olivenhain MWD Components 1, 2, and 9.

### Avoidance of Impacts to Light-Footed Ridgway's Rail.

To avoid take of light-footed Ridgway's rail and potential direct and indirect impacts, Olivenhain MWD shall complete vegetation clearing/grubbing and construction activities outside of the rail breeding season (between September 16 and March 14) if possible. According to the project's vegetation mapping, the disturbance/staging area west of the river does not contain and is not immediately adjacent to wetland vegetation. Should construction need to occur during the rail breeding season (March 15 to September 15), consultation with the USFWS and focused surveys may be necessary. In addition, rail exclusionary fencing, stacked straw bales, and additional noise abatement measures (i.e., sound walls) may need to be installed in project areas closest to wetland vegetation to inhibit entry of rails into the construction footprint and to minimize impacts to nesting birds as a result of construction noise and activity.

### Pre-Construction Survey for Sensitive Biological Resources

Regardless of time of year, within three days prior to commencement of construction activities (including staging of equipment, clearing and grubbing) a qualified biologist shall perform a pre-construction survey for sensitive biological resources within 500 feet of the proposed project area and verify disturbance limits have been clearly identified. If a sensitive biological resource is identified during the pre-construction survey with potential for direct or indirect impacts from the Project, biological monitoring may be necessary throughout project duration.

### Biological Monitor and Training for Contractors

A qualified biological monitor shall be present during initial clearing and grubbing activities. As appropriate, the biologist may relocate animal species offsite to appropriate habitat and in compliance with any applicable federal, state, and local regulations pertaining to relocation activities. The qualified biological monitor shall train contractors and construction personnel expected to be in the project impact areas on the biological resources associated within the project and avoidance and minimization measures being implemented as part of the project and document that training is implemented.

### Preservation of Surface Soils

Surface soils including grubbed vegetation that is not a part of surface soils in the vegetated excavation areas shall be removed and preserved during construction and replaced when construction is complete. The biological monitor (see prior measure) will verify this is completed.

### Clearance of Debris

The project site shall be kept as clear of debris as possible. All food-related trash items will be enclosed in sealed containers and regularly removed from the site. All spoils and materials (including grubbed vegetation) will be disposed of properly.

### Backfill Trenches or Bore Holes

Trenches or bore holes shall not be left open if they cannot be backfilled that same day. If a trench or bore-hole cannot be backfilled, placement of a wood plank with minimum dimensions of two-inch-thick by six-inch-wide should be placed in a manner that an animal can climb out of the hole or trench. If an animal becomes trapped in a hole or trench a qualified biologist should be contacted immediately to relocate the animal.

### Reduced Speed Limit

The construction-related vehicle speed limit on dirt access roads leading to the project area shall be less than 15 miles per hour, unless otherwise posted.

## 6.3 Conservation Measures for Coastal California Gnatcatcher and Designated Critical Habitat for Coastal California Gnatcatcher

For Olivenhain MWD Components 1, 2, 3, and 9, the following conservation measures for light-footed Ridgeway's rail include local agency-proposed practices as well as the measures required for

minimization of adverse effects during construction. These measures are taken directly from the Mitigated Negative Declarations for the Olivenhain MWD Components 1, 2, 3, and 9.

### Temporary Construction Fencing

All construction areas immediately adjacent to southern willow scrub and Diegan coastal sage scrub habitats shall retain the boundary fencing between the construction area and the habitat or be temporarily fenced to prevent the inadvertent expansion of the disturbance footprint into sensitive habitat.

### Avoidance of Gnatcatcher Breeding Season

Construction activities, including brush clearing and removal, within 500 feet of Diegan coastal sage scrub habitat should be timed such that construction avoids the gnatcatcher breeding season (February 15 to August 30) to the maximum extent possible. If construction in this area cannot avoid the gnatcatcher breeding season, then the San Elijo JPA should retain a permitted biologist to conduct protocol-level surveys for the coastal California gnatcatcher prior to the start of construction activities to determine the species' presence or absence within 500 feet of work areas. The surveys should be conducted in accordance with protocol recommended by the USFWS, which includes six surveys spaced one week apart if conducted during the period of March 15 to June 30 (i.e., breeding season surveys), or nine surveys spaced two weeks apart if conducted during the period of July 1 to March 14 (i.e., non-breeding season surveys). If no gnatcatchers are observed or otherwise detected during the protocol-level surveys, then construction activities can proceed with no further requirements. If gnatcatchers are observed or otherwise detected, then construction activities should be postponed to avoid the gnatcatcher breeding season to ensure that no adverse indirect impacts would occur. If construction must occur during the gnatcatcher breeding season and gnatcatchers are confirmed to be nesting within 500 feet of construction activities, then the San Elijo shall implement additional avoidance measures in consultation with the USFWS. Additional avoidance measures may include the implementation of noise control provisions to limit the noise levels at the Diegan coastal sage scrub to not exceed an average of 60 decibels per hour, or ambient, whichever is greater, for work to proceed during the nesting season. Noise control measures may include straw bales and/or plywood backed with a foam core or other suitable materials.

## 6.4 Conservation Measures for Riparian Birds: Southwestern Willow Flycatcher and Least Bell's Vireo

For Olivenhain MWD Components 1, 2, 3, and 9, the following conservation measures for light-footed Ridgeway's rail include local agency-proposed practices as well as the measures required for minimization of adverse effects during construction. These measures are taken directly from the Mitigated Negative Declarations for the Olivenhain MWD Components 1, 2, 3, and 9.

### Avoidance of Least Bell's Vireo and Southwestern Willow Flycatcher Breeding Season

Construction should be timed to avoid the least Bell's vireo and southwestern willow flycatcher breeding season (March 15 to September 15) to the maximum extent possible. If construction in this

area cannot avoid the vireo breeding season, then a permitted biologist should be retained to conduct protocol-level surveys for the least Bell's vireo prior to the start of construction activities to determine the species' presence or absence within 500 feet of work areas. The surveys should be conducted in accordance with the protocol recommended by the USFWS, which includes eight surveys spaced 10 days apart between April 10 and July 31. If no vireos are observed or otherwise detected during the protocol-level surveys, then construction activities can proceed with no further requirements. If vireos are observed or otherwise detected, then construction activities should be postponed to avoid the vireo breeding season to ensure that no adverse indirect impacts would occur. If construction must occur during the vireo breeding season and vireos are confirmed to be nesting within 500 feet of construction activities, then additional avoidance measures in consultation with the USFWS and CDFW shall be implemented. Additional avoidance measures may include the implementation of noise control provisions to limit the noise levels at the southern willow scrub to not exceed an average of 60 decibels per hour, or ambient, whichever is greater, for work to proceed during the nesting season. Noise control measures may include straw bales and/or plywood backed with a foam core or other suitable materials.

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# Appendix A

USFWS IPaC List

# United States Department of the Interior

FISH AND WILDLIFE SERVICE
Carlsbad Fish And Wildlife Office
2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385
Phone: (760) 431-9440 Fax: (760) 431-5901


In Reply Refer To: April 28, 2023
Project Code: 2023-0045812
Project Name: North San Diego Water Reuse Coalition Water Reclamation and Reuse Projects

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A biological assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a biological assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a biological assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found at the Fish and Wildlife Service's Endangered Species Consultation website at:

https://www.fws.gov/endangered/what-we-do/faq.html

**Migratory Birds**: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

# OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Carlsbad Fish And Wildlife Office**
2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385
(760) 431-9440

# PROJECT SUMMARY

Project Code: 2023-0045812

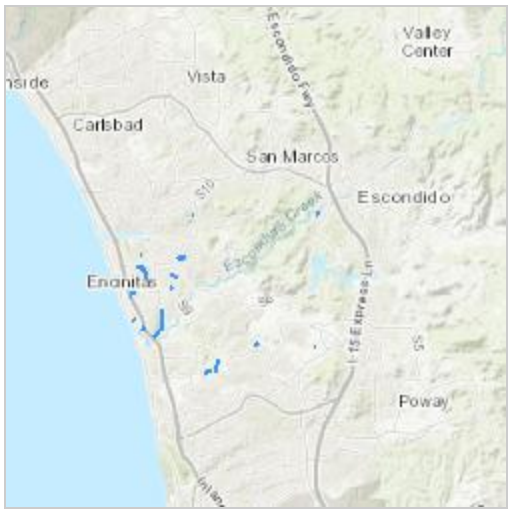
Project Name: North San Diego Water Reuse Coalition Water Reclamation and Reuse Projects

Project Type: Federal Grant / Loan Related

Project Description: The North San Diego Water Reuse Coalition (Coalition) consists of eight water and wastewater agencies in northern San Diego County: Carlsbad Municipal Water District (MWD), City of Escondido, City of Oceanside, Leucadia MWD, Olivenhain MWD, Rincon del Diablo MWD, San Elijo Joint Powers Authority (JPA), and Vallecitos Water District (WD). The Coalition is proposing to implement the Regional Recycled Water Program: 2020 Project (proposed project), which is a regional effort that includes interagency connections to increase the capacity and connectivity of the Coalition partners' combined recycled water storage and distribution systems. A Program Environmental Impact Report (PEIR) for this project was certified by Olivenhain MWD's Board of Directors in October 2015 (Coalition 2015 ). In early 2017, the Coalition prepared a Regional Recycled Water Program: 2020 Project Feasibility Study, which was approved by USBR in October 2017. In FY 2021 and FY2022, the Coalition applied for and received funding from the United States Bureau of Reclamation (USBR) through the WaterSMART: Title XVI Water Infrastructure Improvement for the Nation (WIIN) Water Reclamation and Reuse Projects. Existing technical studies have not been prepared for several project components nor have consultations with the United States Fish and Wildlife Service (USFWS) and State Historic Preservation Office (SHPO) been completed. As a result, USBR has requested preparation of supplemental technical studies for these project components to support its compliance with the National Environmental Policy Act (NEPA) and associated USFWS and SHPO consultations as part of grant funding request RA22AS00115.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@33.043497200000004,-117.28241919500739,14z




Counties: San Diego County, California

# ENDANGERED SPECIES ACT SPECIES

There is a total of 26 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## MAMMALS

| NAME | STATUS |
|---|---|
| Pacific Pocket Mouse *Perognathus longimembris pacificus* | Endangered |

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/8080

## BIRDS

| NAME | STATUS |
|---|---|
| California Least Tern *Sterna antillarum browni*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/8104 | Endangered |
| Coastal California Gnatcatcher *Polioptila californica californica*<br>There is **final** critical habitat for this species. Your location overlaps the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/8178 | Threatened |
| Least Bell's Vireo *Vireo bellii pusillus*<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/5945 | Endangered |
| Light-footed Clapper Rail *Rallus longirostris levipes*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/6035 | Endangered |
| Southwestern Willow Flycatcher *Empidonax traillii extimus*<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/6749 | Endangered |
| Western Snowy Plover *Charadrius nivosus nivosus*<br>Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast)<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/8035 | Threatened |

## AMPHIBIANS

| NAME | STATUS |
|---|---|
| Arroyo (=arroyo Southwestern) Toad *Anaxyrus californicus*<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/3762 | Endangered |

## INSECTS

| NAME | STATUS |
|---|---|
| Hermes Copper Butterfly *Lycaena hermes*<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/4379 | Threatened |
| Monarch Butterfly *Danaus plexippus*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/9743 | Candidate |
| Quino Checkerspot Butterfly *Euphydryas editha quino (=E. e. wrighti)*<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/5900 | Endangered |

## CRUSTACEANS

| NAME | STATUS |
| --- | --- |
| Riverside Fairy Shrimp *Streptocephalus woottoni* | Endangered |
| There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8148 | |
| San Diego Fairy Shrimp *Branchinecta sandiegonensis* | Endangered |
| There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6945 | |

## FLOWERING PLANTS

| NAME | STATUS |
|---|---|
| California Orcutt Grass *Orcuttia californica*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/4923 | Endangered |
| Coastal Dunes Milk-vetch *Astragalus tener var. titi*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/7675 | Endangered |
| Del Mar Manzanita *Arctostaphylos glandulosa ssp. crassifolia*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/7673 | Endangered |
| Encinitas Baccharis *Baccharis vanessae*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/3343 | Threatened |
| Nevin's Barberry *Berberis nevinii*<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/8025 | Endangered |
| Orcutt's Spineflower *Chorizanthe orcuttiana*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/7573 | Endangered |
| San Diego Ambrosia *Ambrosia pumila*<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/8287 | Endangered |
| San Diego Button-celery *Eryngium aristulatum var. parishii*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/5937 | Endangered |
| San Diego Mesa-mint *Pogogyne abramsii*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/5971 | Endangered |
| San Diego Thornmint *Acanthomintha ilicifolia*<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/351 | Threatened |
| Spreading Navarretia *Navarretia fossalis*<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/1334 | Threatened |
| Thread-leaved Brodiaea *Brodiaea filifolia*<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/6087 | Threatened |
| Willowy Monardella *Monardella viminea*<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/250 | Endangered |

## CRITICAL HABITATS

There is 1 critical habitat wholly or partially within your project area under this office's jurisdiction.

| NAME | STATUS |
| --- | --- |
| Coastal California Gnatcatcher *Polioptila californica californica*<br>https://ecos.fws.gov/ecp/species/8178#crithab | Final |

# IPAC USER CONTACT INFORMATION

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State: CA
Zip: 93401
Email mrobbins@rinconconsultants.com
Phone: 8054590333

# Appendix B

Species Observed List

## List of Species Observed Within the Action Area (includes staging areas)

| Scientific Name<br>Common Name | Federal Status | Agency | | | | |
|---|---|---|---|---|---|---|
| | | City of Escondido | Olivenhain Municipal Water District | San Elijo Joint Powers Authority | Rincon del Diablo Municipal Water District | Vallecitos Water District |
| **Birds** | | | | | | |
| *Agelaius phoeniceus*<br>red-winged blackbird | N/A | | X | | | |
| *Anas crecca*<br>green-winged teal | N/A | X | | | | |
| *Anas platyrhynchos*<br>mallard | N/A | X | X | X | | |
| *Aphelocoma californica*<br>California scrub jay | N/A | | | | | |
| *Anser caerulescens*<br>snow goose | N/A | | X | | | |
| *Asio sp.*<br>owl | N/A | | | X | | |
| *Bombycilla cedrorum*<br>cedar waxwing | N/A | X | | | | |
| *Buteo jamaicensis*<br>Red-tailed hawk | N/A | | X | X | | |
| *Charadrius vociferus*<br>killdeer | N/A | | X | X | | |
| *Calypte anna*<br>Anna's hummingbird | N/A | X | | X | X | X |
| *Corvus brachyrhynchos*<br>American crow | N/A | X | X | | X | |
| *Corvus corax*<br>common raven | N/A | | | | | |
| *Dryobates nuttallii*<br>Nuttall's woodpecker | N/A | | X | | | |

| Scientific Name<br>Common Name | Federal Status | Agency | | | | |
|---|---|---|---|---|---|---|
| | | City of Escondido | Olivenhain Municipal Water District | San Elijo Joint Powers Authority | Rincon del Diablo Municipal Water District | Vallecitos Water District |
| *Falco sparverius*<br>American kestrel | N/A | | X | | | |
| *Fulica americana*<br>American coot | N/A | | X | | | |
| *Gallinula galeata*<br>common gallinule | N/A | | X | | | |
| *Haemorhous mexicanus*<br>house finch | N/A | X | X | X | X | X |
| *Haemorhous purpureus*<br>purple finch | N/A | | X | | | |
| *Icterus cucullatus*<br>hooded oriole | N/A | | | X | | |
| *Leiothlypis celata*<br>orange crowned warbler | N/A | | | X | | |
| *Melospiza melodia*<br>song sparrow | N/A | X | X | X | | |
| *Melanerpes formicivorus*<br>acorn woodpecker | N/A | X | | | | |
| *Melozone crissalis*<br>California towhee | N/A | X | | X | | X |
| *Mimus polyglottos*<br>northern mockingbird | N/A | | | X | | X |
| *Psaltriparus minimus*<br>bushtit | N/A | X | | | | X |
| *Sayornis nigricans*<br>black phoebe | N/A | X | X | | | |
| *Sayornis saya*<br>Say's phoebe | N/A | | X | | | |
| *Spatula discors*<br>blue-winged teal | N/A | X | | | | |

| Scientific Name<br>Common Name | Federal Status | Agency<br>City of Escondido | Olivenhain Municipal Water District | San Elijo Joint Powers Authority | Rincon del Diablo Municipal Water District | Vallecitos Water District |
|---|---|---|---|---|---|---|
| *Spinus psaltria*<br>lesser goldfinch | N/A | X | | X | | X |
| *Sturnus vulgaris*<br>European starling | N/A | | X | | | |
| *Tringa flavipes*<br>lesser yellow legs | N/A | X | | | | |
| *Troglodytes aedon*<br>house wren | N/A | | | X | | |
| *Turdus migratorius*<br>American robin | N/A | X | | | | |
| *Tyrannus vociferans*<br>Cassin's kingbird | N/A | | X | | | |
| *Polioptila californica californica*<br>Coastal California Gnatcatcher* | Threatened | | | X | | |
| *Rallus levipes levipes*<br>Light-footed Ridgway's rail* | Endangered | | X | | | |
| *Selasphorus sasin*<br>Allen's hummingbird | N/A | | | X | | |
| *Setophaga coronate*<br>yellow-rumped warbler | N/A | X | | X | | |
| *Sturnella neglecta*<br>western meadowlark | N/A | | X | | | |
| *Tachycineta thalassina*<br>violet-green swallow | N/A | | | | | |
| *Tyrannus verticalis*<br>western kingbird | N/A | | | X | | |
| *Thryomanes bewickii*<br>bewick's wren | N/A | | | X | | |

| Scientific Name<br>Common Name | Federal Status | Agency<br>City of Escondido | Olivenhain Municipal Water District | San Elijo Joint Powers Authority | Rincon del Diablo Municipal Water District | Vallecitos Water District |
|---|---|---|---|---|---|---|
| *Zenaida macroura*<br>Mourning dove | N/A | X | X | X | X | |
| **Reptiles** | | | | | | |
| *Sceloporus occidentalis*<br>western fence lizard | N/A | | X | X | | |
| **Mammals** | | | | | | |
| *Otospermophilus beecheyi*<br>California ground squirrel | N/A | | X | | | |
| **Plants** | | | | | | |
| *Acacia redolens*<br>Vanilla scented wattle | N/A | | | | X | |
| *Acacia sp.* | N/A | X | X | X | X | |
| *Acmispon glaber*<br>*deerweed* | N/A | | | | | X |
| *Adenostoma fasciculatum*<br>Chamise | N/A | | X | | | X |
| *Agave americana*<br>Century plant | N/A | X | | | | |
| *Aloe arborescens*<br>Candelabra aloe | N/A | | | | X | |
| *Ambrosia psilostachya*<br>western ragweed | N/A | X | | | | |
| *Amsinckia menziesii* | N/A | | X | | | |
| *Artemisia californica*<br>California sagebrush | N/A | X | X | X | X | X |
| *Artmesia douglasana*<br>*mugwart* | N/A | | X | | | |
| *Avena barbata*<br>*wild oat* | N/A | | X | | | |

| Scientific Name<br>Common Name | Federal Status | Agency<br>City of Escondido | Olivenhain Municipal Water District | San Elijo Joint Powers Authority | Rincon del Diablo Municipal Water District | Vallecitos Water District |
|---|---|---|---|---|---|---|
| *Baccharis pilularis*<br>*coyote brush* | N/A | X | X | X | X | X |
| *Baccharis salicifolia*<br>*mulefat* | N/A | X | X | X | | X |
| *Baccharis sathroides*<br>*broom baccharis* | N/A | | X | | | |
| *Brassica nigra*<br>black mustard | N/A | | X | X | | |
| *Brassica sp.* | N/A | | X | X | | |
| *Bromus madritensis*<br>red brome | N/A | | X | | X | |
| *Bromus rubens*<br>foxtail brome | N/A | | X | | | |
| *Carpobrotus edulis*<br>ice plant | N/A | | X | X | X | |
| *Ceanothus*<br>California lilac | N/A | | | | | X |
| *Centaurea melitensis*<br>tocalote | N/A | | | | X | |
| *Chaerophyllum tainturieri*<br>Tainturier's chervil | N/A | X | | | | |
| *Circium sp.* | N/A | | X | | | |
| *Chenopodium murale* | N/A | X | | | | |
| *Claytonia parviflora*<br>streambank spring beauty | N/A | | | | | |
| *Cotula coronopifolia*<br>brass buttons | N/A | | X | | | |
| *Crassula connata*<br>sand pygmy weed | N/A | | | | X | |

| Scientific Name<br>Common Name | Federal Status | Agency | | | | |
|---|---|---|---|---|---|---|
| | | City of Escondido | Olivenhain Municipal Water District | San Elijo Joint Powers Authority | Rincon del Diablo Municipal Water District | Vallecitos Water District |
| *Cyperus eragrostis*<br>tall flatsedge | N/A | X | | | | |
| *Distichlis spicata*<br>saltgrass | N/A | | X | | | |
| *Encelia californica*<br>California brittle bush | N/A | | | | X | |
| *Eriogonum fasciculatum*<br>California buckwheat | N/A | | X | X | | X |
| Erodium cicutarium<br>red-stemmed filaree | N/A | | | X | X | |
| *Erodium malacoides*<br>Mediterranean stork's-bill | N/A | | X | | | |
| *Eucalyptus sp.*<br>gum tree | N/A | X | X | X | X | |
| *Forestiera sp.* | N/A | | X | | | |
| *Frankenia salina*<br>alkalai heath | N/A | | X | | | |
| *Galium aparine*<br>Catchweed bedstraw ^ | N/A | X | | | | |
| *Heteromeles arbutifolia*<br>Toyon | N/A | | | | | |
| *Hordeum murinum*<br>wall barley | N/A | | X | | | |
| *Juncus acutus* | N/A | | | | | X |
| *Juncus acutus*. ssp. *Leopoldii*<br>southwestern spiny rush | N/A | | X | | | |
| Lepidium didymium<br>lesser swine-cress | N/A | | | | | |

| Scientific Name<br>Common Name | Federal Status | Agency | | | | |
|---|---|---|---|---|---|---|
| | | City of Escondido | Olivenhain Municipal Water District | San Elijo Joint Powers Authority | Rincon del Diablo Municipal Water District | Vallecitos Water District |
| *Lonicera sp.*<br>honey suckle | N/A | | | | X | |
| *Marah fabaceus*<br>California manroot | N/A | | | X | | |
| *Marah macrocarpa*<br>wild cucumber | N/A | | | X | | |
| *Medicago polymorpha*<br>bur clover | N/A | | X | | | |
| *Melosa laurina*<br>laurel sumac | N/A | | X | X | | |
| *Nassella leucotricha*<br>Texas winter grass | N/A | | X | | | |
| *Ngaois sp.* | N/A | | X | | | |
| *Nicotiana glauca*<br>tree tobacco | N/A | | X | X | | |
| *isocoma menziesii*<br>Coastal goldenbush | N/A | | | | | X |
| *Opuntia littoralis*<br>*coast prickly pear* | N/A | | X | | | |
| *Osteospermum*<br>*African daisy* | N/A | | | X | | |
| *Oxalidaceae sp.*<br>*Woodsorrel* | N/A | | | | | |
| *Pinus sp.* | N/A | X | | | X | |
| Pinus halepensis<br>Aleppo pine | N/A | | | X | | |
| *Platanus hispanica*<br>London plane | N/A | | | | X | |
| *Plumbago auriculata*<br>blue plumbago | | | | | X | |

| Scientific Name<br>Common Name | Federal Status | Agency | | | | |
|---|---|---|---|---|---|---|
| | | City of Escondido | Olivenhain Municipal Water District | San Elijo Joint Powers Authority | Rincon del Diablo Municipal Water District | Vallecitos Water District |
| *Quercus agrifolia*<br>coast live oak | | X | | | | |
| *Quercus berberidifolia*<br>California scrub oak | | | X | | | |
| *Rhamnus crocea*<br>red berry buckthorn | | | | | | X |
| *Rhus integrifolia*<br>lemonade berry | | | X | X | | X |
| *Ribes speciosum*<br>fuchsiaflower gooseberry | | | | | | X |
| *Salicornia sp.*<br>Pickleweed | | | X | | | |
| *Salix goodingii*<br>Gooding's black willow | | | X | | | |
| *Salix lasiolepsis*<br>*arroyo willow* | | X | X | | | |
| *Salix laevigata*<br>red willow | | X | | | | |
| *Salvia mellifera*<br>black sage | | | | X | | X |
| *Salsola tragus*<br>salsola tragus | | | X | | | |
| *Sambucus nigra*<br>black elderberry | | | X | | | |
| *Schinus terebinthifolia*<br>Brazilian pepper tree | | X | X | | | |
| *Senecio vulgaris*<br>common grounsel | | | X | | | |
| *Schismus barbatus*<br>Mediterranean grass | | | X | | | |

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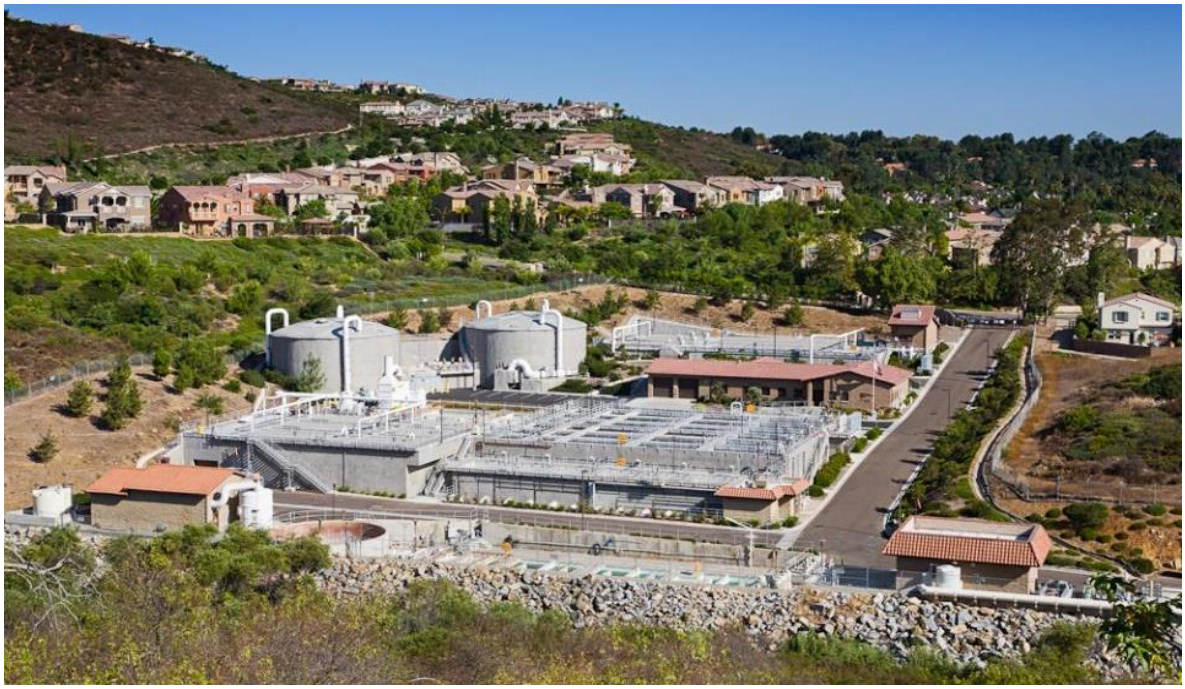
|---|---|---|---|---|---|---|
| *Schoenoplectus acutus*<br>*Common tule* | | | X | | | |
| *Soliva sessilis*<br>Common solvia | | | | | X | |
| *Syagrus romanzoffianum*<br>queen palm | | | | | X | |
| *Tamarix*<br>salt cedar | | X | X | | | |
| *Trifolium sp.* | | | | | | |
| *Tulbaghia violacea*<br>society garlic | | | | | X | |
| *Urtica urens*<br>dwarf nettle | | X | | | | |
| *Washingtonia robusta*<br>Mexican fan palm | | X | | | | |
| *Viburnum tinus*<br>lasturnium | | | X | | | |
| *vitis girdiana*<br>desert wild grape | | | X | | | |

# Appendix C

Project-Specific Mitigation Monitoring and Reporting Program



# Meadowlark Water Reclamation Facility Chlorine Contact Tank Expansion Project

## Mitigation Monitoring and Reporting Program

*prepared by*

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**December 2023**

RINCON CONSULTANTS, INC.
Environmental Scientists | Planners | Engineers
rinconconsultants.com

# Mitigation Monitoring and Reporting Program

CEQA requires that a reporting or monitoring program be adopted for the conditions of project approval that are necessary to mitigate or avoid significant effects on the environment (Public Resources Code 21081.6). This mitigation monitoring and reporting program is intended to track and ensure compliance with adopted mitigation measures during the project implementation phase. For each mitigation measure recommended in the Addendum to the Final Program Environmental Impact Report for the North San Diego Water Reuse Coalition Regional Recycled Water Project for the Meadowlark Water Reclamation Facility Chlorine Contact Tank Expansion Project, specifications are made herein that identify the action required, the monitoring that must occur, and the agency or department responsible for oversight.

| Mitigation Measure | Party Responsible for Implementation and Reporting | Review and Approval By | Monitoring and Reporting Actions | Implementation Schedule | Compliance Verification Initial | Compliance Verification Date | Compliance Verification Comments |
|---|---|---|---|---|---|---|---|
| **Air Quality** | | | | | | | |
| **Mitigation Measure 3.3-2 Implementation of Practicable Air Pollution Control Measures** | | | | | | | |
| Vallecitos Water District shall complete an air quality assessment that determines project-level air emissions and identifies measures that could be incorporated into project operation and construction to minimize emissions to the extent practicable. Potential mitigation measures could include control measures for PM10 (e.g., imposing speed limits on unpaved roads, covering haul trucks, limiting daily grading), control measures for nitrogen oxides (e.g., grading or fuel use restrictions, using newer equipment), control measures for volatile organic compounds (e.g., use of volatile organic compound-free coatings, using volatile organic compound emission control reductions), or other control measures as appropriate. All project components shall implement air quality control measures to the extent practicable, even where such components do not individually violate air quality standards, due to the cumulative impact on air quality from the Proposed Project. | Vallecitos Water District | Vallecitos Water District | 1. Complete an air quality assessment that determines project-level air emissions and identifies measures to minimize emissions to the extent practicable<br>2. Confirm that air quality measures identified in the project-level air quality assessment are included in contract documents<br>3. Monitor construction activities to verify that measures are implemented during construction | 1. Design<br>2. Design<br>3. Construction | 1.<br>2.<br>3. | 1. Dec. 2023<br>2.<br>3. | 1. Part of Addendum<br>2.<br>3. |
| **Mitigation Measure 3.3-5 Incorporate Odor Control into Facility Design** | | | | | | | |
| Consideration of objectionable odors shall be incorporated into the design of treatment facilities and treatment facility expansions. Appropriate odor control measures shall be implemented for those treatment facilities located in close proximity to sensitive receptors, and residential and commercial areas, and that are found to be likely to produce objectionable odors during project-level CEQA review. Examples of odor control measures could | Vallecitos Water District | Vallecitos Water District | 1. Verify that design of treatment facilities includes odor controls, as appropriate<br>2. Confirm that odor control measures are included in contract documents<br>3. Verify that odor control | 1. Design<br>2. Design<br>3. Post construction | 1.<br>2.<br>3. | 1.<br>2.<br>3. | 1.<br>2.<br>3. |

| Mitigation Measure | Party Responsible for Implementation and Reporting | Review and Approval By | Monitoring and Reporting Actions | Implementation Schedule | Compliance Verification Initial | Compliance Verification Date | Compliance Verification Comments |
|---|---|---|---|---|---|---|---|
| include installation of odor-controlled ventilation systems and air filters, enclosing certain facilities within structures, use of closed systems, implementation of best management practices, or others, as appropriate and applicable. | | | measures were constructed as designed | | | | |
| **Biological Resources** | | | | | | | |
| **Mitigation Measure 3.4-1b Surveys and Mitigation for Sensitive Wildlife Species** | | | | | | | |
| Prior to the initiation of construction, Vallecitos Water District shall conduct habitat assessment for sensitive wildlife species, (including but not limited to the coastal California gnatcatcher, least Bell's vireo, southwestern willow flycatcher, and burrowing owl). Avoidance measures shall also be incorporated to avoid impacts from construction adjacent to any occupied areas.<br>**Coastal California Gnatcatcher**<br>*During Construction*<br>▪ Construction noise shall not exceed 60 A-weighted decibels (dBA) $L_{eq}$ in avoided occupied coastal California gnatcatcher habitat between February 15 and August 31 unless noise attenuation measures are implemented to reduce noise levels below this level, or the United States Fish and Wildlife Service (USFWS) approves noise levels above this threshold. Noise attenuation measures may include, but are not limited to, establishing construction set-back buffers, equipment noise mufflers, and noise walls, as determined necessary by an acoustic specialist and in consultation with the project biologist. Monitoring by a qualified biologist shall also occur during construction to ensure noise levels are maintained below the threshold. | Vallecitos Water District | USFWS (if necessary), California Department of Fish and Wildlife (if necessary), Vallecitos Water District | 1. Confirm completion of surveys.<br>2. Confirm that locations of facilities avoid sensitive habitats to the extent feasible.<br>3. Confirm that if coastal California gnatcatcher, least Bell's vireo, southern willow flycatcher, or western yellow-billed cuckoo are found to occupy a site that measures are implemented as outlined and in consultation with USFWS and CDFW.<br>4. Monitor construction activities to verify that other measures are implemented during construction. | 1. Pre-construction<br>2. Pre-construction<br>3. Construction<br>4. Construction | 1.<br>2.<br>3.<br>4. | 1.<br>2.<br>3.<br>4. | 1.<br>2.<br>3.<br>4. |

| Mitigation Measure | Party Responsible for Implementation and Reporting | Review and Approval By | Monitoring and Reporting Actions | Implementation Schedule | Compliance Verification Initial | Compliance Verification Date | Compliance Verification Comments |
|---|---|---|---|---|---|---|---|
| Alternatively, construction noise levels above 60 dBA $L_{eq}$ may be approved by USFWS if monitoring by a USFWS permitted biologist for this species determines that the construction noise is not impacting the expected breeding behavior of the birds.<br><br>**Least Bell's Vireo, Southern Willow Flycatcher, and Western Yellow-Billed Cuckoo**<br>▪ Avoid indirect impacts to Least Bell's Vireo, Southwestern Willow Flycatcher, or Western Yellow-Billed Cuckoo including noise impacts during construction by implementing the following proposed measures:<br>▫ Construction limits in and around potential habitat shall be delineated with flags and fencing prior to the initiation of any grading or construction activities.<br>▫ Prior to grading and construction, a training program shall be developed and implemented to inform all workers on the project about listed species, sensitive habitats, and the importance of complying with avoidance and minimization measures.<br>▫ All construction work shall occur during the daylight hours. The construction contractor shall limit all construction-related activities that would result in high noise levels according to the construction hours determined by the City.<br>▫ During all excavation and grading on site, the construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, | | | | | | | |

| Mitigation Measure | Party Responsible for Implementation and Reporting | Review and Approval By | Monitoring and Reporting Actions | Implementation Schedule | Compliance Verification Initial | Compliance Verification Date | Compliance Verification Comments |
|---|---|---|---|---|---|---|---|
| consistent with manufacturers' standards to reduce construction equipment noise to the maximum extent possible.<br>▫ Construction contractor shall place all stationary construction equipment so that emitted noise is directed away from sensitive receptors (i.e., territory for Least Bell's Vireo, Southwestern Willow Flycatcher, and Western Yellow Billed Cuckoo) nearest the project site.<br>▫ The construction contractor shall stage equipment in areas that will create the greatest distance between construction-related noise sources and noise sensitive receptors nearest the project site during all project construction.<br>▫ Noise from construction activities shall be limited to the extent possible through the maximum use of technology available to reduce construction equipment noise. Project-generated noise, both during construction and after the development has been completed, shall be in compliance with the requirements outlined in any local noise regulations to ensure that noise levels that the riparian area is exposed to do not exceed noise standards for residential areas.<br>▪ The project shall be designed to minimize exterior night lighting while remaining compliant with local ordinances related to street lighting. Any necessary lighting (e.g., to light up equipment for security measures), both during construction and after construction has been completed, will be shielded or directed away | | | | | | | |

| Mitigation Measure | Party Responsible for Implementation and Reporting | Review and Approval By | Monitoring and Reporting Actions | Implementation Schedule | Compliance Verification Initial | Compliance Verification Date | Compliance Verification Comments |
|---|---|---|---|---|---|---|---|
| from the nesting area and are not to exceed 0.5 foot-candles. Monitoring by a qualified lighting engineer (attained by the lead agency for that project component) shall be conducted as needed to verify light levels are below 0.5 foot-candles required within identified, occupied least Bell's vireo territories, both during construction and at the onset of operations. If the 0.5 foot-candles requirement is exceeded, the lighting engineer shall make operational changes and/or install a barrier to alleviate light levels during the breeding season. | | | | | | | |
| **Mitigation Measure 3.4-4 Avoid Migratory Bird Nesting Season or Complete Surveys Before Construction Activities** | | | | | | | |
| If feasible, construction within or adjacent to vegetation suitable for migratory birds shall occur outside the nesting season (i.e., construction shall occur between September 1 through January 14) to avoid potential direct and indirect impacts to nesting birds. If vegetation removal is required during the nesting season, a qualified biologist shall survey all suitable habitats for the presence of nesting birds before the commencement of clearing. If any nests are detected, a buffer of at least 300 feet (500 feet for raptors) shall be delineated, flagged, and avoided until the nesting cycle is complete, or as determined appropriate by the biologist. Biological monitoring shall occur until nesting cycle is complete. | Vallecitos Water District | Vallecitos Water District | 1. Verify construction schedule for activities within or adjacent to vegetation suitable for migratory birds occurs between September 1 and January 14, where feasible.<br>2. Confirm that surveys are completed, if construction activities within or adjacent to habitat suitable for migratory birds are scheduled between January 15 and August 31 (nesting season), and if vegetation removal is required.<br>3. Confirm buffer zones have been established, if | 1. Pre-construction<br>2. Pre-construction<br>3. Pre-construction<br>4. Construction | 1.<br>2.<br>3.<br>4. | 1.<br>2.<br>3.<br>4. | 1.<br>2.<br>3.<br>4. |

| Mitigation Measure | Party Responsible for Implementation and Reporting | Review and Approval By | Monitoring and Reporting Actions | Implementation Schedule | Compliance Verification Initial | Compliance Verification Date | Compliance Verification Comments |
|---|---|---|---|---|---|---|---|
| | | | applicable.<br>4. Verify that monitoring of construction activities is occurring until the nesting cycle is complete, if needed. | | | | |
| **Cultural Resources** | | | | | | | |
| **Mitigation Measure 3.5-2c Conduct Archaeological Sensitivity Training for Construction Personnel** | | | | | | | |
| Vallecitos Water District shall retain a qualified archaeologist and Native American representative from the San Luis Rey Band who shall conduct an Archaeological Sensitivity Training for construction personnel prior to commencement of excavation activities. The training session shall be carried out by a cultural resources professional with expertise in archaeology, will focus on how to identify archaeological resources that may be encountered during earthmoving activities, and the procedures to be followed in such an event. The training session will include a Power Point presentation and/or handouts for all attendees. The basic topics to be addressed in the session include: a brief cultural and archaeological history of the area and the Study Area; cultural resource compliance obligations; training in potential resources that may be encountered through the use of photographs or other illustrations; the duties of archaeological and Native American monitors; notification and other procedures to follow upon discovery of resources; and the general steps that would be followed to conduct a salvage investigation if one is necessary. | Vallecitos Water District | Vallecitos Water District | 1. Confirm that contract documents specify training for construction personnel by a qualified archaeologist and Native American representative from the San Luis Rey Band.<br>2. Document training session materials include a PowerPoint presentation and/or handouts for attendees.<br>3. Verify topics listed in the mitigation measure are included in the training. | 1. Design<br>2. Pre-construction<br>3. Pre-construction | 1.<br>2.<br>3. | 1.<br>2.<br>3. | 1.<br>2.<br>3. |

| Mitigation Measure | Party Responsible for Implementation and Reporting | Review and Approval By | Monitoring and Reporting Actions | Implementation Schedule | Compliance Verification Initial | Compliance Verification Date | Compliance Verification Comments |
|---|---|---|---|---|---|---|---|
| **Mitigation Measure 3.5-2d Monitor and Report Construction Excavations for Archeological Resources** | | | | | | | |
| Vallecitos Water District shall retain a qualified professional archaeological monitor and Native American monitor from the San Luis Rey Band who shall be present during construction excavations such as clearing/grubbing, grading, trenching, or any other construction excavation activity associated with the proposed improvement. The frequency of monitoring shall be based on the rate of excavation and grading activities, proximity to known archaeological resources, the materials being excavated (native versus fill soils), and the depth of excavation, and if found, the abundance and type of archaeological resources encountered. Full-time monitoring can be reduced to part-time inspections if determined adequate by the archaeological and Native American monitors. In the event that archaeological resources are unearthed during ground-disturbing activities, ground-disturbing activities shall be halted or redirected away from the vicinity of the find so that the find can be evaluated. Work shall be allowed to continue outside of the vicinity of the find. All archaeological resources unearthed by project construction activities shall be evaluated by the archaeologist. Vallecitos Water District shall coordinate with the archaeologist to develop an appropriate treatment plan for the resources. Treatment may include implementation of archaeological data recovery excavations to remove the resource or preserve it in place. Vallecitos Water District, in consultation with the archaeologist, shall designate repositories in the event that archaeological material is recovered. The archaeological monitor shall prepare a final report at | Vallecitos Water District | Vallecitos Water District | 1. Confirm that contract documents include retention of a qualified professional archaeological monitor and Native American monitor from the San Luis Rey Band.<br>2. Confirm that contract documents include that work shall be halted in the vicinity of the find in the event that archaeological resources are unearthed during ground-disturbing activities.<br>3. Verify that monitoring of construction excavation activities is occurring as recommended by the archaeological monitor.<br>4. Confirm development of a treatment plan for resources, in coordination with archaeologist, if resources are unearthed. during construction<br>5. Verify designation of repositories for archaeological materials.<br>6. Confirm completion of final archaeological monitoring | 1. Design<br>2. Design<br>3. Construction<br>4. Construction<br>5. Construction<br>6. Post-construction<br>7. Post-construction | 1.<br>2.<br>3.<br>4.<br>5.<br>6.<br>7. | 1.<br>2.<br>3.<br>4.<br>5.<br>6.<br>7. | 1.<br>2.<br>3.<br>4.<br>5.<br>6.<br>7. |

| Mitigation Measure | Party Responsible for Implementation and Reporting | Review and Approval By | Monitoring and Reporting Actions | Implementation Schedule | Compliance Verification Initial | Compliance Verification Date | Compliance Verification Comments |
|---|---|---|---|---|---|---|---|
| the conclusion of archaeological monitoring. The report shall be submitted to Vallecitos Water District, South Coastal Information Center, and representatives of other appropriate or concerned agencies to signify the satisfactory completion of the project and required mitigation measures. The report shall include a description of resources unearthed, if any, evaluation of the resources with respect to the California Register of Historical Resources and the California Environmental Quality Act, and treatment of the resources. | | | report.<br>7. Verify submittal of report to Vallecitos Water District and to California Historical Resources Information System South Coastal Information Center, and other agencies as appropriate. | | | | |
| **Mitigation Measure 3.5-2e Cease Ground-Disturbing Activities and Report if Archeological Resources are Encountered** | | | | | | | |
| If archaeological resources are encountered by construction personnel during implementation of the project, ground-disturbing activities should temporarily be redirected from the vicinity of the find. Recognition of archaeological resources by construction personnel would be based on the training received under Mitigation Measure MM 3.5-2c. Vallecitos Water District shall immediately notify a qualified archaeologist of the find if they are not already on site. The archaeologist should coordinate with Vallecitos Water District as to the immediate treatment of the find until a proper site visit and evaluation is made by the archaeologist and Native American representative of the SLR Band if the find is of Native American origin. Treatment may include the implementation of an archaeological testing or data recovery program. All archaeological resources recovered will be documented on California DPR Site Forms to be filed with the SCIC. The archaeologist shall prepare a final report about the find to be filed with Vallecitos Water District and SCIC, as required | Vallecitos Water District | Vallecitos Water District | 1. Confirm measure is included in specifications.<br>2. Confirm work in the vicinity of a find is stopped and appropriate measures are taken, if needed.<br>3. Document implementation of immediate treatment recommended by archaeologist.<br>4. Verify documentation of finds on California Department of Parks and Recreation Site Forms filed with California Historical Resources Information System South Coastal Information Center.<br>5. Confirm completion of final | 1. Design<br>2. Construction<br>3. Construction<br>4. Construction<br>5. Post-construction<br>6. Post-construction<br>7. Pre-construction<br>8. Post-construction | 1.<br>2.<br>3.<br>4.<br>5.<br>6.<br>7.<br>8. | 1.<br>2.<br>3.<br>4.<br>5.<br>6.<br>7.<br>8. | 1.<br>2.<br>3.<br>4.<br>5.<br>6.<br>7.<br>8. |

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| by the California Office of Historic Preservation. The report shall include documentation and interpretation of resources recovered. Interpretation will include full evaluation of the resource's eligibility for listing in the CRHR and whether the resource qualifies as a unique archaeological resource. Vallecitos Water District, in consultation with the archaeologist, shall designate repositories to curate any material in the event that resources are recovered. The archaeologist shall also determine the need for archaeological monitoring for any ground-disturbing activities in the area of the find thereafter. | | | report on the find by the archaeologist.<br>6. Verify submittal of report to California Department of Parks and Recreation and California Historical Resources Information System South Coastal Information Center.<br>7. Document designation of repositories for potential recovered resources. | | | | |
| **Mitigation Measure 3.5-4 Cease Ground-Disturbing Activities and Notify County Coroner If Human Remains Are Encountered** | | | | | | | |
| If human remains are unearthed during implementation of the proposed Chlorine Contact Tank Expansion Project, Vallecitos Water District shall comply with State Health and Safety Code Section 7050.5. Vallecitos Water District shall immediately notify the County Coroner and no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission (NAHC). The NAHC shall then identify the person(s) thought to be the Most Likely Descendent (MLD). The MLD may, with the permission of Vallecitos Water District, inspect the site of the discovery of the Native American remains and may recommend to Vallecitos Water District | Vallecitos Water District | Vallecitos Water District, County Coroner, Native American Heritage Commission | 1. Confirm contract documents include measures for what to do in the event that human remains are unearthed during construction.<br>2. Confirm appropriate notifications (County Coroner and NAHC if applicable) have occurred if human burials are encountered.<br>3. Verify excavation activities in the vicinity of the remains is halted if the remains are determined to be Native American until consultation | 1. Design<br>2. Construction<br>3. Construction<br>4. Construction<br>5. Post-construction | 1.<br>2.<br>3.<br>4.<br>5. | 1.<br>2.<br>3.<br>4.<br>5. | 1.<br>2.<br>3.<br>4.<br>5. |

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| means for treating or disposing, with appropriate dignity, the human remains and any associated funerary objects. The MLD shall complete their inspection and make their recommendation within 48 hours of being granted access by Vallecitos Water District to inspect the discovery. The recommendation may include the scientific removal and nondestructive analysis of human remains and cultural items associated with Native American burials. Upon the discovery of the Native American remains, Vallecitos Water District shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until Vallecitos Water District has discussed and conferred, as prescribed in this mitigation measure, with the MLD regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. Vallecitos Water District shall discuss and confer with the descendants all reasonable options regarding the descendants' preferences for treatment. MLDs in the region typically recommend reburial of the remains as close to the original burial location as feasible accompanied by a ceremony. The MLD shall file a record of the reburial with the NAHC and the project archaeologist shall file a record of the reburial with the California Historical Resources Information System South Coastal Information Center.<br>If the NAHC is unable to identify a MLD, or the MLD identified fails to make a recommendation, or Vallecitos Water District rejects the recommendation of the MLD and the mediation provided for in | | | with MLD has occurred.<br>4. Confirm human remains have been accorded appropriate treatment.<br>5. Verify record of reburial has been filed with NAHC by MLD and California Historical Resources Information System South Coastal Information Center by the archaeologist, if applicable. | | | | |

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| Subdivision (k) of Section 5097.94, if invoked, fails to provide measures acceptable to Vallecitos Water District, Vallecitos Water District or its authorized representative shall inter the human remains and items associated with Native American human remains with appropriate dignity on the facility property in a location not subject to further and future subsurface disturbance. | | | | | | | |
| **Geology and Soils** | | | | | | | |
| **Mitigation Measure 3.5-3a Conduct Paleontological Sensitivity Training for Construction Personnel** | | | | | | | |
| Vallecitos Water District shall retain a qualified paleontologist who shall conduct a Paleontological Sensitivity Training for construction personnel prior to commencement of excavation activities. The training session shall be carried out by a cultural resources professional with expertise in paleontology, and will focus on how to identify paleontological resources that may be encountered during earthmoving activities, and the procedures to be followed in such an event. The training session will include a Power Point presentation and/or handouts for all attendees. The basic topics to be addressed in the session include: a brief cultural and geologic history of the area and the District's cultural resource compliance obligations; training in potential resources that may be encountered through the use of photographs or other illustrations; the duties of paleontological monitors; notification and other procedures to follow upon discovery of resources; and the general steps that would be followed to conduct a salvage investigation if one is necessary. | Vallecitos Water District | Vallecitos Water District | 1. Confirm that contract documents specify training for construction personnel by a qualified paleontologist.<br>2. Document that training materials include a PowerPoint presentation and/or handouts.<br>3. Verify training topics include, at minimum, those listed in the mitigation measure.<br>4. Verify training occurred for all construction personnel. | 1. Design<br>2. Pre-construction<br>3. Pre-construction<br>4. Pre-construction | 1.<br>2.<br>3.<br>4. | 1.<br>2.<br>3.<br>4. | 1.<br>2.<br>3.<br>4. |

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| **Mitigation Measure 3.5-3b Monitor and Report Construction Excavations for Paleontological Resources** | | | | | | | |
| A qualified professional paleontologist shall be retained to monitor excavation activities. Monitoring shall consist of visually inspecting fresh exposures of rock for larger fossil remains and, where appropriate, collecting wet or dry screened sediment samples of promising horizons for smaller fossil remains. The frequency of monitoring shall be based on the rate of excavation and grading activities, proximity to known paleontological resources or fossiliferous geologic units, the materials being excavated (native versus fill soils), and the depth of excavation, and if found, the abundance and type of paleontological resources encountered. Full-time monitoring can be reduced to part-time inspections or ceased entirely if determined adequate by the paleontological monitor.<br>If a potential fossil is found, the grading and excavation activities shall be temporarily diverted or redirected away from or around the area of the exposed fossil to facilitate evaluation and, if necessary, salvage. At the paleontologist's discretion and to reduce any construction delay, the grading and excavation contractor shall assist in removing rock samples for initial processing.<br>Any fossils encountered and recovered shall be prepared to the point of identification and catalogued before they are donated to their final repository. Any fossils collected shall be donated to a public, non-profit institution with a research interest in the materials, such as the San Diego Natural History Museum. Accompanying notes, maps, and photographs shall also be filed at the repository. | Vallecitos Water District | Vallecitos Water District | 1. Confirm measure included in contract documents.<br>2. Verify that monitoring of construction excavation activities is occurring as recommended by the paleontological monitor.<br>3. Verify temporary cessation of grading and excavation in the vicinity of the fossil, if found.<br>4. Confirm fossils recovered and prepared to the point of identification and are catalogued.<br>5. Confirm recovered fossils donated to appropriate institution and all appropriate documentation (notes, maps, photographs) submitted to the institution.<br>6. Confirm completion of final paleontological monitoring report.<br>7. Verification report submitted to Vallecitos Water District, San Diego Natural History Museum, and other appropriate | 1. Design<br>2. Construction<br>3. Construction<br>4. Construction<br>5. Post-construction<br>6. Post-construction<br>7. Post-construction | 1.<br>2.<br>3.<br>4.<br>5.<br>6.<br>7. | 1.<br>2.<br>3.<br>4.<br>5.<br>6.<br>7. | 1.<br>2.<br>3.<br>4.<br>5.<br>6.<br>7. |

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| Upon completion of the above activities, the paleontologist shall prepare a report summarizing the results of the monitoring and salvaging efforts, the methodology used in these efforts, as well as a description of the fossils collected and their significance. The report shall be submitted to Vallecitos Water District, the San Diego Natural History Museum, and representatives of other appropriate or concerned agencies to signify the satisfactory completion of the Project and required mitigation measures. | | | agencies. | | | | |
| **Hazards and Hazardous Materials** | | | | | | | |
| **Mitigation Measure 3.8-8 Prevention of Fire Hazards** | | | | | | | |
| Vallecitos Water District shall require that construction equipment staging areas shall be cleared of dried vegetation or other material that could ignite, and equipment that heats up during use shall be stored only in areas cleared of vegetation. All equipment shall be kept in good working order and equipped with spark arrestors to prevent potential sparks, and a spotter shall be utilized during all welding activities. Fire extinguishers shall be made available at all construction sites, and construction employees shall be trained in proper fire safety and prevention measures. | Vallecitos Water District | Vallecitos Water District | 1. Confirm requirements for fire prevention are included in the contract documents<br>2. Confirm that contract documents include commitment to maintaining fire extinguishers at all construction sites and fire prevention training provided to personnel.<br>3. Confirm that construction employees received fire prevention training.<br>4. Verify that measures are implemented. | 1. Design<br>2. Design<br>3. Pre-construction<br>4. Construction | 1.<br>2.<br>3.<br>4. | 1.<br>2.<br>3.<br>4. | 1.<br>2.<br>3.<br>4. |

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| **Noise** | | | | | | | |
| **Mitigation Measure 3.12-1a Noise and Vibration Control During Construction** | | | | | | | |
| Vallecitos Water District shall incorporate into contract specifications the following noise and vibration control measures:<br>▪ Impact equipment (e.g., jack hammers, pavement breakers, and rock drills) used for project construction will be hydraulically or electrically powered whenever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatically powered tools is unavoidable, an exhaust muffler on the compressed air exhaust would be used. This muffler can lower noise levels from the exhaust by up to 10 dBA. External jackets on the tools themselves would be used where feasible, and this could achieve a reduction of 5 dBA. Quieter procedures will be used such as drilling rather than impact equipment whenever feasible.<br>▪ Wherever possible, sonic or vibratory pile drivers will be used instead of impact pile drivers. If sonic or vibratory pile drivers are not feasible, acoustical enclosures will be provided as necessary to reduce noise levels. Engine and pneumatic exhaust controls on pile drivers will be required as necessary to ensure that exhaust noise from pile driver engines is minimized to the extent feasible. Where feasible, pile holes will be pre-drilled to reduce potential noise and vibration impacts. No impact pile drivers shall be used in the vicinity of sensitive receptors unless necessary. For above-ground facilities, temporary | Vallecitos Water District | Vallecitos Water District | 1. Confirm noise reduction measures are included in contract documents.<br>2. Confirm noise reduction measures are implemented during construction. | 1. Design<br>2. Construction | 1.<br>2. | 1.<br>2. | 1.<br>2. |

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| noise barriers may be erected at some locations to reduce noise impacts to residents adjacent to construction sites.<br>▪ Comply with compaction standards for backfill. Vibration generated during soil compaction may be minimized by using a small compactor.<br>▪ During sheetpile driving for the trench excavation, use the following measures: pushing the sheetpile in as far as possible with the excavator CAT before using the vibrator; using a small, hand-operated vibratory hammer or one with a different operational frequency to further reduce the vibration potential; flooding the soils before tamping with the vibrator; and/or operating the vibratory CAT with "throttling" when a vibrator must be used.<br>▪ All equipment and trucks used for project construction shall use the best available noise control techniques (including mufflers, use of intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds) and be maintained in good operating condition to minimize construction noise impacts. All internal combustion engine-drive equipment shall be fitted with intake and exhaust mufflers which are in good condition.<br>▪ Unnecessary idling of internal combustion engines shall be prohibited. In practice, this would mean turning off equipment if it would not be used for five or more minutes.<br>▪ Stationary noise-generating construction equipment, such as air compressors and generators, shall be located as far as possible from homes and businesses. | | | | | | | |

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| ▪ Staging areas shall be located as far as feasibly possible from sensitive receptors.<br>▪ For construction activities anticipated to generate noise above local standards even with the noise attenuation measures listed above, timing and length of construction activities generating excessive noise shall be adjusted to maintain average or impulsive noise levels within acceptable limits, as set forth in applicable local regulations. | | | | | | | |
| **Mitigation Measure 3.12-1b Pre-Construction Notification** | | | | | | | |
| Prior to construction, written notification to residents within 500 feet of the proposed facilities undergoing construction shall be provided, identifying the type, duration, and frequency of construction activities. Notification materials shall also identify a mechanism for residents to register complaints with Vallecitos Water District if construction related noise impacts should occur. | Vallecitos Water District | Vallecitos Water District | 1. Confirm preconstruction notification measures are included in the contract documents, and that notification materials provide mechanism to register construction-related noise complaints.<br>2. Verify that notification materials were distributed to appropriate residents.<br>3. Document any construction-related noise complaints received through the designated mechanism. | 1. Design<br>2. Pre-Construction<br>3. Construction | 1.<br>2.<br>3. | 1.<br>2.<br>3. | 1.<br>2.<br>3. |

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