DRAFT INITIAL STUDY/
MITIGATED NEGATIVE DECLARATION

for the

B2 RESERVOIR PROJECT

Prepared for:

Marina Coast Water District
920 Second Avenue, Suite A
Marina, CA 93933-2099

Prepared by:

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947 Cass Street, Suite 5
Monterey, CA 93940

August 2025

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1. BACKGROUND INFORMATION

1. **Project Title**: B2 Reservoir Project

2. **Lead Agency/Project Proponent Name and Address:** Marina Coast Water District (MCWD or District), 920 Second Avenue, Suite A, Marina, CA 93933

3. **Contact Person & Phone Number**: Jack Gao, MCWD Senior Project Manager, (831) 883-5962

4 **Project Location:** The proposed project is located within the City of Seaside (City) limits on the California State University, Monterey Bay (CSUMB) campus on the former Fort Ord in Monterey County, California, within U.S. Army (Army) Parcel L32.2.2. The proposed project site is approximately 2.9 acres.

5. **Project Summary**: The Marina Coast Water District (MCWD) is proposing a new 2,160,000-gallon potable water reservoir, the B2 reservoir, adjacent to the MCWD's existing B1 reservoir. The purpose of the proposed B2 reservoir is to increase the operational, emergency, and fire storage to meet current and future water demand on the former Fort Ord. Adding a second tank to the B-Zone also allows the B1 Reservoir to be taken off-line for maintenance.

   In addition to the reservoir construction, the project includes the installation of new underground pipeline to connect the new B2 reservoir to the existing transmission main, a paved access road and driveway, a retaining wall, a percolation basin, and new fencing and gate. The proposed project also includes various improvements within the existing B1 reservoir yard, including a new emergency generator, relocation of the existing booster pump station, upgrades to electrical panels, and replacement of the existing inlet and outlet valves at the B1 reservoir. Construction activities are anticipated to begin in 2025 and last approximately 18 months.

6. **Land Use Designations**: The City's General Plan designates the proposed project site as Public/Institutional. The 2022 CSUMB Master Plan designates the site as a proposed (tank) building.

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2. PROJECT SUMMARY

2.1 INTRODUCTION

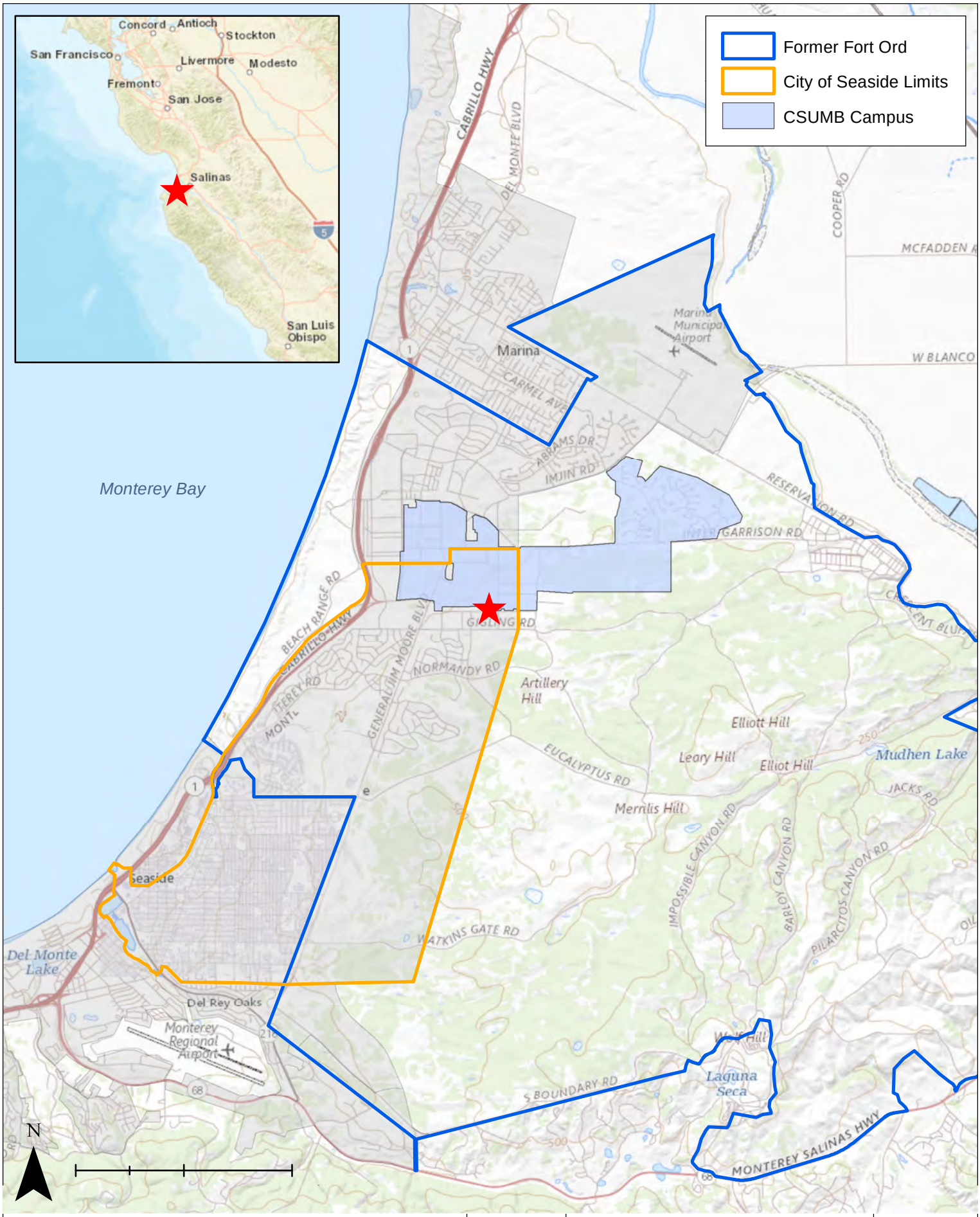
This Initial Study has been prepared to evaluate the potential environmental effects associated with the B2 Reservoir Project (project or proposed project), located on the former Fort Ord and on the CSUMB campus in the City of Seaside, Monterey County, California (**Figure 1**). This document has been prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code §21000 et. seq., and the State CEQA Guidelines, California Code of Regulations (CCR) §15000 et. seq.

An Initial Study is an informational document prepared by a lead agency to determine if a project may have a significant effect on the environment (CEQA Guidelines §15063, subd. (a)). If there is substantial evidence that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) must be prepared, in accordance with CEQA Guidelines §15064(a). However, if the lead agency determines that revisions in the project plans or proposals made by, or agreed to by, the applicant mitigate the potentially significant effects to a less-than-significant level, a Negative Declaration (ND) or Mitigated Negative Declaration (MND) may be prepared instead of an EIR (CEQA Guidelines §15070, subd. (b)). The lead agency prepares a written statement describing the reasons a proposed project would not have a significant effect on the environment and, therefore, why an EIR need not be prepared. This Initial Study conforms to the content requirements under CEQA Guidelines §15071.

The Marina Coast Water District (MCWD or District) is acting as the lead agency pursuant to CEQA Guidelines §15050(a). The District is a special district, established in 1960, that provides potable water and wastewater collection services to the City and the former Fort Ord. MCWD serves approximately 33,000 residents through 10,000 connections (LAFCO, 2019). As the lead agency, the District prepared this Initial Study pursuant to CEQA Guidelines §15063, §15070, and §15152.

This document will also serve as a basis for soliciting comments and input from members of the public and public agencies regarding the proposed project. This Initial Study will be circulated for agency and public review during a 30-day public review period pursuant to CEQA Guidelines §15073. During the public review period comments concerning the analysis contained in the Draft Initial Study/Mitigated Negative Declaration (IS/MND) should be sent to: Jack Gao, MCWD, 11 Reservation Road, Marina, CA 93933; or via email at jgao@mcwd.org. Comments received by the District on the Initial Study will be reviewed and considered as part of the deliberative process in accordance with CEQA Guidelines §15074.

The following section is consistent with the requirements of CEQA Guidelines §15124 to the extent that it is applicable to the project. This section contains a detailed description of the historical background and context, project location, project components and relevant project characteristics, project goals and objectives, and required project approvals.



Regional Location and Vicinity Map

Date	Scale	Figure
8/27/2025	1 in = 6,000 ft	1

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2.2 PROJECT BACKGROUND

The MCWD is a County Water District organized and operating under the County Water District Law, Water Code §30000. The MCWD is located on the coast of Monterey Bay at the northwest end of the Salinas Valley and occupies a service area of about 10.4 square miles. The District was formed in 1960 and provides potable water, wastewater collection, and reclaimed water services within the City of Marina and the Ord Community, located on the former Fort Ord military base. From 1995 to 2019, MCWD served the Ord Community under contract with the Fort Ord Reuse Authority. In 2019, the Ord Community was annexed into the District's service area.

The District's water system has multiple pressure zones. Each pressure zone has one or more water tanks providing operational, emergency and fire-fighting water storage. The B-Zone currently has a single 2,000,000-gallon water tank (the B1 reservoir). The MCWD Water System Master Plan (2020 Master Plan), prepared in 2020, as well as earlier master plans published in 2004 and 2007, identified the need for an additional water tank in the B-Zone to improve system reliability and increase the operational, emergency, and fire storage as needed to support redevelopment of the Ord Community. The 2020 Master Plan determined that 2.2 million gallons of additional storage would be needed in the B-Zone.

2.3 PROJECT LOCATION

The proposed project, described below, is located within the City of Seaside on the CSUMB campus on the former Fort Ord in Monterey County, California (**Figure 1**). The 2.9-acre project site encompasses the proposed B2 reservoir yard and the adjacent existing B1 reservoir yard, within U.S. Army Parcel L32.2.2 (the western portion of Monterey County Assessor's Parcel Number 031-261-002) (**Figure 2**). MCWD holds easements for both the existing and proposed reservoir yards.

The site consists of the existing B1 reservoir and associated infrastructure, ruderal/disturbed habitat, and disturbed coast live oak woodland habitat. The site is bounded to the north by coast live oak woodland, to the west by a paved parking lot, to the south by Colonel Durham Street, and to the east by 6th Avenue. Regional access to the project site is provided from State Route (SR) 1 onto Lightfighter Drive and then to Colonel Durham Street.

2.4 PROJECT DESCRIPTION

Overview

The proposed project includes the construction of a new 2,160,000-gallon potable water reservoir (B2 reservoir) adjacent to MCWD's existing B1 reservoir. As identified in the 2020 Master Plan, the proposed additional water reservoir and associated improvements are necessary to meet the current and future water demand of the Ord Community.

Project Location

Date
2/12/2025

Scale
1 in = 300 ft

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Figure
2

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The proposed project includes the installation of approximately 270 feet of 20-inch pipeline to connect the B2 reservoir to the existing B1 transmission main. The proposed project also includes various associated site improvements within the existing B1 reservoir yard and proposed B2 reservoir yard. Along with the reservoir itself, the new B2 yard would include: a paved access road surrounding the tank and a paved driveway connection to Colonel Durham Street; an approximately 90-foot long retaining wall (varying from approximately three to four feet above grade) along the southeast edge of the paved access road; a percolation basin at the northwestern corner of the reservoir yard; 8-foot tall chain link fencing around the yard; and a 12-foot wide chain link swing access gate. The proposed site plan and project components are shown in **Figure 3**.

Improvements at the existing B1 reservoir yard would include adding an emergency generator, relocating the existing booster pump station with the associated yard piping, upgrading the electrical panels and replacing the existing inlet and outlet valves at the B1 reservoir (**Figure 3**). In addition, the area between the two tanks would be regraded and the fence line along the northern and western sides of the B1 reservoir (bordering the B2 reservoir yard) would be removed to create one contiguous fenceline around both reservoir yards (**Figure 3**).

Construction

The total area of ground disturbance for construction of the project is approximately 2.5 acres; however, grading would not occur over the entire project site. The entire site (except the existing reservoir) would be utilized for improvements, access, and/or staging. The approximate quantity of earthwork for site preparation is 6,762 cubic yards of cut and 115 cubic yards of fill, for a net export of 6,647 cubic yards of material. Excess soil would be hauled off-site for reuse or disposal.

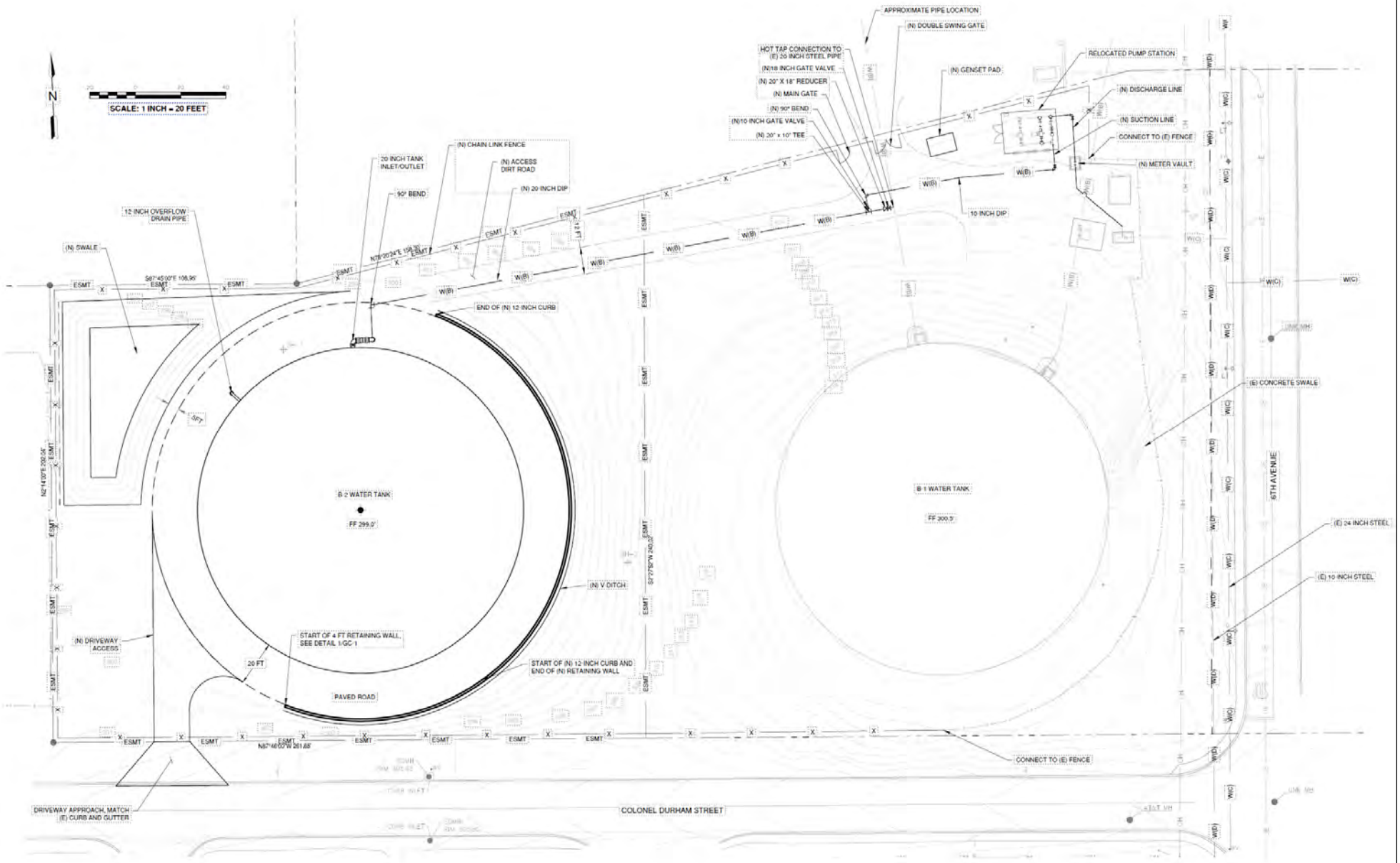
Construction equipment would include, but not be limited to, tracked excavator, wheeled excavator, roller compactor, dozer, loader, grader, crane, asphalt paving equipment, concrete trucks, various smaller vehicles, and welders for tank construction. The new reservoir would be constructed without interrupting operation of the existing water system.

Construction activities are anticipated to begin in 2025 and last approximately 18 months, with work occurring between Monday through Friday, 8 AM – 5 PM. Staging would occur within the project site, and the existing unpaved access driveway from Colonel Durham Street would be used to access the site. During the initial site grading, up to 30 truck trips per day may occur to export soil. Following that, four to five round trip truck trips per day are expected. On most days, five to six employees are expected on the construction site, depending on the activity. The maximum number of workers for any given day would be 15 employees.

Tree Removal

The proposed project site contains over 50 coast live oak and pine trees which must be removed to facilitate construction. CSUMB requires that for every tree removed on campus, two coast live oak trees are planted as replacement. MCWD plans to replant coast live oak trees within the project site, as space permits following construction; however, due to the existing and proposed facilities within the site and the number of pipelines within the site, replanting trees at a 2:1 ratio inside the facility easement would not be practical due to lack of space or because roots planted too close to infrastructure may damage pipelines. Therefore, MCWD will coordinate with CSUMB to replant additional coast live oak trees off-site (but within the campus) to achieve CSUMB's required 2:1 replanting ratio.

Source: Schaaf & Wheeler, 2025



Site Plan

Date	Figure
8/27/2025	3
Scale N/A	

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Operation and Maintenance

Operational activities would consist of the maintenance of the B2 reservoir and associated infrastructure. For the first two years post-construction, operational activities would also include tree establishment and maintenance via drip irrigation. Activity at the existing B1 reservoir is currently one MCWD operator visit per day (pickup truck) and up to five additional visits per month. Maintenance at the B2 reservoir would be incorporated into MCWD's existing maintenance schedule and, once operational, the combined B1/B2 site would not require additional maintenance trips compared to existing conditions.

2.5 PROJECT GOALS AND OBJECTIVES

As identified in the 2020 Master Plan, improvements to MCWD's system are necessary to meet the current and future water demand of the Ord Community. The goal of the proposed project is to expand potable water storage capacity in the B-Zone of the MCWD system to ensure compliance with the 2020 Water Master Plan. The objectives of the project are to: (1) provide additional potable water storage to sufficiently meet identified operational, emergency, and fire flow requirements in the B-Zone; and (2) improve MCWD's system reliability and resiliency.

2.6 PROJECT APPROVALS

This Initial Study is an informational document for both agency decision-makers and the public. MCWD is the Lead Agency responsible for adoption of this IS/MND. Below is a general list of agencies that may have jurisdiction over the proposed project. This list is not considered exhaustive and additional agencies and/or jurisdictions may have permitting authority.

Regional and State Agencies

- Regional Water Quality Control Board: National Pollution Discharge Elimination System (NPDES) and General Construction Permit
- CSUMB:
    - Quitclaim and Easement
    - Schematic Design Review (e.g., Structural, Mechanical, and Fire Safety Review)
    - Temporary Construction Permit
    - Temporary Access Agreement

Local Agencies

- Monterey Bay Air Resource District: Permit for Emergency Generator

3. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

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

4. DETERMINATION

Based on this initial evaluation:

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

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

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

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

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

Signature

Date 8/27/25

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5. ENVIRONMENTAL EVALUATION

This Initial Study evaluates the following resource sections within *Section 5.2, Environmental Setting and Impacts:* aesthetics, agricultural and forestry resources, air quality, biological resources, cultural resources, energy, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation, tribal cultural resources, utilities and service systems, wildfire, and mandatory findings of significance.

5.1 EVALUATION OF ENVIRONMENTAL IMPACTS

The following describes how the proposed project's impacts to resource areas will be analyzed in this Initial Study in accordance with CEQA. Each resource section includes: 1) existing setting and applicable regulatory background, 2) CEQA impact checklist for the resource area, and 3) impact discussion in response to the questions in the checklist and mitigation where warranted. The impact discussion will identify the level of environmental effect from the proposed project. An explanation or discussion is required for all answers to the resource impact checklist as follows.

1. A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project would not expose sensitive receptors to pollutants, based on project-specific screening analysis).

2. All answers must take into account the whole action involved, including offsite as well as onsite, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3. Once the lead agency has determined that a particular environmental impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant based on the thresholds. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4. "Less Than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less-Than-Significant Impact." The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less-than-significant level mitigation measures.

5. Supporting Information Sources: A source list will be attached, and other sources used, or individuals contacted will be cited in the discussion.

6. The explanation of each issue will identify:

    a. The significance criteria or threshold, if any, used to evaluate each question; and

    b. The mitigation measure identified, if any, to reduce the impact to less than significant.

5.2 ENVIRONMENTAL SETTING AND IMPACTS

The following section describes the environmental setting and identifies the environmental impacts anticipated from implementation of the proposed project. The criteria provided in the CEQA environmental checklist was used to identify potentially significant environmental impacts associated with the project.

5.2.1 AESTHETICS

Setting

The proposed project site is located within the CSUMB campus and is surrounded by development, including a paved parking lot to the west, paved roads to the south and east, and an existing water tank within the project site itself. The proposed project site is not located in visually sensitive area designated by the City's General Plan or CSUMB's 2022 Master Plan. The proposed project would create a new facility on the CSUMB campus in an area designated as a "tank site" in CSUMB's 2022 Master Plan. The proposed project site ranges in elevation from 300 to 320 feet. The top of roof of the existing reservoir is 328 feet, and the top of roof of the proposed B2 reservoir is 327 feet. The existing B1 reservoir has a diameter of 142 feet and the proposed B2 reservoir would have a diameter of 144 feet. However, natural grade is approximately 315 feet at the B1 reservoir, and ranges from approximately 300 to 307 feet at the proposed B2 reservoir location. As a result, the B2 reservoir would be more visible from ground level than the B1 reservoir. The easement agreement with CSUMB requires the design to include "reasonable architectural treatments" for the proposed reservoir, which will include a decorative mural on the tank.

The State Scenic Highways Program is designed to protect and enhance the natural scenic beauty of California highways and adjacent corridors through special conservation treatment. SR 1 is located over one mile west from the project site. This section of SR 1 is not designated as scenic; however, it is listed as eligible for scenic highway designation by the California Scenic Highway Mapping System (Caltrans, 2025). The nearest officially designated scenic highway is SR 68, approximately five miles south of the project site. The proposed project site is inland from SR 1 and is not visible from SR 1 or any other scenic highways due to distance and topography.

CEQA Thresholds

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Less-Than-Significant Impact with Mitigation	Less-Than-Significant Impact	No Impact	Checklist Source(s)
AESTHETICS. Would the project:					
a) Have a substantial adverse effect on a scenic vista?				X	1, 2, 3, 4
b) Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?				X	1, 2, 3, 4
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			X		1, 2, 3, 4

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Less-Than-Significant Impact with Mitigation	Less-Than-Significant Impact	No Impact	Checklist Source(s)
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X		1, 2, 3, 4

Explanation

a) **No Impact**. A scenic vista is generally characterized as a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. As discussed above, the proposed project site is not located within any designated scenic vistas. In addition, the project site is not visible from any nearby scenic vistas. Therefore, the proposed project would have no impact on scenic vistas.

b) **No Impact**. As discussed above, the proposed project site is not visible from any designated state scenic highways. Therefore, the proposed project would have no impact on scenic resources within a state scenic highway.

c) **Less-Than-Significant Impact**. The proposed project site is located adjacent to public/institutional uses and open space and is generally non-urbanized. The area on the south side of Colonel Durham Street is zoned for commercial mixed use. The proposed project would create a new facility on the CSUMB campus. As discussed above, the proposed improvements at the project site would involve the construction of a new water reservoir. The new water reservoir would be visually consistent with the existing reservoir on-site, but would be more conspicuous due to the natural grade of the project site, as discussed above. However, in accordance with the easement agreement with CSUMB that requires the project design to include "reasonable architectural treatments" for the proposed reservoir, the reservoir would be covered with a decorative mural to enhance the visual quality of the site. The proposed height of the B2 reservoir is comparable to a three-story building, and other buildings of that height, including the existing B1 reservoir, occur in the immediate project vicinity. Therefore, the proposed project would be visually consistent with surrounding development.

Implementation of the proposed project would result in impacts to over 50 coast live oak and pine trees within the CSUMB campus. CSUMB has established a tree restoration program for impacts to coast live oak and other trees resulting from projects that occur on campus. This program requires that for trees with a four-inch diameter at breast height (dbh) or greater removed, a minimum of two coast live oak trees would be replanted in the identified restoration area on campus. MCWD would replant coast live oak trees within the project site, as space permits, following construction. However, due to the existing and proposed facilities within the site and the number of pipelines within the site, replanting trees at a 2:1 ratio inside the facility easement would not be practical due to limited space and because plants with deep roots cannot be located over pipelines. Therefore, MCWD will coordinate with CSUMB to replant additional coast live oak trees off-site (but within the campus) to achieve CSUMB's required 2:1 replanting ratio. The total number of trees that would be replanted on-site has not been determined. Removal of the existing tree canopy would change the visual character of the project site, but with replanting of trees on-site, would not

substantially degrade the existing visual character or quality of public views of the site and its surroundings.

Construction activities would include the presence of construction vehicles, equipment and materials, stockpiles, and exposed soils. Construction activities at the project site would result in a short-term, temporary impact to the visual character of the site. Therefore, construction impacts to the visual character of the site would be less than significant.

For these reasons, construction and operation of the proposed project would result in a less-than-significant impact to the visual quality of the site.

d) **Less-than-Significant Impact**. The proposed new reservoir facility would include new exterior lighting. However, all proposed exterior lighting would be downward-facing and shielded to direct light downward to ensure that lighting does not spill over onto nearby properties. In addition, the proposed project does not propose to introduce materials into the design that would create substantial glare. Therefore, the proposed project would have a less-than-significant impact on light and glare.

Conclusion: The proposed project would have a less-than-significant impact on aesthetics.

5.2.2 AGRICULTURAL AND FORESTRY RESOURCES

Setting

In California, agricultural land is given consideration under CEQA. According to Public Resources Code §21060.1, "agricultural land" is identified as prime farmland, farmland of statewide importance, or unique farmland, as defined by the U.S. Department of Agriculture land inventory and monitoring criteria, as modified for California:

- Prime Farmland (P) comprises the best combination of physical and chemical features able to sustain long-term agricultural production. Irrigated agricultural production is a necessary land use four years prior to the mapping date to qualify as Prime Farmland. The land must be able to store moisture and produce high yields.
- Farmland of Statewide Importance (S) possesses similar characteristics to Prime Farmland with minor shortcomings, such as less ability to hold and store moisture and more pronounced slopes.
- Unique Farmland (U) has a production history of propagating crops with high-economic value.
- Farmland of Local Importance (L) is important to the local agricultural economy. Local advisory committees and a county specific Board of Supervisors determine this status.
- Grazing Land (G) is suitable for browsing or grazing of livestock.

The Monterey County Important Farmlands Map classifies the proposed B2 reservoir yard as "Other Land" and the existing B1 reservoir yard as "Urban and Built Up Land." CEQA also requires consideration of impacts on lands that are under Williamson Act contract. The proposed project site do not contain lands under Williamson Act contract (DOC, 2016).

CEQA requires the evaluation of forest and timber resources where they are present. The proposed project sites do not contain any forest land as defined in Public Resources Code section 12220(g), timberland as defined by Public Resources Code section 4526, or property zoned for Timberland Production as defined by Government Code section 51104(g).

CEQA Thresholds

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Less-Than-Significant Impact with Mitigation	Less-Than-Significant Impact	No Impact	Checklist Source(s)
AGRICULTURAL AND FOREST RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:					
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X	1, 2, 3, 4, 5, 6
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X	1, 2, 3, 4, 5, 6
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))?				X	1, 2, 3, 4, 5, 6
d) Result in the loss of forest land or conversion of forest land to non-forest uses?				X	1, 2, 3, 4, 5, 6
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?				X	1, 2, 3, 4, 5, 6

Explanation

a, b) **No Impact**. The proposed project site is designated as "Other Land" or "Urban or Built-Up Land" on the Important Farmlands Map for Monterey County and does not contain any prime farmland, unique farmland, farmland of statewide importance (farmland), or lands under Williamson Act contract. As a result, the proposed project would not convert farmland to non-agricultural use, nor conflict with existing zoning for agricultural use or a Williamson Act contract. No impact to agricultural resources would occur.

c, d) **No Impact**. The proposed project would not impact forest resources or result in the loss or conversion of forest land since the project site does not contain any forest land as defined in Public Resources Code section 12220(g), timberland as defined by Public Resources Code section 4526, or property zoned for Timberland Production as defined by Government Code section 51104(g). No impact to forest resources would occur.

e) **No Impact**. As per the discussion above, the proposed project would not involve changes in the existing environment which, due to their location or nature, could result in conversion of farmland or agricultural land, since none are present on this property. The proposed project would involve a new water facility and improvements to an existing water facility on land designated for this use in CSUMB's 2022 Master Plan, and would not convert any land for other use. Therefore, no impact would occur.

Conclusion: The proposed project would have no impact on agricultural and forest resources.

5.2.3 AIR QUALITY

The following analysis is based on the *Air Quality & Greenhouse Gas Impact Assessment for MCWD B2 Water Reservoir Project,* prepared by Ambient Air Quality & Noise Consulting (Ambient) in March 2025 and attached to this IS/MND as **Appendix A**.

Setting

For the protection of public health and welfare, the Federal Clean Air Act (FCAA) required that the United States Environmental Protection Agency (U.S. EPA) establish National Ambient Air Quality Standards (NAAQS) for various pollutants. These pollutants are referred to as "criteria" pollutants because the U.S. EPA publishes criteria documents to justify the choice of standards. These standards define the maximum amount of air pollutants that can be present in ambient air. An ambient air quality standard is generally specified as a concentration averaged over a specific time period, such as one hour, eight hours, 24 hours, or one year. The different averaging times and concentrations are meant to protect against different exposure effects. Standards established for the protection of human health are referred to as primary standards; whereas standards established for the prevention of environmental and property damage are called secondary standards. Primary criteria pollutants include carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxides (NO_X), particulate matter (PM_{10}), sulfur dioxide (SO_2), and lead (Pb). Secondary criteria pollutants include ozone (O_3), and fine particulate matter ($PM_{2.5}$). The air quality regulatory framework and ambient air quality standards are discussed in greater detail in **Appendix A**.

The proposed project site is located within the North Central Coast Air Basin (NCCAB), which is comprised of Santa Cruz, San Benito, and Monterey Counties. Air quality within the NCCAB is regulated by several

jurisdictions, including the U.S. EPA, the California Air Resources Board (ARB), and the Monterey Bay Air Resources District (MBARD). Each of these jurisdictions develop rules, regulations, and policies to attain the goals or directives imposed upon them through legislation. Although U.S. EPA regulations may not be superseded, the FCAA allows both state and local regulations to be more stringent.

Violations of ambient air quality standards are based on air pollutant monitoring data and evaluated for each air pollutant. Areas that do not violate ambient air quality standards are considered to have attained the standard. The NCCAB is in attainment for all NAAQS and for all California Ambient Air Quality Standards (CAAQS) except O_3 and PM_{10}. The primary sources of O_3 and PM_{10} in the NCAAB are from automobile engine combustion. To address exceedance of these CAAQS, the MBARD has developed and implemented several plans including the 2005 Particulate Matter Plan, the 2007 Federal Maintenance Plan, and the 2012-2015 Air Quality Management Plan (AQMP), a revision to the 2012 Triennial Plan. NCCAB Attainment Status to National and California Ambient Air Quality can be found in **Table 1** below.

Table 1. North Central Coast Air Basin Attainment Status Designations

Pollutant	State Designation	National Designation
Ozone (O_3)	Nonattainment-Transitional[1]	Attainment/Unclassified[2]
Inhalable Particulates (PM_{10})	Nonattainment	Unclassified
Fine Attainment ($PM_{2.5}$)	Attainment	Attainment/Unclassified[3]
Carbon Monoxide (CO)	Monterey County-Attainment	Attainment/Unclassified
Nitrogen Dioxide (NO_2)	Attainment	Attainment/Unclassified[4]
Sulfur Dioxide (SO_2)	Attainment	Attainment/Unclassified[5]
Lead	Attainment	Attainment/Unclassified[6]

Notes
1) Effective July 26, 2007, the ARB designated the NCCAB a nonattainment area for the State ozone standard, which was revised in 2006 to include an 8-hour standard of 0.070 ppm.
2) In 2015, EPA adopted a new 8-hour ozone standard of 0.070 ppm.
3) This includes the 2006 24-hour standard of 35 µg/m3 and the 2012 annual standard of 12 µg/m3.
4) In 2012, EPA designated the entire state as attainment/unclassified for the 2010 NO2 standard.
5) In June 2011, the ARB recommended to EPA that the entire state be designated as attainment for the 2010 primary SO2 standard. Final designations to be addressed in future EPA actions.
6) On October 15, 2008, EPA lowered the NAAQS for lead to 0.15 µg/m3. Final designations were made by EPA in November 2011.
Source: ARB 2018a, MBARD 2018a.

Sensitive receptors are more susceptible to the effects of air pollution than the general population. Land uses that are considered sensitive receptors include residences, schools, and health care facilities. No sensitive land uses were identified within 1,500 feet of the project site. The nearest sensitive land uses are residential dwellings located approximately 1,600 feet southwest of the project site, south of Gigling Road. The nearest residential use (i.e., CSUMB student housing) is located approximately 2,100 feet north of the project site. No sensitive land uses were identified downwind of predominant wind flows in the project vicinity (**Appendix A**).

CEQA Thresholds

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Less-Than-Significant Impact with Mitigation	Less-Than-Significant Impact	No Impact	Checklist Source(s)
AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:					
a) Conflict with or obstruct implementation of the applicable air quality plan?			X		1, 7
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?			X		1, 7
c) Expose sensitive receptors to substantial pollutant concentrations?			X		1, 7
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X		1, 7

Explanation

a) **Less-Than-Significant Impact**. The NCCAB is currently classified as non-attainment for the state's PM_{10} standard and nonattainment transitional for the state's 8-hour and one-hour ozone standards. MBARD has adopted the 2012-2015 Air Quality Management Plan for the purpose of enforcing state and federal air quality standards (MBARD, 2018b). Consistency with the AQMP is assessed by comparing the proposed growth associated with a proposed project with the population and dwelling unit forecasts adopted by the Association of Monterey Bay Area Governments (AMBAG). These projections are used to generate emission forecasts upon which the AQMP is based. Projects that are consistent with AMBAG's regional forecasts would be considered consistent with the AQMP. In addition, projects that would result in a significant increase in emissions, in excess of MBARD significance thresholds, would also be considered to potentially conflict with or obstruct implementation of the AQMP.

The proposed project would not result in increased population growth or increases in vehicle miles travelled (VMT). In addition, as noted in Impact b, the proposed project would not result in PM_{10} emissions that would exceed MBARD's significance threshold of 82 lbs/day. For this reason, implementation of the proposed project would not result in a substantial increase in either direct or indirect emissions that could conflict with or obstruct implementation of the AQMP. This impact would be less-than-significant.

b) **Less-Than-Significant Impact.** Impacts from the release of criteria pollutants during construction and operation of the project are discussed below.

Construction Emissions

Construction-generated emissions are short-term and of temporary duration, lasting only as long as construction activities occur, but possess the potential to represent a significant air quality impact.

The construction of the proposed uses would result in the temporary generation of emissions resulting from site demolition, site preparation, grading, building construction, paving, architectural coating, and motor vehicle exhaust associated with construction equipment and on-road vehicle trips. Emissions of PM are largely associated with ground disturbance and the movement of construction vehicles and equipment on unpaved surfaces.

Construction-generated emissions associated with the project, summarized in **Appendix A**, would not exceed MBARD's thresholds of significance for PM_{10}. If multiple construction activities (e.g., demolition, site preparation, grading) were to be conducted simultaneously, short-term construction associated with the project would generate approximately 17 lbs/day of PM_{10} and would not exceed MBARD's significance threshold of 82 lbs/day for PM_{10}. Furthermore, compliance with existing MBARD rules and regulations, such as Rule 402 (Nuisances) and Rule 400 (Visible Emissions), would further minimize emissions of PM_{10} during construction. Additionally, construction projects using typical construction equipment, such as dump trucks, scrapers, bulldozers, compactors, and front-end loaders that temporarily emit precursors of ozone (i.e., VOCs or $NO_{x)}$, are accommodated in the emission inventories of State- and federally-required air plans and would not have a significant impact on the attainment and maintenance of ozone AAQS (MBARD, 2008). For these reasons, the proposed project would have a less-than-significant impact related to the release of criteria air pollutants during construction.

Operational Emissions

Daily operational emissions of criteria air pollutants associated with the project would be predominantly associated with the occasional operation of the proposed emergency generator for maintenance and testing operations. According to MBARD permitting requirements, maintenance and testing of the generator would be limited to a maximum of 60 hours per year and only permitted for emergency power when normal power service is interrupted. In comparison to existing operations, implementation of the proposed project would not be anticipated to result in changes in long-term site maintenance activities, including onsite landscape maintenance, and worker vehicle trips. As depicted in **Appendix A**, the emergency generator would generate maximum daily emissions of approximately 2.95 lbs/day of ROG, 9.63 lbs/day of NO_x, 10.7 lbs/day of CO, 0.43 lbs/day of PM_{10}, 0.43 lbs/day of $PM_{2.5}$, and 0.01 lbs/day of SO_x. Operational emissions would not exceed MBARD's daily significance thresholds. As a result, the proposed project would have a less-than-significant impact related to the release of criteria air pollutants during operation.

c) **Less-Than-Significant Impact**. Short-term and long-term pollutants of primary concern with regard to potential health-related impacts include construction-generated emissions of Toxic Air Contaminants (TACs), naturally-occurring asbestos, and particulate matter. Short-term and long-term localized air quality impacts are discussed in greater detail below.

Short-Term Construction

Naturally-Occurring Asbestos

The ARB identifies naturally-occurring asbestos (NOA) as a TAC. The proposed project site is not located within an area identified as having potential for naturally-occurring ultramafic rock and serpentine soils. As a result, this impact would be less-than-significant.

Asbestos-Containing Materials

Demolition activities can have potential negative air quality impacts, including issues surrounding the proper handling, demolition, and disposal of asbestos-containing material (ACM). ACM could be encountered during the demolition of existing buildings, particularly older structures constructed prior to 1970. Asbestos can also be found in various building products, including (but not limited to) utility pipes/pipelines (transit pipes or insulation on pipes). If a project involves the disturbance or potential disturbance of ACM, various regulatory requirements may apply, including the requirements stipulated in the National Emission Standard for Hazardous Air Pollutants (40CFR61, Subpart M-Asbestos NESHAP). The proposed project would include the demolition of approximately 50,000 sq. ft. of existing on-site structures. The demolition of existing structures may result in disturbance of ACM. Consequently, the project would be subject to the National Emission Standard for Hazardous Air Pollutants requirements. These requirements include, but are not limited to: 1) notification, within at least 10 business days of activities commencing, to the APCD; 2) an asbestos survey conducted by a Certified Asbestos Consultant; and 3) applicable removal and disposal requirements of identified ACM. With NESHAP compliance, this impact would be less-than-significant.

Particulate Matter

Construction of the proposed project would result in short-term emissions of fugitive PM associated with ground disturbance. In addition, the use of diesel-fueled off-road equipment and on-road haul trucks would result in emissions of diesel-exhaust particulate matter (DPM). Inhalable particulates can contribute to increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing, as well as aggravated asthma. Long-term exposure can contribute to chronic bronchitis, irregular heartbeat, nonfatal heart attacks, and premature death in people with heart or lung disease. Health-related risks associated with diesel-exhaust emissions are primarily associated with long-term exposure and the associated risk of contracting cancer.

For off-site work and residential land uses, the calculation of cancer risk associated with exposure to DPM is typically calculated based on a 25-year and 30-year period of exposure, respectively. The use of diesel-powered construction equipment would be temporary and episodic, typically only occurring over a short period (i.e., weeks or months) and would constitute less than six percent of the typically applied risk exposure period. Furthermore, no sensitive land uses were identified within 1,000 feet of the project site. The nearest sensitive land uses are residential dwellings located approximately 1,600 feet southwest of the project site, south of Gigling Road, and on-campus student housing located more than 2,100 feet north of the project site. No sensitive land uses are located in the project vicinity downwind of the project site. For these reasons, and given the highly dispersive nature of DPM, exposure to construction-generated DPM would not be anticipated to exceed applicable thresholds (i.e., incremental increase in cancer risk of 10 in one million or a hazard index greater than 1). As a result, this impact would be less-than-significant.

Long-Term Operation

The proposed project would be incorporated into MCWD's existing maintenance schedule and would not result in an increase in worker maintenance trips. As a result, the proposed project would not result in long-term increases in mobile-source emissions. However, the project would include the installation of an emergency back-up generator. The generator would be diesel-fueled and

would be required to comply with MBARD permitting requirements for the operation of stationary emission sources. According to MBARD permitting requirements, maintenance and testing of the generator would be limited to a maximum of 60 hours per year and only permitted for emergency power when normal power service is interrupted. As part of the permitting process, the generator would be evaluated to ensure that related human health risks would not exceed applicable significance thresholds. For this reason, this impact would be less-than-significant.

d) **Less-Than-Significant Impact**. The proposed project would temporarily generate odors during project construction. The occurrence and severity of odor impacts depend on numerous factors, including: the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of the receptors. While offensive odors rarely cause any physical harm, they still can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and regulatory agencies. Construction of the proposed project would involve the use of a variety of gasoline or diesel-powered equipment that would emit exhaust fumes. Exhaust fumes, particularly diesel-exhaust, may be considered objectionable by some people. In addition, paving activities would also emit temporary odors. However, construction-generated emissions would occur intermittently throughout the workday and would dissipate rapidly within increasing distance from the source. As a result, short-term construction activities would not expose a substantial number of people to frequent odorous emissions. In addition, no major sources of odors have been identified in the project area. The proposed project would not result in other types of emissions adversely affecting a substantial number of people. Therefore, this impact would be less-than-significant.

Conclusion: The proposed project would have a less-than-significant impact on air quality.

5.2.4 BIOLOGICAL RESOURCES

Setting

Methods

Denise Duffy & Associates, Inc. (DD&A) completed a biological assessment of the project site to determine if sensitive biological resources are present or have the potential to occur within and in the vicinity of the site. DD&A Associate Environmental Scientist Rikki Lougee conducted biological surveys of the proposed B2 reservoir yard on June 2 and July 19, 2023, to characterize the habitats present and to identify any special-status plant or wildlife species or suitable habitat for these species within the B2 reservoir yard. The existing B1 reservoir yard was not included in focused botanical surveys in 2023 because improvements were not proposed at the site at the time. Therefore, DD&A Associate Environmental Scientist Liz Camilo conducted additional biological surveys of the entire project site on April 16, 2025, and of the existing B1 reservoir yard on May 7, 2025, to capture areas not surveyed in 2023. Survey methods included walking the site to identify general habitat types and potential sensitive habitat types, conducting focused surveys for special-status plant species, and conducting a reconnaissance-level habitat survey to identify suitable habitat for special-status wildlife species. Data collected during the surveys were used to assess the environmental conditions of the project site and its surroundings, evaluate environmental constraints at the site and within the local vicinity, and provide a basis for recommendations to minimize and avoid impacts.

The proposed project site was evaluated for botanical resources following the applicable guidelines outlined in *Guidelines for Conducting and Reporting Botanical Inventories for Federally listed, Proposed and*

Candidate Plants (U.S. Fish and Wildlife Service [Service], 2000), *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (California Department of Fish and Wildlife [CDFW], 2018), and California Native Plant Society (CNPS) *Botanical Survey Guidelines* (CNPS, 2001). Populations of five or fewer special-status plants were mapped as a point and the number of individual plants was documented, while populations of plants with more than five individuals were mapped as a polygon. Populations included all individuals within approximately three feet of another individual; individuals or populations more than three feet apart were mapped as separate points or polygons.

Prior to and following field surveys, DD&A conducted desktop literature reviews to determine the presence or potential presence of special-status species and other sensitive biological resources within the project site. Data sources include:

- Current agency status information from the Service and the CDFW for species listed, proposed for listing, or candidates for listing as threatened or endangered under the federal Endangered Species Act (ESA) or the California Endangered Species Act (CESA), and those considered CDFW "species of special concern," including:
  - California Natural Diversity Database (CNDDB) occurrence reports from the Marina, Monterey, Moss Landing, Prunedale, Salinas, Seaside, and Spreckels quadrangles (CDFW, 2025; **Appendix B**), and
  - The Service's Information for Planning and Consultation (IPaC) Resource List for the project site (Service, 2025; **Appendix B**).
- The California Native Plant Society (CNPS) Inventory of Rare and Endangered Vascular Plants of California (CNPS, 2025).

From these resources, a list of special-status plant and wildlife species that are known or have the potential to occur within and in the vicinity of the project site was created (**Appendix B**). This list identifies these species along with their legal status, habitat requirements, and a brief statement of their likelihood of occurring within the site.

Regulatory Setting

Federal Endangered Species Act

Provisions of the ESA of 1973 (16 USC 1532 et seq., as amended) protect federally listed threatened or endangered species and their habitats from unlawful take. Listed species include those for which proposed and final rules have been published in the Federal Register. The ESA is administered by the Service or National Oceanic and Atmospheric Administration Marine Fisheries Service (NMFS). In general, the NMFS is responsible for the protection of ESA-listed marine species and anadromous fish, whereas other listed species are under Service jurisdiction.

Section 9 of ESA prohibits the take of any fish or wildlife species listed under ESA as endangered or threatened. Take, as defined by ESA, is "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." Harm is defined as "any act that kills or injures the fish or wildlife…including significant habitat modification or degradation that significantly impairs essential behavioral patterns of fish or wildlife." In addition, Section 9 prohibits removing, digging up, and maliciously damaging or destroying federally listed plants on sites under federal jurisdiction. Section 9 does

not prohibit the take of federally listed plants on sites not under federal jurisdiction. If there is the potential for incidental take of a federally listed fish or wildlife species, take of listed species can be authorized through either the Section 7 consultation process for federal actions or a Section 10 incidental take permit process for non-federal actions. Federal agency actions include activities that are on federal land, conducted by a federal agency, funded by a federal agency, or authorized by a federal agency (including issuance of federal permits).

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) of 1918 prohibits killing, possessing, or trading migratory birds except in accordance with regulation prescribed by the Secretary of the Interior. Most actions that result in permanent or temporary possession of a protected species constitute violations of the MBTA. The Service is responsible for overseeing compliance with the MBTA and implements Conventions (treaties) between the United States and four countries—Canada, Mexico, Japan, and Russia—for the protection of migratory birds. The Service maintains a list of migratory bird species that are protected under the MBTA.

California Endangered Species Act

The CESA was enacted in 1984. The California Code of Regulations (Title 14, §670.5) lists animal species considered endangered or threatened by the state. Section 2090 of CESA requires state agencies to comply with endangered species protection and recovery and to promote conservation of these species. Section 2080 of the Fish and Game Code prohibits "take" of any species that the commission determines to be an endangered species or a threatened species. "Take" is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." A Section 2081 Incidental Take Permit from the CDFW may be obtained to authorize "take" of any state listed species.

California Native Plant Protection Act

The CNPPA of 1977 directed CDFW to carry out the legislature's intent to "preserve, protect and enhance rare and Endangered plants in the State." The CNPPA prohibits importing rare and Endangered plants into California, taking rare and Endangered plants, and selling rare and Endangered plants. The CESA and CNPPA authorized the Fish and Game Commission to designate endangered, threatened, and rare species and to regulate the taking of these species (§2050-2098, Fish and Game Code). Plants listed as rare under the CNPPA are not protected under CESA; however, these plants may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research.

California Fish and Game Code

Birds. Section 3503 of the Fish and Game Code states that it is "unlawful to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Section 3503.5 prohibits the killing, possession, or destruction of any birds in the orders Falconiformes or Strigiformes (birds-of-prey). Section 3511 prohibits take or possession of fully protected birds. Section 3513 prohibits the take or possession of any migratory nongame birds designated under the federal MBTA. Section 3800 prohibits the take of nongame birds.

Fully Protected Species. The classification of fully protected was the state's initial effort in the 1960's to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish (§5515), mammals (§4700), amphibians and reptiles (§5050), and birds (§3511). Most

fully protected species have also been listed as threatened or endangered species under the more recent endangered species laws and regulations. Fully protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research, relocation of the bird species for the protection of livestock, and for certain renewable energy and infrastructure projects.

Species of Special Concern. As noted above, the CDFW also maintains a list of wildlife "species of special concern." Although these species have no legal status, the CDFW recommends considering these species during analysis of project impacts to protect declining populations and avoid the need to list them as endangered in the future.

Fort Ord Installation-Wide Multispecies Habitat Management Plan

The U.S. Army's decision to close and dispose of the Fort Ord military base was considered a major federal action that could affect listed species under the ESA. In 1993, the Service issued a Biological Opinion (BO) in accordance with Section 7 of the ESA on the disposal and reuse of former Fort Ord requiring that an HMP be developed and implemented to reduce the incidental take of listed species and loss of habitat that supports these species (Service, 1993, Service, 2017b). The *Fort Ord Installation-Wide Multispecies Habitat Management Plan* (Fort Ord HMP or HMP) was prepared to assess impacts on vegetation and wildlife resources and provide mitigation for their loss associated with the disposal and reuse of former Fort Ord (ACOE, 1997).

The HMP establishes guidelines for the conservation and management of species and habitats on former Fort Ord lands by identifying lands that are available for development, lands that have some restrictions with development, and habitat reserve areas. The intent of the plan is to establish large, contiguous habitat conservation areas and corridors to compensate for future development in other areas of the former base. The HMP identifies what type of activities can occur on each parcel at former Fort Ord; parcels are designated as "development with no restrictions," "habitat reserves with management requirements," or "habitat reserves with development restrictions." The HMP sets the standards to assure the long-term viability of former Fort Ord's biological resources in the context of base reuse so that no further mitigation should be necessary for impacts to species and habitats considered in the HMP. This plan has been approved by the Service; the HMP, deed restrictions, and Memoranda of Agreement between the Army and various land recipients provide the legal mechanism to assure HMP implementation. It is a legally binding document, and all recipients of former Fort Ord lands are required to abide by its management requirements and procedures.

The HMP anticipates some losses to special-status species and sensitive habitats as a result of redevelopment of the former Fort Ord. With the designated reserves and corridors and habitat management requirements in place, the losses of individuals of species and sensitive habitats considered in the HMP are not expected to jeopardize the long-term viability of those species, their populations, or sensitive habitats on former Fort Ord. Recipients of disposed land with restrictions or management guidelines designated by the HMP are obligated to implement those specific measures through the HMP and through deed covenants. However, the HMP does not provide specific authorization for incidental take of federal or state listed species to existing or future non-federal land recipients under the ESA or CESA. As such, impacts to applicable federal and state listed species require incidental take authorization under Section 7 or Section 10 from the Service and/or a Section 2081 incidental take permit (ITP) from the CDFW.

The proposed project site is located within a designated "development" parcel under the HMP. Parcels designated as "development" do not have habitat management requirements relative to HMP species. However, the 2017 Programmatic BO and HMP require the identification of sensitive botanical resources within the development parcels that may be salvaged for use in restoration activities in reserve areas (Service, 2017b and ACOE, 1997). In addition, the HMP requires that land recipients prepare and implement Resource Management Plans (RMP) and Borderland Management Plans (BMP) for specified parcels within their respective jurisdictions.

CSUMB Master Plan

CSUMB prepared and adopted an Environmental Impact Report (EIR) for the CSUMB Master Plan (Master Plan EIR) in 2022 (State Clearinghouse No. 2017051042). The Master Plan EIR included a programmatic analysis of the potential impacts to sensitive resources that could result from projects at the campus, and mitigation measures were identified to reduce potentially significant impacts to a less-than-significant level. The mitigation measures were adopted in the Mitigation Monitoring and Reporting Program (MMRP) for the Master Plan EIR, and implementation of the adopted mitigation measures are required for any projects on the campus. The measures required by the MMRP that apply to the proposed project include Mitigation Measures BIO-1a, BIO-1b, and BIO-1c, which require that project-specific biological assessments are prepared prior to development of any specific site. Specific requirements of these measures as they relate to the proposed project are detailed in the impact analysis below.

CSUMB Tree Restoration Program

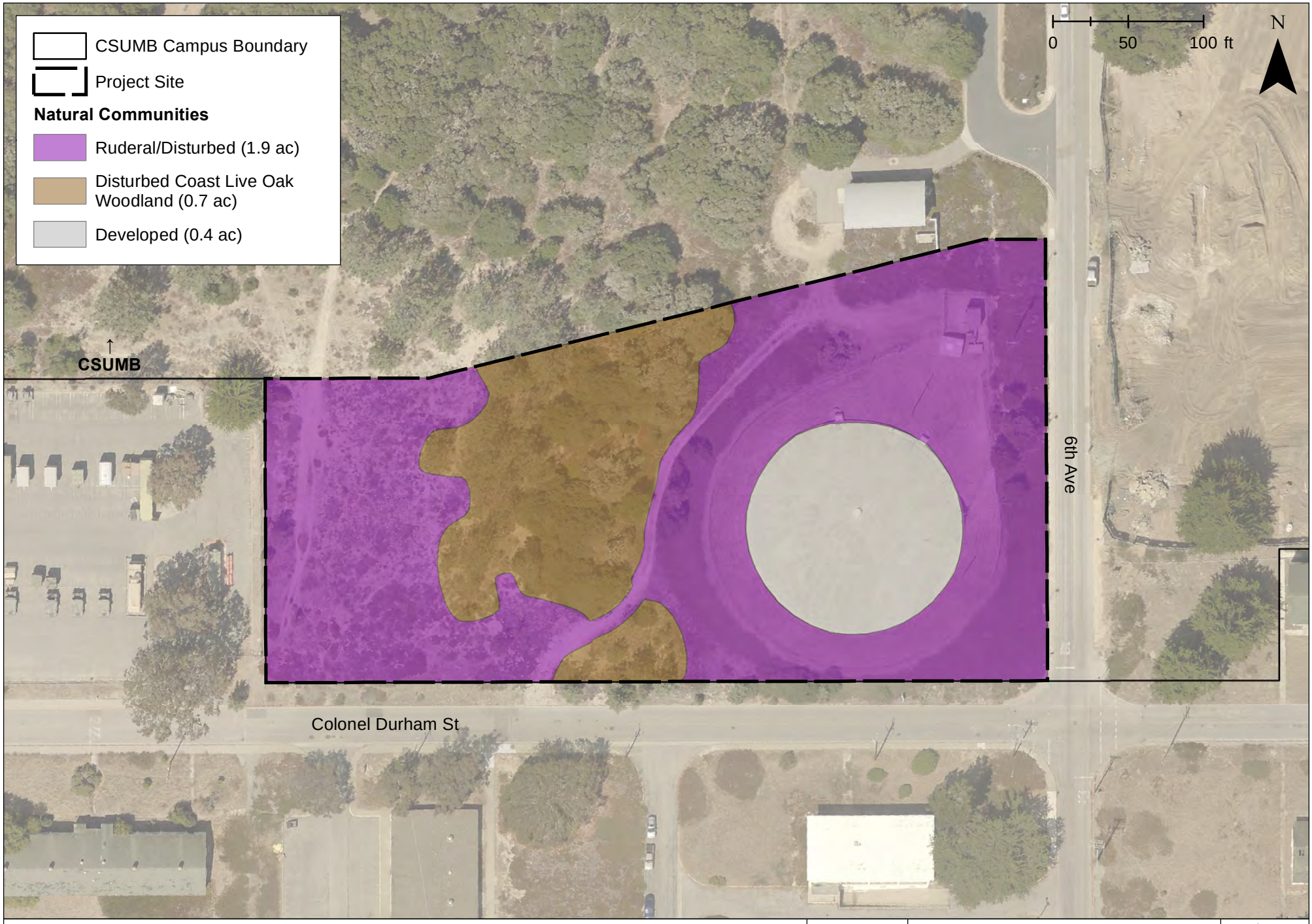
CSUMB has established a tree restoration program for impacts to coast live oak and other trees resulting from projects that take place on campus. This program requires that for every tree greater than four-inch dbh removed, a minimum of two coast live oak trees would be replanted in the identified restoration area on campus. The implementation of this program is required for all development that would result in impacts to trees with at least four-inch dbh.

Results

Natural Communities

Two natural communities, ruderal/disturbed (*Carpobrotus [edulis]* association) and disturbed coast live oak woodland (*Quercus agrifolia* association), occur within the project site (**Figure 4**). The remainder of the project site is developed with the existing water storage tank.

Ruderal areas are those areas which have been disturbed by human activities and are dominated by non-native annual grasses and other "weedy" species. Dominant species observed within these areas include iceplant (*Carpobrotus edulis*), deerweed (*Acmispon glaber*), and non-native grasses and forbs. Coast live oak (*Quercus agrifolia*) and Torrey pine (*Pinus torreyana*) seedlings are also present. Ruderal areas are considered to have low biological value as they are generally denuded of vegetation or are dominated by non-native plant species and consist of relatively low-quality habitat from a wildlife perspective. However, some common wildlife species that do well in urbanized areas, such as ground squirrel (*Otospermophilus beecheyi*), raccoon (*Procyon lotor*), and American crow (*Corvus brachyrhynchos*), may be found foraging within these areas. Approximately 1.9 acres of ruderal habitat occurs within the project site.



Natural Communities

Date
8/27/2025

Scale
1 in = 80 ft

Denise Duffy & Associates, Inc.
Planning and Environmental Consulting

Figure
4

Path: D:\GIS\GIS_Projects\2024-29 MCWD Tank B2\Map Products\ISMND\Fig 4 - Natural Communities.mxd

The coast live oak is the dominant tree of woodlands and savannas on the former Fort Ord, usually occurring in pure stands. The coast live oak woodland within the project site is disturbed, with non-native, invasive Torrey pine in the canopy along its western edge and iceplant dominant in its understory. Other species observed in the understory include poison oak (*Toxicodendron diversilobum*) and non-native grasses, such as slender wild oat (*Avena barbata*) and ripgut brome (*Bromus diandrus*). Coast live oak woodland is an important habitat for many wildlife species; oaks provide nesting sites for many avian species and cover for a variety of mammals, including hermit thrush (*Catharus guttatus*), canyon towhee (*Melozone fusca*), plain titmouse (*Baeolophus inornatus*), blue-gray gnatcatcher (*Polioptila caerulea*), lazuli bunting (*Passerina amoeniia*), California pocket mouse (*Chaetodipus californicus*), and California mouse (*Peromyscus californicus*). Typical predators such as gray fox (*Urocyon cinereoargenteus*) and striped skunk (*Mephitis mephitis*) forage in the understory. Approximately 0.7 acre of disturbed coast live oak woodland occurs within the project site.

Developed areas within the project site include the existing B1 reservoir. Generally, no vegetation is present within developed areas as they typically contain existing structures and/or pavement, and they are considered to have little to no biological value. Approximately 0.4 acre of development area occurs within the project site

Sensitive Habitats

Sensitive habitats include riparian corridors, wetlands, habitats for legally protected species, areas of high biological diversity, areas supporting rare or special-status wildlife habitat, and unusual or regionally restricted habitat types. Habitat types considered sensitive include those listed on CDFW's *California Natural Communities List* (CDFW, 2025), those that are occupied by species listed under ESA or are critical habitat in accordance with ESA, and those that are defined as Environmentally Sensitive Habitat Areas (ESHA) under the California Coastal Act (CCA). Specific habitats may also be identified as sensitive in city or county general plans or ordinances.

Oak woodlands are considered important natural communities because they provide a variety of ecological, aesthetic, and economical values. The extent of oak woodland in California has declined due to agricultural conversion, urban development, fuelwood harvesting, and grazing activities. While coast live oak woodland is not considered a sensitive habitat by CDFW or the HMP (CDFW, 2025; ACOE, 1997), as a native tree and habitat, it is important to note that impacts to coast live oak trees and woodland habitat are typically addressed and mitigated under CEQA, state and local ordinances and policies, and, within the CSUMB campus, in accordance with the CSUMB Tree Restoration Program. As a result, coast live oak woodland habitat is categorized as a sensitive habitat in this analysis. As described above, approximately 0.7 acre of disturbed coast live oak woodland occurs within the project site (**Figure 4**). No other sensitive habitats occur within the site.

Special-Status Species

Special-status species are those plants and animals that have been formally listed or are Candidates for listing as Endangered or Threatened under ESA or CESA, are CDFW "species of special concern," are listed as rare under the CNPPA, are included in the CNPS California Rare Plant Ranks (CRPR) 1A, 1B, 2A, or 2B, or are California Fully Protected Species. On the former Fort Ord, plants that do not typically meet this requirement (i.e., CRPR 4 species), but are provided management consideration in the HMP, are also considered special-status species. In addition, raptors (e.g., eagles, hawks, and owls), migratory birds, and their nests are protected under the California Fish and Game Code.

As identified in **Appendix B**, several special-status plant and wildlife species are known or have the potential to occur within or directly adjacent to the project based on documented occurrences during biological surveys or on the presence of suitable habitat and known occurrences in the vicinity. These species are discussed below. All other species are assumed unlikely to occur or to have a low potential to occur based on the species-specific reasons presented in **Appendix B** and are, therefore, unlikely to be impacted by the project.

Monterey Dusky-Footed Woodrat

The Monterey dusky-footed woodrat (*Neotoma macrotis luciana*, MDFW) is a CDFW species of special concern. This is a subspecies of the dusky-footed woodrat *(Neotoma macrotis)*, which is common to oak woodlands and other forest types throughout California. Dusky-footed woodrats are frequently found in forest habitats with moderate canopy cover and a moderate to dense understory, including riparian forests; however, they may also be found in chaparral communities. Relatively large nests are constructed of grass, leaves, sticks, and feathers and are built in protected spots, such as rocky outcrops or dense brambles of blackberry and/or poison oak. Typical food sources for this species include leaves, flowers, nuts, berries, and truffles. Dusky-footed woodrats may be a significant food source for small- to medium-sized predators. Populations of this species may be limited by the availability of nest material. Within suitable habitat, nests are often found in close proximity to each other.

Suitable habitat for MDFW is present within the evaluation area in the disturbed coast live oak woodland habitat areas. The CNDDB reports only one occurrence of this species within the quadrangles reviewed, located approximately 6.8 miles east of the project site. However, DD&A has observed nests of this species throughout the former Fort Ord in similar habitat. Nests of these species were not observed within the project site during biological surveys; however, MDFW has the potential to occupy the site prior to construction.

Northern California Legless Lizard

The northern California legless lizard (*Anniella pulchra*) is a CDFW species of special concern, as well as an HMP species.[1] This fossorial (burrowing) species typically inhabits sandy or loose (friable) soils. Habitats known to support northern California legless lizard include (but are not limited to) coastal dunes, valley and foothill grasslands, chaparral, and coastal scrub at elevations from near sea level to approximately 1,800 meters (6,000 feet). The northern California legless lizard forages on invertebrates beneath the leaf litter or duff layer at the base of bushes and trees or under wood, rocks, and slash in appropriate habitats. The diet of this species likely overlaps to some extent with that of juvenile alligator lizards and perhaps some other salamanders. This species may be preyed upon by alligator lizards, snakes,

[1] The HMP identifies this species as black-legless lizard (*Anniella pulchra* ssp. *nigra*) to differentiate it from the previously identified silvery-legless lizard (*A. p.* ssp. *pulchra*). These subspecies are based primarily on phenotypic differences (black-legless lizard being much darker, having fewer scales on the back, and a relatively shorter tail) and very limited genetic work. Further, the range of the black-legless lizard has historically been classified as "restricted to coastal and interior dune sand other areas of sandy soils in the vicinity of Monterey Bay and the Monterey Peninsula" (Service, 1998), while the range of silvery-legless lizard has been classified as widespread throughout central California (Parham and Papenfuss, 2008). However, recent genetic studies have revealed five lineages of this species that correspond with different geographic areas of California (Parham and Papenfuss, 2008). These studies do not, however, identify the legless lizards occurring on the coast of Monterey Bay (i.e., the currently designated black-legless lizard) as a separate lineage. Currently, CDFW identifies both subspecies as the northern California legless lizard and this document, therefore, follows the current regulatory identification.

birds, and small mammals. Little is known about the specific habitat requirements for courtship and breeding; however, the mating season for this species is believed to begin late spring or early summer, with one to four live young born between September and November.

Suitable habitat and soils for the northern California legless lizard is present within the project site in both ruderal/disturbed and disturbed coast live oak woodland communities. The CNDDB reports 56 occurrences of this species within the quadrangles reviewed, including occurrences within one mile of the project site. Therefore, the northern California legless lizard has the potential to occur within the project site where suitable cover is present.

Coast Horned Lizard

The coast horned lizard (*Phrynosoma blainvillii*) is a CDFW species of special concern. Horned lizards occur in valley-foothill hardwood, conifer, and riparian habitats, as well as in pine-cypress, juniper, chaparral, and annual grass habitats. This species generally inhabits open country, especially sandy areas, washes, flood plains, and wind-blown deposits in a wide variety of habitats. Coast horned lizards rely on camouflage for protection and will often lay motionless when approached. Horned lizards often bask in the early morning on the ground or on elevated objects such as low boulders or rocks. Predators and extreme heat are avoided by burrowing into loose soil. Periods of inactivity and winter hibernation are spent burrowed into the soil or under surface objects. Little is known about the habitat requirements for breeding and egg-laying of this species. Prey species include ants, beetles, wasps, grasshoppers, flies, and caterpillars.

Suitable habitat for coast horned lizard is present within the project site in both ruderal/disturbed and disturbed coast live oak woodland communities. The CNDDB reports five occurrences of this species within the quadrangles reviewed, the nearest located approximately 1.7 miles north of the project site. In addition, DD&A biologists have observed this species throughout the former Fort Ord in similar habitat conditions. Therefore, the coast horned lizard has the potential to occur within the project site.

Nesting Raptors and Other Avian Species

Raptors, their nests, and other nesting birds are protected under California Fish and Game Code and the MBTA. While the life histories of these species vary, overlapping nesting and foraging similarities allow for their concurrent discussion. Most raptors are breeding residents throughout most of the wooded portions of the state. Stands of live oak, riparian deciduous, or other forest habitats, as well as open grasslands, are used most frequently for nesting. Breeding occurs February through September, with peak activity May through July. Prey for these species include small birds, small mammals, and some reptiles and amphibians. Many raptor species hunt in open woodland and habitat edges.

Various species of raptors and nesting birds, such as red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*), American kestrel (*Falco sparverius*), great horned owl (*Bubo virginianus*), and turkey vulture (*Cathartes aura*), have a potential to nest within any of the large trees present directly adjacent to the project site. Other protected avian species, such as songbirds and hummingbirds, may also nest within these trees.

Monterey Spineflower

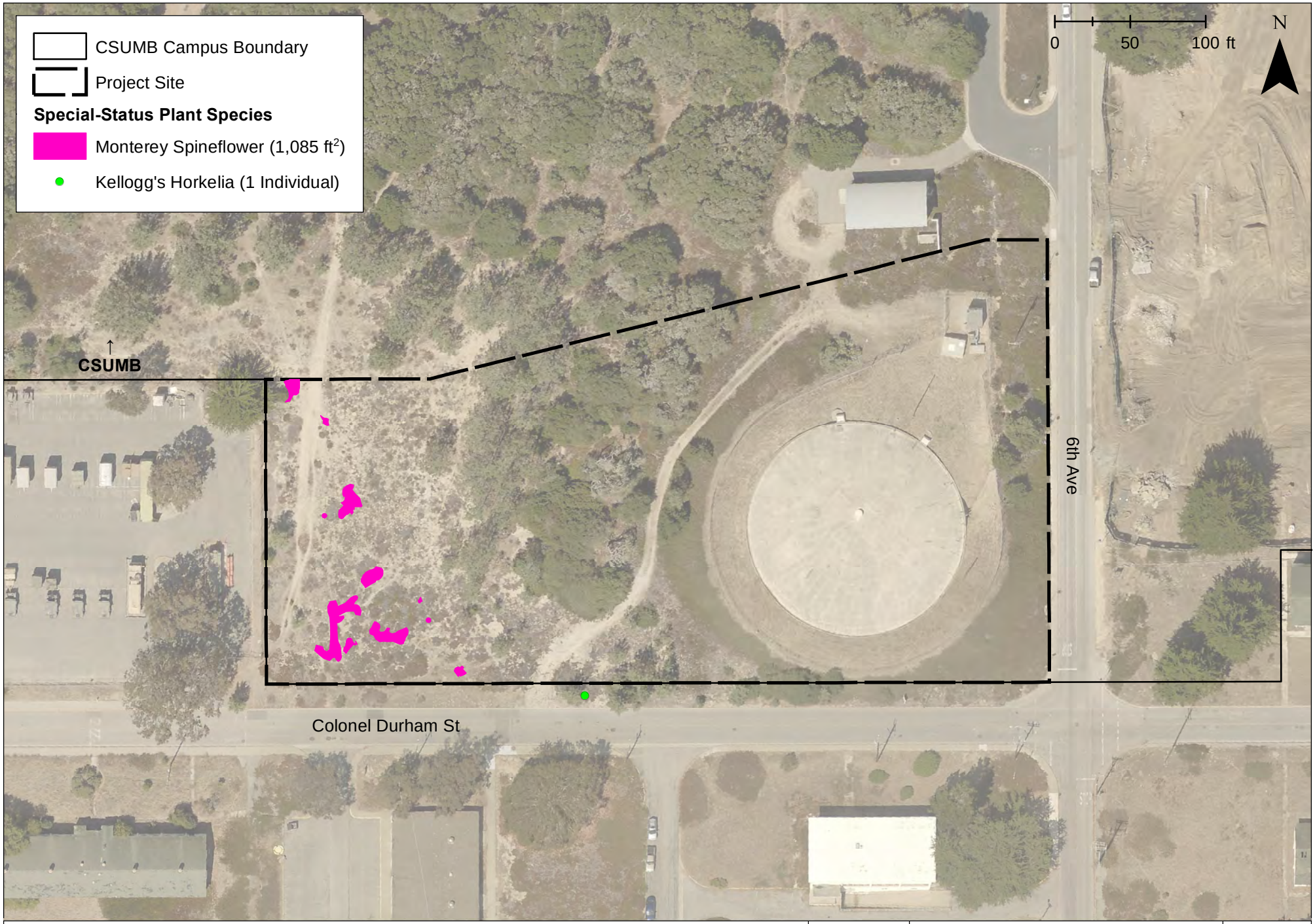
Monterey spineflower (*Chorizanthe pungens* var. *pungens*) is a federally threatened, CNPS CRPR 1B, and HMP species. It is a small, prostrate annual herb in the Polygonaceae family that blooms from April to June. The white to rose floral tube of Monterey spineflower distinguishes it from the more common, but closely related, diffuse spineflower (*Chorizanthe diffusa*), which has a lemon-yellow floral tube. Monterey spineflower is likely self-pollinated in addition to being insect pollinated. It produces small seeds that are dropped or shaken by wind from their capsule and may then be dispersed with blowing sand or by fur-bearing animals to which the spiny fruits may attach and be carried. It typically occurs on open sandy or gravelly soils on relic dunes in coastal dune, coastal scrub, and maritime chaparral habitats, though it can also be associated with cismontane woodlands and valley and foothill grasslands, at elevations of three to 450 meters. This species colonizes recently disturbed sandy soils. In chaparral, scrub, and oak woodland habitats, Monterey spineflower occurs in sandy openings between shrubs. In grasslands, it occurs along roadsides, in firebreaks, and other disturbance patches; it is crowded out of mature grassland vegetation. In older stands that have avoided fire long enough to have dense, closed shrub or tree canopies, it is restricted to roadsides and firebreaks. In dune habitats at the former Fort Ord, Monterey spineflower prefers disturbed sites within otherwise stabilized dunes (Army, 1992).

Monterey spineflower occurs along the coast of southern Santa Cruz and northern Monterey Counties and inland to the coastal plain of the Salinas Valley. It is abundant within undeveloped areas of the former Fort Ord, which likely supports the largest known populations of the species. It has been identified on 12,978 acres of the former Fort Ord, located primarily within undeveloped areas of the western half of the base (Army, 1992). The highest densities are in the central portion of the firing range, where disturbance has historically been the most frequent. Although studies were not conducted on factors that determine the pattern of distribution and the densities of the plant in the former Fort Ord, a correlation exists between open conditions resulting from activities that disturb habitat and high densities of the plant (54 FR 5499). The introduction, and later invasion, of ice plant and European beach grass (*Ammophila arenaria*) for dune stabilization has greatly reduced spineflower populations and suitable habitat for this species within the former Fort Ord. In addition, urban development in coastal cities, and to a lesser extent within the former Fort Ord, have resulted in loss of large portions of its range. Historic occurrences in the Salinas Valley have been extirpated, primarily due to conversion of natural habitat to agricultural land use (Army, 1992).

Monterey spineflower was observed within the proposed B2 reservoir yard during the June 2023 focused botanical survey. DD&A documented approximately 1,085 square feet of this species during the survey (**Figure 5**). Monterey spineflower was not observed elsewhere within the project site during 2023 or 2025 botanical surveys.

Kellogg's Horkelia

Kellogg's horkelia (*Horkelia cuneata* ssp. *sericea*) is a CNPS CRPR 1B species in the Rosaceae family. This perennial herb blooms from April through June and is typically associated with openings in closed cone coniferous forest, maritime chaparral, and coastal scrub (in sandy or gravelly soils on relic dunes) at elevations of 10 to 200 meters. It is endemic to California, where it is known along the coast from Marin County to Santa Barbara County. Kellogg's horkelia is widely distributed; the former Fort Ord likely comprises only a small part of its current range (Army, 1992).



Special-Status Plant Species

Date
8/27/2025

Scale
1 in = 80 ft

Denise Duffy & Associates, Inc.
Planning and Environmental Consulting

Figure
5

Path: D:\GIS\GIS_Projects\2024-29 MCWD Tank B2\Map Products\SMND\Fig 5 - Special-Status Species.mxd

Kellogg's horkelia was not observed within the project site during 2023 or 2025 botanical surveys; however, one individual of this species was documented directly adjacent to the project site during the June 2023 focused botanical survey (**Figure 5**).

CEQA Thresholds

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Less-Than-Significant Impact with Mitigation	Less-Than-Significant Impact	No Impact	Checklist Source(s)
BIOLOGICAL RESOURCES. 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?		X			1, 2, 3, 4, 8-28
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?			X		1, 2, 3, 4, 25
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?				X	1, 2, 3, 4, 25
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?			X		1, 2, 3, 4, 8-28
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			X		1, 2, 3, 4
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?			X		1, 2, 3, 4

Approach to Analysis

The following impact analysis addresses direct and indirect impacts that may result from implementation of the proposed project. Direct impacts are those effects of a project that occur at the same time and place of project implementation, such as removal of habitat from ground disturbance. Indirect impacts are those effects of a project that occur either later in time or at a distance from the project location but are reasonably foreseeable, such as loss of excessive erosion caused by vegetation removal. Direct and indirect impacts can also vary in duration and result in temporary, short-term, and long-term effects on biological resources. A temporary effect would occur only during the activity. A short-term effect would last from the time an activity ceases to some intermediate period of approximately one to five years (i.e., repopulation of habitat following restoration). A long-term or permanent effect would last longer than five years after an activity ceases. Long-term effects may include the ongoing maintenance and operation of a project or may result in a permanent change in the condition of a resource, in which case it could be considered a permanent impact.

The proposed project sites are located within parcels designated as "development" under the approved Fort Ord HMP (Parcel Number L32.2.2). As described in the Regulatory Setting, parcels designated as

"development" have no development restrictions or habitat management requirements. However, the 2017 Programmatic BO and HMP require the identification of sensitive botanical resources within these parcels that may be salvaged for use in restoration activities in reserve areas. Within all parcels, the HMP recommends preservation of native vegetation and HMP species habitat outside of areas identified for development. Impacts to HMP species and habitats occurring within the designated development parcels were anticipated and mitigated through the establishment of habitat reserves and corridors and the implementation of habitat management requirements within habitat reserve parcels on former Fort Ord.

The HMP species that are known or have the potential to occur within the project site include northern California legless lizard and Monterey spineflower. With the designated habitat reserves and corridors and habitat management requirements of the HMP in place, the loss of these species is not expected to jeopardize the long-term viability of these species and their populations on the former Fort Ord. This is such because the recipients of disposed land with development restrictions or habitat management requirements under the HMP are obligated to implement those specific measures through the HMP and deed covenants. The proposed project is:

1. Located within a designated "development" parcel;
2. Required to comply with the habitat management restrictions identified in the HMP; and
3. Would not result in any additional impacts to HMP species and habitats beyond those anticipated in the HMP.

CSUMB is required to implement HMP requirements in accordance with the deed covenants that apply to the project site. The HMP and 2017 Programmatic BO require the identification of sensitive biological resources within development parcels that may be salvaged for use in restoration activities in habitat reserve areas. In addition, the HMP requires that land recipients prepare and implement RMPs and BMPs for specified parcels within their respective jurisdictions. While the proposed project would occur in a designated development parcel, CSUMB is required to have an approved BMPs for the specified parcel in its jurisdiction (Army Parcel S1.3.2) to be considered in compliance with the HMP. If CSUMB is in compliance with the HMP and 2017 Programmatic BO, impacts to these special-status species are considered less than significant and no additional mitigation measures for these HMP species would be required. However, if CSUMB is not in compliance with the HMP and 2017 Programmatic BO, then impacts to HMP species may be considered significant and additional mitigation measures may be required.

Where suitable habitat exists within the project site, the proposed project has the potential to impact special-status species that were not addressed in the HMP. The non-HMP species that are known or have the potential to occur within or directly adjacent to the project site and may be impacted by the project include: Monterey dusky-footed woodrat, coast horned lizard, nesting raptors and other protected avian species, and Kellogg's horkelia.

The MCWD is required to implement the following mitigation to remain in compliance with the Master Plan EIR and MMRP.

> ***MMRP Mitigation Measure BIO-1a****: The CSUMB CPD [Campus Planning and Development] Department shall require that a biological survey of development sites be conducted by a qualified biologist to determine if the development could potentially impact HMP species or potential habitat (HMP Species include: California tiger salamander, Smith's blue butterfly, northern California*

legless lizard, Monterey ornate shrew, Monterey spineflower, sand gilia, sandmat manzanita, Hooker's manzanita, Toro manzanita, Monterey ceanothus, seaside bird's-beak, coast wallflower, Eastwood's goldenbush and Yadon's piperia). A report describing the results of the surveys shall be provided to the CSUMB CPD Department prior to any ground disturbing activities. The report shall include, but not be limited to 1) a description of the biological conditions at the area; 2) identification of the potential for HMP species to occur or HMP species observed, if any; and 3) maps of the locations of HMP species or potential habitat, if observed.

If HMP species that do not require take authorization from the Service or CDFW are identified within the development site, salvage efforts for these species shall be evaluated by a qualified biologist in coordination with CSUMB CPD Department to further reduce impacts per the requirements of the HMP and BO. Where salvage is determined feasible and proposed, seed collection should occur from plants within the development site and/or topsoil should be salvaged within occupied areas to be disturbed. Seeds shall be collected during the appropriate time of year for each species by qualified biologists. The collected seeds and topsoil shall be used to revegetate temporarily disturbed construction areas and reseeding and restoration efforts on- or off-site, as determined appropriate by the qualified biologist and CSUMB CPD Department. For impacts to the HMP species within the development site that do require take authorization from the Service and/or CDFW, the CSUMB CPD Department shall comply with ESA and CESA and obtain necessary permits prior to construction. If non-HMP special-status species are identified during the implementation of this measure, MM-BIO-1b shall also be implemented.

MMRP Mitigation Measure BIO-1b*: The CSUMB CPD Department shall require that a biological survey of development sites be conducted by a qualified biologist to determine if the development could potentially impact a special-status species or their habitat. A report describing the results of the surveys shall be provided to the CSUMB CPD Department prior to any ground disturbing activities. The report shall include, but not be limited to: 1) a description of the biological conditions at the area; 2) identification of the potential for special-status species to occur or special-status species observed, if any; 3) maps of the locations of special-status species or potential habitat, if observed; and 4) recommended mitigation measures, if applicable. If special-status species are determined not to occur at the development site, no additional mitigation is necessary.*

If special-status species are observed or determined to have the potential to occur, the project biologist shall recommend measures necessary to avoid, minimize, and/or compensate for identified impacts. Measures shall include, but are not limited to, revisions to the project design and project modifications, pre-construction surveys, construction buffers, construction best management practices, monitoring, non-native species control, restoration and preservation, and salvage and relocation.

MMRP Mitigation Measure BIO-1c*: Construction activities that may directly (e.g., vegetation removal) or indirectly (e.g., noise/ground disturbance) affect protected nesting avian species shall be timed to avoid the breeding and nesting season. Specifically, vegetation and/or tree removal can be scheduled after September 16 and before January 31. Alternatively, a qualified biologist shall be retained by the CSUMB CPD Department to conduct pre-construction surveys for nesting raptors and other protected avian species within 500 feet of proposed construction activities if*

construction occurs between February 1 and September 15. Pre-construction surveys shall be conducted no more than 14 days prior to the start of construction activities during the early part of the breeding season (February through April) and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May through August). Because some bird species nest early in spring and others nest later in summer, surveys for nesting birds may be required to continue during construction to address new arrivals, and because some species breed multiple times in a season. The necessity and timing of these continued surveys shall be determined by the qualified biologist based on review of the final construction plans and in coordination with the Service and CDFW, as needed for protected avian species nests.

If raptors or other protected avian species nests are identified during the pre-construction surveys, the qualified biologist shall notify the CSUMB CPD Department and an appropriate no-disturbance buffer shall be imposed within which no construction activities or disturbance shall take place (generally 500 feet in all directions for raptors; other avian species may have species-specific requirements) until the young of the year have fledged and are no longer reliant upon the nest or parental care for survival, as determined by a qualified biologist.

This IS/MND satisfies the requirements from MMRP Mitigation Measures BIO-1a and BIO-1b for surveys and site-specific analysis prior to development. MMRP *Mitigation Measure BIO-1c* is included as **Mitigation Measure BIO-7** below in accordance with the CSUMB Master Plan EIR and MMRP.

Explanation

a) **Less-Than-Significant Impact with Mitigation.**

HMP Special-Status Species

The special-status HMP species that are known or have the potential to occur within the project site include Monterey spineflower and northern California legless lizard. DD&A documented approximately 1,085 square feet of Monterey spineflower within the project site during 2023 botanical surveys. Northern California legless lizard has the potential to occur within all ruderal/disturbed and disturbed coast live oak woodland communities.

Construction activities may result in adverse impacts to these species, including mortality/loss of individuals, soil compaction, dust, loss of habitat, erosion, and introduction and spread of non-native, invasive species. Impacts to Monterey spineflower would be considered take of a federally listed species under the federal ESA. These impacts would be potentially significant under CEQA.

The CSUMB Master Plan EIR and MMRP require the implementation of *MMRP Mitigation Measure BIO-1a* to avoid, minimize, or mitigate impacts to HMP special-status species through the following actions:

- Biological surveys by a qualified biologist to identify potential impacts to HMP species or habitats;
- A report to CSUMB prior to ground-disturbing activities identifying biological conditions and special-status species which are known or have the potential to occur within the project site; and

- Salvage efforts if HMP species not requiring ESA or CESA take authorization are present and would be impacted by the project.

The biological surveys conducted in 2023 and 2025 and the analysis contained in this IS/MND satisfy *MMRP Mitigation Measure BIO-1a*'s requirements for pre-construction plant surveys within the project site and completion of a biological report. The MCWD will further comply with *MMRP Mitigation Measure BIO-1a* by conducting salvage activities prior to ground-disturbing activities, as outlined in **Mitigation Measure BIO-1** below.

As described in the "Approach to Analysis" section, impacts to special-status species addressed in the HMP within development parcels are considered less than significant if CSUMB is in compliance with the HMP and 2017 Programmatic BO. CSUMB is currently preparing its BMP; if the BMP is approved by the time the project is implemented, impacts to HMP species within the project site would be less than significant. It is not anticipated that the BMP will be approved prior to construction of the proposed project. Therefore, the implementation of **Mitigation Measures BIO-2** and **BIO-4** through **6** is required to reduce impacts to these HMP species to a less-than-significant level.

Implementation of *MMRP Mitigation Measure BIO-1a* and **Mitigation Measures BIO-2** and **BIO-4** through **6** would ensure that the project is in compliance with the HMP, BO, CSUMB Master Plan EIR and MMRP, and that potentially significant impacts to HMP special-status species are reduced to a less-than-significant level.

Non-HMP Special-Status Species

The non-HMP special-status species that are known or have the potential to occur within or directly adjacent to the project site include Kellogg's horkelia, MDFW, and coast horned lizard. Additionally, nesting raptors and other protected avian species may be present within any of the large trees within or directly adjacent to the project site. DD&A documented one Kellogg's horkelia individual adjacent to the project site during 2023 botanical surveys. MDFW, coast horned lizard, and nesting birds have the potential to occur within disturbed coast live oak woodland and ruderal/disturbed areas of the project site or within trees within the project site. Construction activities may result in adverse impacts to these species, including mortality/loss of individuals, soil compaction, dust, loss of habitat, erosion, and introduction and spread of non-native, invasive species. Construction-related activities (e.g., removal of vegetation, equipment noise, vibration) could also result in raptor and protected avian species nest abandonment. These impacts would be potentially significant under CEQA.

The CSUMB Master Plan EIR and MMRP require the implementation of *MMRP Mitigation Measures BIO-1b* and *BIO-1c* to avoid, minimize, or mitigate impacts to non-HMP special-status species through the following actions:

- Biological surveys by a qualified biologist to identify potential impacts to species or habitats;
- A report to CSUMB prior to ground-disturbing activities identifying biological conditions and special-status species which are known or have the potential to occur within the project site;

- Implementing measures to avoid, minimize, and/or compensate for impacts, such as project design revisions, pre-construction surveys, construction buffers, BMPs, monitoring, restoration, and salvage/relocation; and
- Timing construction to avoid the avian breeding/nesting season or conducting pre-construction surveys, establishing no-disturbance buffers if nests are found, and ensuring young birds have fledged before resuming construction in buffer zones.

The biological surveys conducted in 2023 and 2025 and the analysis contained in this IS/MND satisfy *MMRP Mitigation Measure BIO-1b*'s requirements for pre-construction plant surveys within the project site and completion of a biological report. Additionally, MCWD will implement **Mitigation Measures BIO-3** through **BIO-8**, below, to ensure the project avoids, minimizes, mitigates impacts to non-HMP special-status species.

Implementation of *MMRP Mitigation Measures BIO-1b* and *BIO-1c* and **Mitigation Measures BIO-3** through **BIO-8** would ensure that the project remains in compliance with the CSUMB Master Plan EIR and MMRP, and that potentially significant impacts to non-HMP special-status species are reduced to a less-than-significant level.

Mitigation:

In addition to MMRP *Mitigation Measures BIO-1a*, *BIO-1b*, and *BIO-1c*, MCWD shall implement the following mitigation to avoid, minimize, or mitigate impacts to sensitive biological resources.

Mitigation Measure BIO-1: Monterey Spineflower Salvage

Occurrences of Monterey spineflower shall be avoided to the greatest extent feasible. Individuals or populations that will not be impacted by the project shall be protected prior to and during construction to the maximum possible through the use of exclusionary fencing and/or flagging. Prior to ground-disturbing activities (e.g., vegetation removal, grading, excavation), a biological monitor will supervise the installation of protective fencing/flagging by the contractor and monitor at least once per week until construction is complete to ensure that the protective fencing/flagging remains intact.

Mitigation Measure BIO-2: Monterey Spineflower Restoration Plan

Where avoidance of the Monterey spineflower occurrences is not feasible, the impacted area shall be quantified during final design and Monterey spineflower shall be replaced at a 1:1 ratio for the acreage or individuals impacted and a Restoration Plan shall be prepared by a qualified biologist and implemented. The plan shall include, but is not limited to, the following:

- A description of the baseline conditions of the habitats within the impacted area, including the presence of Monterey spineflower, its location, and density.
- A detailed description of on-site and/or off-site restoration areas, salvage of seed and/or soil bank and/or plant salvage, seeding and planting specifications, which may include but is not limited to, an increased planting ratio to ensure the 1:1 ratio.
- Procedures to control and/or eliminate non-native invasive species within the restoration area(s); and

- A monitoring program that describes annual monitoring efforts which incorporate success criteria and contingency plans if success criteria are not met.

Mitigation Measure BIO-3: Kellogg's Horkelia Rare Plant Restoration Plan

If the non-HMP special-status plant species (i.e., Kellogg's horkelia) present adjacent to the project site cannot be avoided, a Rare Plant Restoration Plan shall be prepared by a qualified biologist and implemented. The plan shall include, but is not limited to, the following:

- A description of the baseline conditions of the work site, including locations and densities of the special-status plant species present;
- Procedures to control and/or eliminate non-native invasive species within the work site;
- A detailed description of on-site and/or off-site restoration areas, salvage of seed and/or soil bank, plant salvage, seeding and planting specifications, including increased planting ratio to ensure the 1:1 success ratio; and
- A monitoring program that describes annual monitoring efforts which incorporate success criteria and contingency plans if success criteria are not met.

Mitigation Measure BIO-4: Construction Best Management Practices

The following best management practices will be implemented during all identified phases of construction (i.e., pre-, during, and post-) to reduce impacts to special-status plant and wildlife species:

- A qualified biologist will conduct an Employee Education Program for the construction crew prior to any construction activities. The qualified biologist will meet with the construction crew at the onset of construction at the project site to educate the construction crew on the following: 1) the appropriate access route(s) in and out of the construction area and review project boundaries; 2) how a biological monitor will examine the area and agree upon a method which will ensure the safety of the monitor during such activities, 3) the special-status species that may be present; 4) the specific mitigation measures that will be incorporated into the construction effort; 5) the general provisions and protections afforded by the Service and CDFW; and 6) the proper procedures if a special-status species is encountered within the project site.
- Protective fencing shall be placed prior to and during construction to keep construction equipment and personnel from impacting vegetation outside of work limits. A biological monitor shall supervise the installation of protective fencing and monitor at least once per week until construction is complete to ensure that the protective fencing remains intact.
- Trees and vegetation not planned for removal or trimming shall be protected prior to and during construction to the maximum extent possible through the use of exclusionary fencing, such as hay bales for herbaceous and shrubby vegetation, and protective wood barriers for trees. A biological monitor shall supervise the installation of protective fencing and monitor at least once per week until construction is complete to ensure that the protective fencing remains intact.
- Grading, excavating, and other activities that involve substantial soil disturbance will be planned and implemented in consultation with a qualified hydrologist, engineer, or erosion

control specialist, and will utilize standard erosion control techniques to minimize erosion and sedimentation to native vegetation adjacent to the project site (pre-, during, and post-construction).

- Following construction, disturbed areas will be restored to pre-project contours to the maximum extent possible and revegetated using locally-occurring native species and native erosion control seed mix, per the recommendations of a qualified biologist.
- To protect against spills and fluids leaking from equipment, the project proponent shall require that the construction contractor maintains an on-site spill plan and on-site spill containment measures that can be easily accessed.
- No firearms will be allowed on the project site at any time.
- All food-related and other trash will be disposed of in closed containers and removed from the project area at least once a week during the construction period, or more often if trash is attracting avian or mammalian predators. Construction personnel will not feed or otherwise attract wildlife to the area.

Mitigation Measure BIO-5: Construction-Phase Monitoring

MCWD shall retain a qualified biologist to monitor all ground disturbing construction activities (i.e., vegetation removal, grading, excavation, or similar activities) associated with the project to protect any special-status species encountered. Any handling and relocation protocols of special-status wildlife species will be conducted by a qualified biologist with the appropriate scientific collection permit. After ground disturbing project activities are complete, the qualified biologist will train an individual from the construction crew to act as the on-site construction biological monitor. The construction biological monitor will be the contact for any special-status wildlife species encounters, will conduct daily inspections of equipment and materials stored on site and any holes or trenches prior to the commencement of work, and will ensure that all installed fencing stays in place throughout the construction period. The qualified biologist will then conduct regular scheduled and unscheduled visits to ensure the construction biological monitor is satisfactorily implementing all appropriate mitigation protocols. The qualified biologist and the construction monitor shall complete a daily log summarizing activities and environmental compliance throughout the duration of the project. The log will also include any special-status wildlife species observed and relocated.

Mitigation Measure BIO-6: Non-Native, Invasive Species Controls

The following measures will be implemented to reduce the introduction and spread of non-native, invasive species:

- Any landscaping or replanting required for the project will not use species listed as noxious by the California Department of Food and Agriculture (CDFA) or invasive by the California Invasive Plant Council (Cal-IPC).
- Bare and disturbed soil will be landscaped with CDFA recommended seed mix or plantings from locally adopted species to preclude the invasion on noxious weeds in the project site.
- Construction equipment will be cleaned of mud or other debris that may contain invasive plants and/or seeds and inspected to reduce the potential of spreading noxious weeds, before mobilizing to arrive at the construction site and before leaving the construction site.

- All non-native, invasive plant species will be removed from disturbed areas prior to replanting.

Mitigation Measure BIO-7: Nesting Bird Survey

In accordance with *MMRP Mitigation Measure BIO-1c*, the following measures will be implemented to avoid or minimize impacts to nesting birds:

Construction activities that may directly (e.g., vegetation removal) or indirectly (e.g., noise/ground disturbance) affect protected nesting avian species shall be timed to avoid the breeding and nesting season. Specifically, vegetation and/or tree removal can be scheduled after September 16 and before January 31. Alternatively, a qualified biologist shall be retained by the CSUMB CPD Department to conduct pre-construction surveys for nesting raptors and other protected avian species within 500 feet of proposed construction activities if construction occurs between February 1 and September 15. Pre-construction surveys shall be conducted no more than 14 days prior to the start of construction activities during the early part of the breeding season (February through April) and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May through August). Because some bird species nest early in spring and others nest later in summer, surveys for nesting birds may be required to continue during construction to address new arrivals, and because some species breed multiple times in a season. The necessity and timing of these continued surveys shall be determined by the qualified biologist based on review of the final construction plans and in coordination with the Service and CDFW, as needed for protected avian species nests.

If raptors or other protected avian species nests are identified during the pre-construction surveys, the qualified biologist shall notify the CSUMB CPD Department and an appropriate no-disturbance buffer shall be imposed within which no construction activities or disturbance shall take place (generally 500 feet in all directions for raptors; other avian species may have species-specific requirements) until the young of the year have fledged and are no longer reliant upon the nest or parental care for survival, as determined by a qualified biologist.

Mitigation Measure BIO-8: Monterey Dusky-Footed Woodrat Survey

The proposed project proponent shall retain a qualified biologist to conduct a pre-construction survey for MDFW in suitable habitat within the project site within three days prior to construction. All MDFW nests identified will be flagged for avoidance. Nests that cannot be avoided will be manually deconstructed prior to land clearing activities to allow animals to escape harm. If a litter of young is found or suspected, nest material will be replaced, and the nest will be monitored for one week to verify that young are capable of independent survival before proceeding with nest dismantling.

b) **Less-Than-Significant-Impact.** The CSUMB campus contains approximately 421 acres of coast live oak woodland habitat. Approximately 0.7 acre of disturbed coast live oak woodland habitat occurs within the project site and would be impacted by construction activities. Oak woodlands are considered important natural communities because they provide a variety of ecological, aesthetic, and economical values. The extent of oak woodland in California has declined due to agricultural

conversion, urban development, fuelwood harvesting, and grazing activities. While coast live oak woodland is not considered a sensitive habitat by CDFW or the HMP, impacts to coast live oak trees and woodland habitat are typically addressed and mitigated under CEQA, state and local ordinances and policies, and, within the CSUMB campus, in accordance with the CSUMB Tree Restoration Program. As a result, coast live oak woodland habitat is categorized as a sensitive habitat in this analysis.. As discussed under *Impact e*, the MCWD would replant coast live oak trees on-site at a 2:1 ratio, to the extent feasible after build-out of the project, and would replant any remaining oak trees off-site (within the CSUMB campus) to achieve the 2:1 replacement ratio required by CSUMB's Tree Restoration Program. Given compliance with the program and that the project would impact less than 0.2 percent of the existing coast live oak woodland habitat on the campus, impacts to coast live oak woodland habitat would be less-than-significant.

c) **No Impact.** There are no state or federally protected wetlands present within or adjacent to the site. Therefore, no impact would occur.

d) **Less-Than-Significant Impact.** Wildlife movement corridors are pathways or habitat linkages that connect discrete areas of natural open space otherwise separated or fragmented by topography, changes in vegetation, and other natural or man-made factors, such as urbanization. The fragmentation of natural habitat creates isolated "islands" of vegetation that may not provide sufficient area or resources to accommodate sustainable populations for a number of species, and, therefore, adversely affect both genetic and species diversity. Corridors often partially or largely mitigate the adverse effects of fragmentation by 1) allowing animals to move between remaining habitats to replenish depleted populations and increase the gene pool available; 2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk that catastrophic events (e.g., fire and disease) would result in population or species extinction; and 3) serving as travel paths for individual animals moving throughout their home range in search of food, water, mates, and other needs, or for dispersing juveniles in search of new home ranges.

The 2010 Monterey County General Plan EIR identified a number of significant wildlife movement corridors and linkages within the vicinity of the former Fort Ord, including Linkage 308: Fort Ord – Ventana; Linkage 322: Highway 68 Western Crossing; Linkage 350: Sierra de Salinas – Toro Peak; Linkage 339: Salinas Valley Floor; and Linkage 378: Salinas River – Pinnacles National Monument (County of Monterey, 2010). Of particular importance for wildlife movement from the former Fort Ord lands to outlying areas are Linkages 308 and 322. Specifically, Linkage 322 runs along El Toro Creek in the southeastern portion of former Fort Ord and through a large bridge undercrossing Highway 68. This corridor has been identified as a significant wildlife corridor for mammals, amphibians, and reptiles moving between former Fort Ord lands and connecting to the Sierra de Salinas and Santa Lucia Ranges.

The HMP considered conservation area connectivity as an essential component of the design of the conservation areas and corridors within the former Fort Ord. The HMP created conservation areas and corridors with the purpose of linking the plant and animal populations in the northern portion of the former base at the Marina Municipal Airport to the populations in the south to the Fort Ord National Monument and the El Toro Creek undercrossing of Highway 68. The implementation of the HMP preserves over 18,500 acres of a variety of habitats supporting a variety of common and

special-status plant species, and maintains a north-south wildlife corridor across the former Fort Ord lands to connect with the primary, significant wildlife linkages.

The proposed project site is not located within any of the significant wildlife movement corridors or linkages identified above, nor does it serve as a significant nursery site for native wildlife. The site is within CSUMB and is surrounded by paved roadways on its western, southern, and eastern sides. As such, although portions of the site are undeveloped, these areas are currently isolated from other undeveloped areas and provide little use as a corridor for wildlife movement. The implementation of the proposed project would involve impacts to vegetative communities at the project site; however, the proposed project would impact only a small percentage of natural habitat within the former Fort Ord. The HMP preserves approximately 18,500 acres of large, contiguous areas of wildlife habitat that will remain on the former Fort Ord and will be preserved in perpetuity. Therefore, the proposed activities within the project site would not disconnect, fragment, or otherwise impede wildlife movement in the primary, significant wildlife movement corridors in the area, and would not substantially interfere with the movement of wildlife through the area or impede the use of a native wildlife nursery site. This would be a less-than-significant impact.

e) **Less-than-Significant Impact.** Implementation of the project would result in impacts to over 50 trees within CSUMB campus boundaries. CSUMB has established a tree restoration program for impacts to coast live oak and other trees resulting from projects that occur on campus. This program requires that for every tree with a four-inch dbh or greater removed, a minimum of two coast live oak trees would be replanted in the identified restoration area on campus. The implementation of this program is required for all projects that would result in impacts to trees on campus. Therefore, as a feature of the project design, two coast live oak trees would be replanted for every tree with a greater than four-inch dbh removed. The replanting specifications would be required in final project plans. The proposed project site would not have enough space to accommodate tree replacement at a 2:1 ratio on-site; only 13 trees may be replanted on-site. Therefore, MCWD will coordinate with CSUMB to replant additional trees off-site to achieve the 2:1 replacement requirement. Trees within and adjacent to the project site not planned for removal will be protected prior to and during construction through the implementation of exclusionary fencing as required in **Mitigation Measure BIO-3**. This would be a less-than-significant impact.

f) **Less-Than-Significant Impact.** The proposed project site is not located within an approved HCP or NCCP area. However, the project site is located within the Fort Ord HMP boundaries and is designated for development (with no restrictions). As described in the "Approach to Analysis," the proposed project is consistent with the approved HMP. This would be a less-than-significant impact.

Conclusion: The proposed project would have a less-than-significant impact on biological resources with implementation of the mitigation measures identified above.

5.2.5 CULTURAL RESOURCES

Albion Environmental, Inc. (Albion) prepared a Phase I Cultural Resource Inventory for the proposed project (**Appendix C**). The Phase I Cultural Resource Inventory includes the results of background research and field reconnaissance of the proposed project site. Background research consisted of a records search from the California Historical Resources Information System (CHRIS), Northwest Information Center at Sonoma State University (NWIC), and a Sacred Lands File (SLF) search with the Native American Heritage Commission (NAHC). Albion's field reconnaissance consisted of a pedestrian survey of the site on March 13, 2025, which investigated the site for evidence of cultural and tribal cultural resources. The following section is based on the findings of Albion's report.

Setting

Archaeologists working in California's central coast have generally recognized six major periods of precolonial human occupation as described in **Appendix C**. The Esselen were one of the smallest groups of Native Californians observed at the time of European contact in the eighteenth century. At the time of European contact, the Esselen occupied a territory encompassing approximately 850 square miles spanning the upper Carmel Valley, the Santa Lucia Mountains and the Big Sur coast area from approximately Point Sur to Point Lopez, and the upper Arroyo Seco watershed into the western edge of the Salinas Valley to Greenfield. Esselen territory comprised five "districts" (Excelen, Eslenajan, Ekheahan, Imunahan, and Aspasniajan), each having a number of semi-sedentary villages occupied on a seasonal basis, and all sharing the same language.

The Esselen underwent cataclysmic changes during the period of Spanish colonialism and missionization during the period of 1776-1834. Estimates for the population at the time of contact range from about 500 to over 1,300. As the Esselen were gradually brought into the mission system, and placed under the direction of the mission fathers, they lost much of their erstwhile autonomous existence and traditional lifeway and were scattered between the three missions around their territory, Missions Carmel, Soledad, and San Antonio. The Native population of the Monterey area was decimated due to diseases and hardships ubiquitous to the Spanish and Mexican missions in addition to the violent encounters with military patrols sent out to recapture Natives fleeing from the missions. Mission activities lasted until about 1808 and the new Mexican government began secularization of the missions in 1834. Much of the former mission land was divided among loyal Mexican subjects, although a few Indigenous individuals were given rancherias. After secularization in 1834, Native individuals of many groups, including the Esselen, often presented themselves as other than Indian to the outside world, in large part due to the discrimination suffered during and after the mission period. The new ranchos that sprang up as a result of secularization were centered around the raising and maintaining of vast herds of cattle and employed a variety of laborers including Esselen and members of other tribes. In 1846, during the Mexican-American war, U.S. forces captured Monterey without a fight and occupied it as a defensive position. Upon conclusion of the war in 1848, Mexico ceded California to the United States and in 1849 a constitutional convention was held in Monterey, followed by ratification of the California Constitution and the next year by statehood.

The proposed project site is located approximately 0.6 miles east of the boundary of Rancho Noche Buena. The proposed project site itself is located outside any rancho boundaries as it was part of the lands under the control of the original City of Monterey founded by the Spanish in 1770. Albion's archival research identified a 1941 historic aerial image of the project site that shows the area was undeveloped with the ground surface covered in vegetation and visible dirt roads and trails. No historic structures or buildings are present within the site in any of the historical aerial imagery.

CEQA Thresholds

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Less-Than-Significant Impact with Mitigation	Less-Than-Significant Impact	No Impact	Checklist Source(s)
CULTURAL RESOURCES. Would the project:					
a) Cause a substantial adverse change in the significance of a historical resource as pursuant to 15064.5?				X	1, 29
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to 15064.5?		X			1, 29
c) Disturb any human remains, including those interred outside of formal cemeteries?		X			1, 29

Explanation

a) **No Impact.** No listed or known potential National Register of Historic Places and/or California Register of Historical Resources are located in the vicinity of the proposed project site. No other significant or potentially significant local, state or federal historic properties, landmarks, points of interest, etc. have been identified within or adjacent to the proposed project site. Therefore, no impacts would result to historical resources pursuant to CEQA Guidelines § 15064.5.

b, c) **Less-Than-Significant Impact with Mitigation.** Albion conducted archival research, a search of the SLF file with the NAHC, a records search at the NWIC, and a pedestrian survey of the project area. The NWIC records search indicated that one previous cultural resource study has been conducted within the project site, and seven cultural resource studies have been conducted within a quarter-mile radius of the site. The record search revealed that no previously recorded cultural resources are located within the project site or within a quarter-mile radius of the site. Albion did not find evidence of surface archaeological resources within the project area during their pedestrian survey. Consequently, Albion determined that no further archaeological investigation is warranted under CEQA. However, there is the potential to unearth previously unidentified cultural materials or human remains interred outside of a formal cemetery during ground disturbing activities. This represents a potentially significant impact that can be reduced to a less-than-significant level with the implementation of **Mitigation Measure CR-1** and **CR-2**.

Mitigation Measure CR-1

If archaeological materials or features are discovered at any time during construction, work shall be halted within 50 meters (150 ft.) of the find until it can be evaluated by a qualified professional archaeologist (defined as one who is certified by the Society of Professional Archaeologists). If the find is determined to be significant, appropriate mitigation measures based on the location and characteristics of the resource shall be formulated and implemented by the qualified professional archaeologist. Mitigation measures may include, but are not limited to: 1) avoiding the resource, 2) establishing a permanent conservation easement over the resource, 3) capping or covering the resource with a layer of soil before building on the resource, 4) incorporating the resource into parks, greenspace, or some other open space, or 5) conducting archaeological data recovery to excavate the resource, analyze the artifacts, develop a report of findings, and curate the artifacts at an appropriate facility.

Mitigation Measure CR-2

If human remains are discovered at any time during construction, work shall be halted within 50 meters (150 ft.) of the find.

- The contractor shall call the Monterey County Coroner and await the Coroner's clearance. If the coroner determines the remains are Native American, the Coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours.
- NAHC shall notify the most likely descendent.
- The Native American descendent, with permission of the landowner or representative, may inspect the site of the discovery and recommend the means for treating or disposing with appropriate dignity the human remains and any associated grave goods.
- The Native American descendent shall complete their inspection and make their recommendation within 24 hours of their notification by the Native American Heritage Commission. The recommendation may include the removal and analysis of human remains and associated items; preservation of the Native American human remains and associated items in place; relinquishment of Native American human remains and associated items to the descendants for treatment; or other culturally appropriate treatment. If the NAHC is unable to identify a descendent or the descendent identified fails to make a recommendation within 24 hours, the landowner shall reinter the human remains and items associated with the Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance.
- If the landowner and Native American descendent reach agreement on the appropriate procedure, the landowner shall follow this procedure.
- If the landowner and Native American descent cannot reach agreement, the parties shall consult with the Native American Heritage Commission. The landowner shall consider and, if agreeable, follow the identified procedure.
- If the landowner and Native American descendant cannot reach agreement after consultation, the Native American human remains shall be reinterred on the property with appropriate dignity.

Conclusion: The proposed project would have a less-than-significant impact on cultural resources with implementation of the mitigation measures identified above.

5.2.6 ENERGY

Setting

Starting in 2018, all PG&E customers within Monterey, San Benito, and Santa Cruz Counties were automatically enrolled in Central Coast Community Energy (3CE) (formally Monterey Bay Community Power). 3CE is a locally-controlled public agency providing carbon-free electricity to residents and businesses. Formed in February 2017, 3CE is a joint powers authority, and is based on a local energy model called community choice energy. 3CE partners with PG&E, which continues to provide billing, power transmission and distribution, customer service, grid maintenance services and natural gas services to Monterey County. 3CE's standard electricity offering is carbon free and is classified as 30 percent

renewable. Of the electricity provided by 3CE in 2018, 40 percent was hydroelectric, and 30 percent was solar and wind (eligible renewables) (3CE, 2025).

CEQA Thresholds

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Less-Than-Significant Impact with Mitigation	Less-Than-Significant Impact	No Impact	Checklist Source(s)
6. ENERGY. Would the project:					
a) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operation?			X		1
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?			X		1, 2, 3, 4

Explanation

a) **Less-Than-Significant Impact**. The proposed project would not result in a potentially significant environmental impact due to the wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during construction or operation of the proposed project. Energy use associated with construction and operation of the project would not constitute an adverse effect under CEQA, as described below.

Construction

The anticipated construction schedule assumes that the proposed project would be completed over a period of approximately 18 months. The construction phase would require energy for the manufacture and transportation of building materials, preparation of the site (e.g., excavation, and grading), and the actual construction of project components. Petroleum-based fuels such as diesel fuel and gasoline would be the primary sources of energy for these tasks. The construction energy use has not been determined at this time. However, the proposed project would not cause inefficient, wasteful, or unnecessary consumption of energy as the construction schedule and process is already designed to be efficient to avoid excess monetary costs. Equipment and fuel are not typically used wastefully during construction due to the added expenses associated with renting, maintaining, and fueling the equipment. Hand tools would be used when possible to avoid use of heavy machinery. Furthermore, energy used required to complete construction would be limited and short-term.

Operation

The total annual operational energy use of the proposed project is not known at this time. Direct energy use would occur in association with operating the proposed B2 reservoir. Indirect energy use would also occur through the use of petroleum fuels for vehicle trips to maintain the proposed project; however, maintenance trips would be conducted concurrently with trips to the existing B1 reservoir. Therefore, the proposed project would not result in an increase in traffic to/from the site as traffic required for maintenance activities associated with the proposed project would be consistent with the existing usage for maintenance of the B1 reservoir. Operation of the proposed new facility would consume energy primarily for operation of the existing booster pump station.

However, operation of the proposed project would not result in an increase in energy use compared to existing conditions. As a result, implementation of the proposed project would not result in a substantial environmental impact on energy resources.

Based on the discussion above, the proposed project would not result in potentially significant environmental impact, during operation or construction, due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation.

b) **Less-Than-Significant Impact**. The construction and operation of the proposed project would have a less-than-significant impact due to energy usage and efficiency and, thus, would not conflict with local or state plans for energy efficiency. As a result, the project would comply with existing state energy standards and would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Conclusion: The proposed project would have less-than-significant impacts related to energy use.

5.2.7 GEOLOGY AND SOILS

Setting

The following discussion describes the geological characteristics of the proposed project site based on available resources offered by federal, state, and local agencies.

Soil Conditions

The University of California Davis (UC Davis) *SoilWeb* application identifies the soils in the project site as *Oceano loamy sand, 2 to 15 percent slopes*, predominantly belonging to the Oceano series. The Oceano series is described very deep, excessively drained soils that formed in material from old eolian deposits, with slopes of 0 to 50 percent. Runoff is very low (UC Davis and NRCS, 2025).

Assessment of Potential Geologic Hazards

Localized Faulting. The proposed project site is not located within a currently delineated State of California Alquist-Priolo Earthquake Fault Zone as shown on the Department of Conservation's (DOC's) online Earthquake Zones of Required Investigations GIS viewer (EQZapp) (DOC, 2025). The San Andreas fault is the closest active fault to the site, located approximately 20 miles northeast of the project site (DOC, 2025). No known active faults have been identified on or near the project site; thus, the potential for future surface fault rupture at the site is low.

Flood Hazard. The Federal Emergency and Management Administration (FEMA) maintain a collection of Flood Insurance Rate Maps (FIRM), which cover the entire U.S. These maps identify those areas which may be subjected to 100-year and 500-year cycle floods. Based on review of these maps, the project site is in an area zoned as Zone X (unshaded), which is an area of minimal flood hazard (FEMA, 2025).

Landslides. Landslides are ground failures (several tens to hundreds of feet deep) in which a large section of a slope (i.e., mass of earth material, including debris and often portions of bedrock) detaches and slides downhill. Landslides are not to be confused with minor surficial slope failures (slumps), which are usually limited to the topsoil zone and can occur on slopes composed of almost any geologic material. Landslides

can cause damage to structures both above and below the slide mass. The proposed project site is relatively flat and is considered to have low landslide potential (County of Monterey, 2025).

Liquefaction and Seismic Settlement. The term liquefaction describes a phenomenon in which saturated, cohesionless or very low plasticity soils temporarily lose shear strength (liquefy) due to increased pore water pressures induced by strong, cyclic ground motions during an earthquake. Structures founded on or above potentially liquefiable soils may experience bearing capacity failures due to the temporary loss of foundation support, vertical settlements (both total and differential), and/or undergo lateral spreading. The factors known to influence liquefaction potential include age, soil type, relative density, grain size, plasticity, confining pressure, depth to groundwater, and the intensity and duration of the seismic ground shaking. Liquefaction is most prevalent in young loose to medium dense, non-plastic coarse-grained soils below the groundwater table. The County of Monterey's GIS viewer describes the site as having a low potential for liquefaction (County of Monterey, 2025).

Lateral Spreading. Lateral spreading is horizontal/lateral ground movement of relatively flat-lying soil deposits towards a free face such as an excavation, channel, or open body of water, typically lateral spreading is associated with liquefaction of one or more subsurface layers near the bottom of the exposed slope. As failure tends to propagate as block failures, it is difficult to analyze and estimate where the first tension crack will form. The potential for liquefaction to occur at the site is low (County of Monterey, 2025); therefore, the potential for lateral spreading is also low.

Expansive Soils. Expansive soils are characterized by their ability to undergo significant volume changes (shrink or swell) due to variations in moisture content. Changes in soil moisture content can result from precipitation, landscape irrigation, utility leakage, roof drainage, perched groundwater, drought, or other factors and may result in unacceptable settlement or heave of structures or concrete slabs supported on grade. The soils underlying the site have non-plastic characteristics and are considered to have a low expansion potential.

Paleontological Resources

Paleontological resources are fossils or assemblages of fossils that are unique, unusual, rare, uncommon, and diagnostically or stratigraphically important, as well as those that add to an existing body of knowledge in specific areas, stratigraphically, taxonomically, or regionally. They include fossil remains of large to very small aquatic and terrestrial vertebrates, remains of plants and animals previously not represented in certain portions of the stratigraphy and assemblages of fossils that might aid stratigraphic correlations – particularly those offering data for the interpretation of tectonic events, geomorphologic evolution, paleoclimatology, and the relationships of aquatic and terrestrial species. Most of the fossils found in Monterey County are of marine life forms and form a record of the region's geologic history of advancing and retreating sea levels. A review of nearly 700 known fossils localities in the County was conducted in 2001; 12 fossil sites were identified as having outstanding scientific value. The proposed project site is not located on or near any of those sites (Rosenberg and Clark, 2001).

CEQA Thresholds

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Less-Than-Significant Impact with Mitigation	Less-Than-Significant Impact	No Impact	Checklist Source(s)
GEOLOGY AND SOILS. Would the project:					
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:					
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			X		1, 2, 3, 4, 30, 31
ii) Strong seismic ground shaking?			X		1, 2, 3, 4, 30, 31
iii) Seismic-related ground failure, including liquefaction?			X		1, 2, 3, 4, 30, 31
iv) Landslides?				X	1, 2, 3, 4, 30, 31
b) Result in substantial soil erosion or the loss of topsoil?			X		1, 2, 3, 4, 30, 31
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?			X		1, 2, 3, 4, 30, 31
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?			X		1, 2, 3, 4, 31
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?				X	1, 2, 3, 4, 31
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				X	1, 2, 3, 4, 31

Explanation

ai) **Less-Than-Significant Impact**. The potential for surface rapture is low as no active faults cross the region and the proposed project site is located outside Alquist-Priolo Earthquake Zones (DOC, 2025). Additionally, the proposed project would consist of updated infrastructure with no habitable structures and no net operational increase of personnel and, therefore, would not increase exposure of people to greater risk of seismic hazards. In addition, the project would be designed and constructed in accordance with standard engineering and seismic safety design techniques to further ensure infrastructure is not compromised from seismic activity. For these reasons, the proposed project would not, directly or indirectly, cause potential substantial adverse effects, including the

risk of loss, injury, or death due to rupture of a known earthquake fault. This would be a less-than-significant impact.

aii) **Less-Than-Significant Impact**. The proposed project is located in a seismically active region. The nearest active fault is the San Andreas fault, located approximately 20 miles northeast of the proposed project site (DOC, 2025). As a result, the proposed project could be subject to seismically induced hazards during its design lifetime. However, the proposed project is a water system improvement project and does not include the addition of any new habitable structures which could substantially increase exposure of individuals or buildings to greater risk of seismic hazards. To minimize potential seismically induced hazards, the proposed project would be designed to comply with all standard engineering and seismic safety design requirements and guidelines contained in the Uniform Building Code and California Building Code. Additionally, the final design of the proposed project would be required to comply with the recommendations of a design-level geotechnical analysis. Compliance with existing building code requirements, standard engineering and seismic safety design techniques, as well as the recommendations of a design-level geotechnical report would ensure that potential impacts would be minimized. Therefore, the proposed project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death from strong seismic ground shaking. Therefore, this impact would be less than significant.

aiii) **Less-Than-Significant Impact**. As described above, the project site may be subject to strong ground shaking in the event of a major earthquake. However, soils at the project site are not considered susceptible to liquefaction or significant seismically-induced settlement (County of Monterey, 2025). In addition, the project would be constructed to standard engineering and seismic safety design techniques pursuant the California Building Code. The proposed project would be designed and constructed in accordance with all state, federal, and other laws, rules, regulations to avoid or minimize potential direct or indirect damage from seismic related ground failure, including liquefaction. Therefore, this impact would be less than significant.

aiv) **No Impact**. The proposed project site has no appreciable vertical relief and as a result the potential for landslides is low. See also aiii) above. Therefore, no impact would occur.

b) **Less-Than-Significant Impact**. The proposed project would be subject to the requirements of the Regional Water Quality Control Board (RWQCB) National Pollution Discharge Elimination System (NPDES) Program General Storm Water Permit, which includes the preparation of a Storm Water Pollution Prevention Plan (SWPPP), as outlined in *Section 5.2.10, Hydrology and Water Quality*, for construction activities disturbing one acre or more. Any temporary erosion related to construction would be minimized through the implementation of standard construction phase best management practices (BMPs) related to erosion. Erosion control measures and associated BMPs would be consistent with the recommended measures contained in the California Stormwater Best Management Practices Handbooks. Applicable measures may include the following:

- Stockpiling and disposing of demolition debris, concrete, and soil.
- Protecting existing storm drain inlets and stabilizing disturbed areas.
- Hydroseeding/re-vegetating disturbed areas.

- Minimizing areas of impervious surfaces.
- Implementing runoff controls (e.g., percolation basins and drainage facilities).
- Properly managing construction materials.
- Managing waste, aggressively controlling litter, and implementing sediment controls.
- Limiting grading to the minimum area necessary for construction and operation of the project.

Compliance with state requirements, and the above BMPs would ensure that construction activities associated with the proposed project would not cause substantial soil erosion. Therefore, this impact would be less than significant.

c) **Less-Than-Significant Impact**. Soils within the project site have a low potential for lateral spreading, subsidence, or liquefaction which could damage proposed structures. Further, construction of the proposed project would be conducted in accordance with requirements of a site-specific geotechnical report and the most recent regulatory requirements to minimize the potential for geologic hazards. Therefore, this impact would be less than significant.

d) **Less-Than-Significant Impact**. The soils underlying the project site have non-plastic characteristics and are considered to have a low expansion potential. In addition, the proposed project is a water system improvement project and does not include the addition of any new habitable structures which could create substantial direct or indirect risks to life or property. Further, construction of the proposed project would be conducted in accordance with requirements of a site-specific geotechnical report and the most recent regulatory requirements to minimize the potential for geologic hazards. Therefore, this impact would be less than significant.

e) **No Impact**. The proposed project does not propose any septic tanks or alternative wastewater disposal system. Therefore, no impact would occur.

f) **No Impact**. The proposed project site is not listed within an area identified as containing paleontological resources nor is it located near any known paleontological resources. Therefore, no impact would occur.

Conclusion: The proposed project would have a less-than-significant impact on geology and soils.

5.2.8 GREENHOUSE GAS EMISSIONS

Setting

Global temperatures are affected by naturally occurring and anthropogenic-generated atmospheric gases, such as water vapor, carbon dioxide, methane, and nitrous oxide (Intergovernmental Panel on Climate Change, 2007). Gases that trap heat in the atmosphere are called greenhouse gases (GHGs). Solar radiation enters the earth's atmosphere from space, and a portion of the radiation is absorbed at the surface. The earth emits this radiation back toward space as infrared radiation. Greenhouse gases, which are mostly transparent to incoming solar radiation, are effective in absorbing infrared radiation and redirecting some of this back to the earth's surface. As a result, radiation that otherwise would have escaped back into space is retained, resulting in a warming of the atmosphere. This process is known as the greenhouse effect. The greenhouse effect helps maintain a habitable climate. Emissions of GHGs from human activities, such as electricity

production, motor vehicle use, and agriculture, are elevating the concentration of GHGs in the atmosphere. GHG emissions from anthropogenic sources are causing a trend of unnatural warming of the earth's climate, known as global warming or global climate change.

Climate change has a cumulative impact; a project contributes to this impact through its incremental contribution of GHG emissions combined with the cumulative increase of all other sources of GHGs. MBARD defines their GHG threshold in terms of carbon dioxide equivalent (CO_2e), a metric that accounts for emissions from various GHGs based on their global warming potential. If annual emissions of GHGs exceed these threshold levels, the proposed project would result in a cumulatively considerable contribution of GHG emissions and must implement mitigation measures (MBARD, 2018). MBARD has not yet adopted a threshold for construction-related GHG emissions but recommends utilizing thresholds set by neighboring districts (e.g., Sacramento Metropolitan Air Quality Management District [SMAQMD]). SMAQMD adopted an updated threshold based on the 2030 target year in April 2020. Based on correspondence with MBARD staff, utilizing this threshold would be appropriate. Therefore, a project would result in a significant construction GHG related impact if it would emit more than 1,100 metric tons of CO2e ($MTCO_2e$) per year and would result in a significant operational GHG related impact if it would emit more than 10,000 $MTCO_2e$ (SMAQMD, 2020).

CEQA Thresholds

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Less-Than-Significant Impact with Mitigation	Less-Than-Significant Impact	No Impact	Checklist Source(s)
GREENHOUSE GAS EMISSIONS. Would the project:					
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X		1, 7
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X		1, 7

Explanation

a) **Less-Than-Significant Impact**. Implementation of the proposed project would contribute GHG emissions that are associated with global climate change. As identified in **Appendix A**, annual emissions of GHGs associated with the construction of the proposed project would total approximately 311 $MTCO_2e$/year in 2025 and 255 $MTCO_2e$/year in 2026. There would also be a small amount of GHG emissions from waste generated during construction; however, this amount is speculative. Actual emissions would vary, depending on various factors including construction schedules, equipment required, and activities conducted. Assuming an average project life of 30 years, amortized construction-generated GHG emissions would total approximately 18.9 $MTCO_2e$/yr.

As identified in **Appendix A**, annual operational GHG emissions associated with water use for irrigation and electricity use would total approximately 0.04 $MTCO_2e$/year. It is important to note that the proposed project would include the installation of high-efficiency exterior lighting to

reduce electricity demand and water-efficient drip irrigation systems for reducing water demand. The drip irrigation systems are anticipated to only be required during initial tree establishment, which is anticipated to be during the initial two years of project operations. With the inclusion of amortized construction emissions, total GHG emissions from all emission sources, including permitted and non-permitted sources, would total approximately 1,535 $MTCO_2e$/year. Annual operational GHG emissions associated with the operation of the emergency generator would total approximately 1,516 $MTCO_2e$/year. Operational GHG emissions associated with the emergency generator would not exceed MBARD's significance threshold of 10,000 $MTCO_2e$/year for permitted stationary sources. As a result, the project is not anticipated to generate GHG emissions, either directly or indirectly, that would have a significant impact on the environment. Therefore, this impact would be less than significant.

b) **Less-Than-Significant Impact**. Applicable GHG-reduction plans include the Monterey Bay Association of Governments (AMBAG) 2022-2045 MTP/SCS and ARB's Climate Change Scoping Plan.

The AMBAG 2022-2045 MTP/SCS was developed in accordance with state and federal requirements including Senate Bill (SB) 375 which aims to reduce GHG emissions related to mobile sources. The proposed project would not result in a long-term increase in vehicle trips. As a result, the proposed project would not conflict with any goals or objectives identified in the AMBAG 2022-2045 MTP/SCS.

ARB's 2017 Climate Change Scoping Plan incorporated the State's GHG emissions reduction target of 40 percent below 1990 emissions levels by 2030, as mandated by SB 32. On November 16, 2022, the ARB approved the 2022 Scoping Plan for Achieving Carbon Neutrality. The recently adopted 2022 Scoping Plan continues the path to achieve the SB 32 2030 target and expands upon earlier Scoping Plans by targeting an 85 percent reduction in GHG below 1990 levels by 2045. A significant part of achieving the SB 32 goals are strategies to promote sustainable communities, such as the promotion of zero net energy buildings, and improved transportation choices that result in reducing vehicle miles traveled (VMT). Other measures include the increased use of low-carbon fuels and cleaner vehicles. The proposed project would include the installation of high-efficiency exterior lighting to reduce electricity demand and water-efficient drip irrigation systems for reducing water demand. The drip irrigation systems are anticipated to only be required during initial tree establishment, which is anticipated to be during the initial two years of project operations. As such, the proposed project includes BMPs that would constitute its "fair share" of what would be required to meet the State's long-term climate goals, including achieving carbon neutrality by 2045. In addition, implementation of the proposed project would not result in increases in VMT and associated mobile-source emissions. The proposed project would not have the potential to generate GHG emissions that would have a significant impact on the environment, or potentially conflict with applicable greenhouse emission reduction plans and policies. Therefore, this impact would be less than significant.

Conclusion: The proposed project would have a less-than-significant impact related to GHG emissions.

5.2.9 HAZARDS AND HAZARDOUS MATERIALS

Setting

Hazardous materials, as defined by the California Code of Regulations, are substances with certain physical properties that could pose a substantial present or future hazard to human health or the environment when improperly handled, disposed of, or otherwise managed. Hazardous waste is any hazardous material that is discarded, abandoned, or slated to be recycled. Hazardous materials and waste can result in public health hazards if improperly handled, released into the soil or groundwater, or through airborne releases in vapors, fumes, or dust. Soil and groundwater having concentrations of hazardous constituents higher than specific regulatory levels must be handled and disposed of as hazardous waste when excavated or pumped from an aquifer. Hazardous materials transport, use, and disposal are heavily regulated at the federal, state, and local levels. These regulations are applied on a project-specific basis as part of the permitting process.

The former Fort Ord was established in 1917 by the Army as a maneuver area and field artillery target range. Prior to closing in 1994, the base's primary function was the home base for the 7th Infantry Division. Due to presence of various contaminants and hazards resulting from the Army's use of the base, the U.S. Environmental Protection Agency (EPA) placed the base on the Superfund program's National Priorities List (NPL) in 1990. On May 14, 2021, the EPA finalized its proposal to partially delete 11,934 acres of the former Fort Ord from the NPL, including the project site (Fort Ord Cleanup, 2025).

Government Code Section 65962.5 requires California Environmental Protection Agency (CalEPA) to develop a Cortese List that is updated at least annually. While CalEPA no longer maintains a single Cortese List, CalEPA uses the following database and list to meet the requirements of Government Code Section 65962.5.

- List of Hazardous Waste and Substances sites from Department of Toxic Substances Control (DTSC) EnviroStor database.
- List of Leaking Underground Storage Tank (LUST) Sites from the State Water Board's GeoTracker database.
- List of solid waste disposal sites identified by State or Regional Water Board with waste constituents above hazardous waste levels outside the waste management unit.
- List of "active" Cease and Desist Orders (CDO) and Clean-up and Abatement Orders (CAO) from State Water Board.
- List of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by DTSC.

Based on review of the above-listed databases, no hazardous material sites are identified as being located on the project site.

CEQA Thresholds

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Less-Than-Significant Impact with Mitigation	Less-Than-Significant Impact	No Impact	Checklist Source(s)
HAZARDS AND HAZARDOUS MATERIALS. Would the project:					
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X		1
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?			X		1
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school?				X	1, 2, 3, 4
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X	1, 2, 3, 4, 33
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?				X	1, 2, 3, 4
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X	1, 2, 3, 4
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?			X		1, 32

Explanation

a, b) **Less-Than-Significant Impact.** Construction activities would require the temporary use of hazardous substances, such as fuel, lubricants, and other petroleum-based products for operation of construction equipment as well as oil, solvents, or paints. As a result, the proposed project could result in the exposure of people and/or the environment to an adverse environmental impact due to the accidental release of a hazardous material. However, the transportation, use, and handling of hazardous materials for construction would be temporary and short-term. Further, these materials would be handled and stored in compliance with all applicable federal, state, and local requirements. Any handling of hazardous materials would be limited to the quantities and concentrations set forth by the manufacturer and/or applicable regulations and all hazardous materials would be securely stored in a construction staging area or similar designated location within the project site.

Operation of the proposed project would consist of routine operation and maintenance of the proposed B2 reservoir. Small quantities of chemicals may be utilized during operation of the project

associated with routine maintenance of facilities. However, all such materials would be applied, stored, transported, and disposed of in accordance with applicable regulations and manufacturers' recommendations. In addition, activities would be conducted concurrently with required maintenance activities at the existing B1 reservoir for no net increase in hazardous materials. Therefore, this impact would be less than significant.

c) **No Impact**. The proposed project is on CSUMB property. However, as discussed in Impacts (a) and (b), the project would not result in routine or emission or handling of hazardous materials, and operation of the proposed B2 reservoir would be consistent with existing operation of the B1 reservoir and would not routinely emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste. Therefore, no impact would occur.

d) **No Impact**. The proposed project site is located on the former Fort Ord; the entire former military base was included on the Federal National Priority List (NPL), also known as the Superfund list. However, the project site has been deleted from the NPL and is not listed on the "Cortese" site lists compiled pursuant to Government Code Section 65962.5. Therefore, no impact would occur.

e) **No Impact**. The proposed project site is more than two miles south of Marina Municipal Airport, the nearest airport. The proposed project would not result in a safety hazard or exposure to excessive noise for people residing or working in the proposed project area as there are no airports within two miles of the site and the project would not require permanent on-site employees. Therefore, no impact would occur.

f) **No Impact.** The proposed project would not impede emergency response or evacuation plans, as it is not part of vehicular transportation network used by emergency vehicles. Therefore, no impact would occur.

g) **Less-Than-Significant Impact**. The proposed project site is not located within a State Responsibility Area (SRA) designated by the California Department of Forestry and Fire Protection, nor is the project in a High or Very High Fire Hazard Severity Zone (VHFHSZ) (CALFIRE, 2024; County of Monterey, 2022). Fire protection within the CSUMB campus is provided primarily by the Presidio of Monterey Fire Department and supported by the Marina Fire Department and the Seaside Fire Department. Although unlikely, construction activities involving the use of mechanized equipment could lead to wildland fire through the generation of sparks and use of flammable materials (e.g., fuel, lubricants, etc.). However, construction equipment would be maintained and fitted with safety equipment (e.g., spark arrestors, mufflers, etc.) to reduce the risk of fire. The proposed project site contains vegetation that could ignite in a wildfire event. However, the proposed reservoir would be constructed on a paved area not conducive to fire, and would be subject to daily maintenance checks to ensure safe operation. Therefore, project operation would not increase the risk of wildfire. Also see *Section 5.2.20, Wildfire*. This impact would be less than significant.

Conclusion: The proposed project would have a less-than-significant impact related to hazards and hazardous materials.

5.2.10 HYDROLOGY AND WATER QUALITY

Setting

The proposed project site does not contain any natural drainages, waterways, or other aquatic features. The Flood Insurance Rate Maps issued by the Federal Emergency Management Agency (FEMA) indicate that the project site is located within Zone X (unshaded). Zone X is described as an "area of minimal flood hazard."

CEQA Thresholds

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Less-Than-Significant Impact with Mitigation	Less-Than-Significant Impact	No Impact	Checklist Source(s)
HYDROLOGY AND WATER QUALITY. Would the project:					
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			X		1
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			X		1, 2, 3, 4
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:			X		1
i) Result in substantial erosion or siltation on- or off-site;			X		1, 34
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;			X		1
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or			X		1
iv) impede or redirect flood flows?				X	1, 35
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?				X	1, 34, 35
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X		1, 2, 3, 4

Explanation

a) **Less-Than-Significant Impact**. Temporary soil disturbance would occur during construction of the proposed project as a result of earth-moving activities, such as excavation and trenching for utilities, soil compaction and moving, cut and fill activities, and grading. If not managed properly, disturbed soils would be susceptible to high rates of erosion from wind and rain, resulting in sediment transport via stormwater runoff from the project site. Moreover, the proposed project would increase the extent of impervious surfaces on the site thereby potentially generating additional sources of polluted runoff. The types of pollutants contained in runoff would be typical of urban areas, and may include sediments and contaminants such as oils, fuels, paints, and solvents. Additionally, other pollutants, such as nutrients, trace metals, and hydrocarbons, can attach to sediment and be transported to downstream drainages and ultimately into collecting waterways, contributing to degradation of water quality.

As stated above in *Section 5.2.7, Geology and Soils*, the proposed project would disturb more than one acre of soil. As a result, the project would be required to obtain coverage under the RWQCB NPDES General Storm Water Permit. The permit would require a SWPPP, which contains BMPs for construction and post construction runoff. BMPs that are typically specified within the SWPPP may include, but would not be limited to the following:

- The use of sandbags, straw bales, and temporary de-silting basins during project grading and construction during the rainy season to prevent discharge of sediment-laden runoff into storm water facilities.
- Revegetation as soon as practicable after completion of grading to reduce sediment transport during storms.
- Installation of straw bales, wattles, or silt fencing at the base of bare slopes before the onset of the rainy season (October 15th through April 15th).
- Installation of straw bales, wattles, or silt fencing at the project perimeter and in front of storm drains before the onset of the rainy season (October 15th through April 15th).

Project operation could result in similar water quality effects (e.g. temporary erosion, hazardous material leakages, etc.). Potential water quality effects could occur in connection with on-going operations, including the operation of mechanized equipment, maintenance activities, and vehicle access within the site. These activities could cause localized increases in erosion and sedimentation, as well as the accidental release of hazardous materials and chemicals used in facility operation. However, the proposed project includes the construction of a new on-site percolation basin to collect and manage runoff. In addition, the operation of the project would be consistent with the existing use and would not result in new water quality impacts within the site. Furthermore, the project would comply with applicable regulations and laws to ensure proper discharge into stormwater infrastructure, as described below. Therefore, runoff generated on the project site during operation would not degrade surface water quality or result in pollutant infiltration into local and regional groundwater basins. This impact would be less than significant.

b) **Less-Than-Significant Impact**. The proposed project would be an upgrade to existing facilities to meet existing and future demand, and would not result in an increase in water demand or substantially decrease groundwater supplies. The proposed project would create new impervious

surfaces that could increase the rate of surface runoff on the site. However, the project includes new drainage improvements to manage increases in surface runoff, and the relatively small size of the new impervious area would not result in a substantial impediment to groundwater recharge in the region. As a result, the proposed project would have no significant net reduction in groundwater recharge compared to existing conditions. This impact would be less than significant.

ci) **Less-Than-Significant Impact**. Construction of the project would require grading activities that could result in a temporary increase in erosion affecting the quality of stormwater runoff. The proposed project would be required to obtain NPDES authorization. The MCWD would develop, implement, and maintain a SWPPP to control the discharge of stormwater pollutants including sediments associated with construction activities. This stormwater permit would be administered by the RWQCB.

The proposed project would not substantially increase the amount of impervious surfaces. However, the construction of the proposed reservoir would modify the drainage pattern on-site. Consistent with the regulations and policies described above, the proposed project would follow the standard permit conditions associated with the NPDES Permit. In addition, the project would include permanent drainage improvements to manage on-site runoff and minimize impacts from erosion and siltation. This impact would be less than significant.

cii) **Less-Than-Significant Impact**. The proposed project would create new impervious surfaces that could increase the rate of surface runoff on the site. However, the project includes new drainage improvements, including a new percolation basin, to manage increases in surface runoff. In addition, project site is mapped by FEMA as being within Flood Zone X (unshaded) and is located outside the 100-year floodplain. This impact would be less than significant.

ciii) **Less-Than-Significant Impact**. The proposed project includes new drainage improvements to manage increases in surface runoff, including a new percolation basin. See also Response ci), above. This impact would be less than significant.

civ) **No Impact**. The proposed project site is located outside the 100-year floodplain, as mapped by FEMA (within Flood Zone X) and would not significantly impede or redirect flood flows. Therefore, no impact would occur.

d) **No Impact**. As described above, the project site is not located within a 100-year floodplain or flood hazard zone. In addition, the project site is not located in an area subject to significant seiche or release of pollutants due to project inundation. The proposed project site is not located within the Tsunami Inundation Zone. The risk associated with tsunamis is, therefore, not considered a potential hazard. Therefore, no impact would occur.

e) **Less-Than-Significant Impact**. The proposed project would be required to comply with the NPDES permit conditions, as well as standard BMPs during construction. As described above, the proposed project would not result in significant water quality or groundwater quality impacts that would conflict or obstruct implementation of a water quality control or sustainable groundwater management plan since, as outlined above. This impact would be less than significant.

Conclusion: The proposed project would have a less-than-significant impact on hydrology and water quality.

5.2.11 LAND USE AND PLANNING

Setting

The City's General Plan designates the proposed project site as Public/Institutional. The 2022 CSUMB Master Plan designates the site as a proposed (tank) building. As a state entity, CSUMB is not subject to local government planning or ordinances, such as the general plans and ordinances for the Cities of Marina and Seaside and the County of Monterey. Accordingly, because neither local general plans nor any other local land use plans or ordinances are applicable to CSUMB, such local plans and ordinances are not summarized here or further analyzed in this section.

CEQA Thresholds

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Less-Than-Significant Impact with Mitigation	Less-Than-Significant Impact	No Impact	Checklist Source(s)
LAND USE AND PLANNING. Would the project:					
a) Physically divide an established community?				X	1, 2, 3, 4
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?			X		1, 2, 3, 4

Explanation

a) **No Impact**. The proposed project involves the construction of the proposed B2 reservoir and associated improvements and updates to the existing B1 reservoir site. The proposed project would not create any barriers that would divide an established community. Therefore, no impact would occur.

b) **Less-Than-Significant Impact**. The proposed project would not conflict with any applicable land use plan, policy, or regulation adopted for the purposes of avoiding and/or mitigating an adverse environmental effect. The proposed project would be consistent with the 2022 CSUMB Master Plan, which designates the site as a proposed (tank) building. The proposed project would be required to obtain a number of approvals and permits, listed in *Section 2.6, Project Approvals* which would further ensure consistency with applicable regulations. As a result, the proposed project is not anticipated to conflict with any policies adopted for the purposes of avoiding and/or substantially lessening an adverse impact. This impact would be less-than-significant.

Conclusion: The proposed project would have a less-than-significant impact on land use and planning.

5.2.12 MINERAL RESOURCES

Setting

In accordance with the Surface Mining and Reclamation Act of 1975 (SMARA), the California Geological Survey (CGS) maps the regional significance of mineral resources throughout the state, with priority given to areas where future mineral resource extraction could be precluded by incompatible land use or to mineral resources likely to be mined during the 50-year period following their classification. The CGS delineates Mineral Resource Zones (MRZs) based on their mineral resource potential.

The proposed project site is classified as MRZ-2, which applies to areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood exists of their presence.

CEQA Thresholds

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Less-Than-Significant Impact with Mitigation	Less-Than-Significant Impact	No Impact	Checklist Source(s)
MINERAL RESOURCES. 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?				X	1, 36, 37
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?				X	1, 36, 37

Explanation

a, b) **No Impact**. Although the project site is classified MRZ-2 by the CGS, the proposed project site is in developed areas and consistent with the applicable land use designations. Additionally, the project site is not currently used for mineral resource extraction, and mineral resource extraction would be an incompatible use with the site's current zoning and adjacent institutional uses. Further, implementation of the proposed project would not result in any large-scale excavation or other activities resulting in significant removal of mineral deposits. Therefore, no impact would occur.

Conclusion: The proposed project would not impact mineral resources.

5.2.13 NOISE

Setting

Noise is generally defined as sound that is loud, disagreeable, or unexpected. Sound is a form of mechanical energy that travels in waves produced by a disturbance or vibration. These sound waves are characterized by their amplitude (loudness) and frequency (pitch). Noise is commonly perceived as unwanted sound that can interfere with normal activities such as sleeping, conversation, or working. Airborne sound is a rapid fluctuation of air pressure above and below atmospheric pressure. Sound levels are typically measured in decibels (dB), a logarithmic unit that quantifies sound intensity. A decibel level of 0 dB is considered the

threshold of human hearing, while prolonged exposure to noise levels above 85 dB can potentially result in hearing damage.

The proposed project is not located in the vicinity of a private airstrip or an airport land use plan, or within two miles of a public airport or public use airport. The existing noise environment in the project area is predominantly influenced by vehicular traffic along local roadways. Other potential noise sources may include typical urban or suburban ambient sounds, such as those generated by institutional, commercial, and recreational activities, as well as periodic construction activities or public events. However, there are no substantial stationary noise sources in the immediate vicinity of the proposed project site.

CEQA Thresholds

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Less-Than-Significant Impact with Mitigation	Less-Than-Significant Impact	No Impact	Checklist Source(s)
NOISE. Would the project result in					
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X		1, 2, 3, 4
b) Generation of excessive groundborne vibration or groundborne noise levels?			X		1, 2, 3, 4
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X	1, 2, 3, 4

Explanation

a, b) **Less-Than-Significant Impact**. Construction of the proposed project would result in short-term noise and groundborne vibration increases in the project vicinity. Noise impacts from construction activities depend on the type of construction equipment used, the timing and length of activities, the distance between the noise generating construction activities and receptors, and shielding. Construction of the proposed project is estimated to require 18 months. Construction equipment would include, but would not be limited to, tracked excavator, wheeled excavator, roller compactor, dozer, loader, grader, crane, asphalt paving equipment, concrete trucks, various smaller vehicles, and welders. Typical hourly average construction noise levels could be as loud as 75 - 80 decibels at a distance of $\pm$100 ft from the construction area during active construction periods (DOT, 2006). However, these noise levels are temporary, would be confined to weekdays between 8 AM and 5 PM, and within typical thresholds for construction activities. In addition, no sensitive receptors are present within 1,500 feet of the project site. Operation of the project would be consistent with the existing use and would not result in operational noise or vibrations that would increase the permanent ambient noise in the area. This impact would be less than significant.

c) **No Impact**. The proposed project is not located in the vicinity of a private airstrip or an airport land use plan, or within two miles of a public airport or public use airport. Therefore, no impact would occur.

Conclusion: The proposed project would result in less-than-significant noise impacts.

5.2.14 POPULATION AND HOUSING

Setting

The proposed project involves the construction and operation of the proposed B2 reservoir, updates to the existing B1 reservoir, and associated infrastructure improvements. The proposed project site is located on the CSUMB campus in an area that does not contain housing.

CEQA Thresholds

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Less-Than-Significant Impact with Mitigation	Less-Than-Significant Impact	No Impact	Checklist Source(s)
POPULATION AND HOUSING. Would the project:					
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X	1, 2, 3, 4
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X	1, 2, 3, 4

Explanation

a, b) **No Impact**. The proposed project involves the construction and operation of the proposed B2 reservoir, updates to the existing B1 reservoir, and associated infrastructure improvements. The new reservoir is being constructed to meet existing and anticipated future demand. The proposed project would not constitute a change which would induce substantial population growth in the area, nor would the project affect housing availability, or displace residents. While the project would increase MCWD water storage capabilities that could serve future demand, any impacts on population and housing from future development would be analyzed as part of the CEQA process for development applications. Therefore, no impacts to population and housing would occur.

Conclusion: The proposed project would have no impact on population and housing.

5.2.15 PUBLIC SERVICES

Setting

Fire Protection

Fire protection services are provided to the project site by the Presidio of Monterey Fire Department (POMFD) and the Seaside Fire Department. The closest fire stations to the project site are located in Seaside at 4400 General Jim Moore Boulevard, less than one mile from the project site, and at 1635 Broadway Avenue, approximately 3.8 miles from the project site. The POMFD is located adjacent to campus in the proposed Campus Town Specific Plan area.

Police Protection

Police protection services are provided to the project site by the CSUMB University Police Department, located less than one mile from the project site at 2081 Inter-Garrison Road, and the Seaside Police Department, located approximately five miles from the project site at 440 Harcourt Avenue.

Schools

There are numerous educational facilities in proximity to proposed project, including schools located in the cities of Marina and Seaside. The proposed project site is located on CSUMB property.

Parks

CSUMB's East Campus open space area is located approximately 0.5 mile from the project site. The Fort Ord National Monument operated by the Bureau of Land Management is located approximately 1.5 miles southeast of the project site. The Fort Ord State Beach is located approximately one mile west of the project site.

CEQA Thresholds

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Less-Than-Significant Impact with Mitigation	Less-Than-Significant Impact	No Impact	Checklist Source(s)
PUBLIC SERVICES. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:					
a) Fire protection?			X		1, 2, 3, 4
b) Police protection?			X		1, 2, 3, 4
c) Schools?				X	1, 2, 3, 4
d) Parks?				X	1, 2, 3, 4
e) Other public facilities?				X	1, 2, 3, 4

Explanation

a, b) **Less-Than-Significant Impact**. The proposed project involves the construction and operation of water infrastructure improvements. The site is currently served by existing public services, including fire and police protection, for the existing reservoir. Although unlikely, University Police or City Police and/or POMFD or City Fire could be required to respond to construction- or operational-related emergencies. However, the limited duration of construction and minimal long-term protection needs of the facilities would not result in the need for new or renovated facilities. In addition, the project site is already served by these emergency public service providers. Furthermore, the addition of a second water tank to the system increases the amount of water available for firefighting. This represents a less-than-significant impact.

c) **No Impact**. The proposed project involves the construction and operation of water infrastructure improvements within the CSUMB campus. The proposed project does not include any residential development which would introduce new students to the region. Therefore, the project would have no impact related to the need for new or remodeled school facilities.

d, e) **No Impact**. The proposed project is an infrastructure improvement project and would not be considered a project that could induce unplanned population growth that would generate new park users or impact other public facilities, such as libraries. While the project would increase MCWD water storage capabilities that could serve future demand, any impacts on public services from future development would be analyzed as part of the CEQA process for development applications. As a result, the project would have no physical impact on parks or other public facilities and would not require the construction of new or remodeled facilities. Therefore, no impact would occur.

Conclusion: The proposed project would have a less-than-significant impact on public services.

5.2.16 RECREATION

Setting

CSUMB's East Campus open space area is located approximately 0.5 mile from the project site. The Fort Ord National Monument operated by the Bureau of Land Management is located approximately 1.5 mile southeast of the project site. The Fort Ord State Beach is located approximately one mile west of the project site.

CEQA Thresholds

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Less-Than-Significant Impact with Mitigation	Less-Than-Significant Impact	No Impact	Checklist Source(s)
RECREATION. 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?				X	1, 2, 3, 4
b) Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?				X	1, 2, 3, 4

Explanation

a, b) **No Impact**. Construction or operation of the proposed project would not increase the use of existing neighborhood parks or require the construction of additional facilities. The proposed project is consistent with the current use and would not directly induce population growth that would generate new park users. While the project would increase MCWD water storage capabilities that could serve future demand, any impacts on recreational facilities from future development would be analyzed as part of the CEQA process for development applications. Therefore, no impacts to recreational facilities would occur as a result of the project.

Conclusion: The proposed project would have no impact on recreational facilities.

5.2.17 TRANSPORTATION

Setting

Regional access to the project site is provided from SR 1 and local access to the site is primarily provided via Lightfighter Drive and Colonel Durham Street. The site is bounded to the south by Colonel Durham Street and to the east by 6th Avenue. Staging for construction would occur within the project site, and the existing dirt access driveway from Colonel Durham Street would be used to access the site during construction. Following construction, the new paved access road from Colonel Durham Street into the new reservoir yard would be used to access the site.

Construction activities are anticipated to begin in 2025 and last approximately 18 months, with work occurring between Monday through Friday, 8 AM – 5 PM. During the initial site grading up to 30 trucks trips per day may occur to export soil. Following completion of initial grading, construction of the project is anticipated to generate four to five round trip truck trips per day. An average of five to six employees is expected to be at the construction site, depending on the activity. The maximum number of workers for any given day would be 15 employees.

CEQA Thresholds

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Less-Than-Significant Impact with Mitigation	Less-Than-Significant Impact	No Impact	Checklist Source(s)
TRANSPORTATION/TRAFFIC. Would the project:					
a) Conflict with a plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?			X		1, 2, 3, 4
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?			X		1
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X	1
d) Result in inadequate emergency access?			X		1, 2, 3, 4

Explanation

a) **Less-Than-Significant Impact**. The implementation of the proposed project would involve construction of the proposed facility and routine operation and maintenance activities. The proposed project would result in a temporary increase in traffic during construction. During the initial site grading, up to 30 trucks trips per day may occur to export soil. Following completion of initial grading, construction of the project is anticipated to generate four to five round trip truck trips per day. An average of five to six employees is expected to be at the construction site, depending on the activity. The maximum number of workers for any given day would be 15 employees. Compared to the existing level of traffic traveling on local roadways, the temporary construction-related traffic would be minimal. In addition, all construction related trips would be

temporary and would cease upon completion of construction. Therefore, construction vehicle trips would not represent a permanent increase in vehicle trips. Operational activities would consist of ongoing maintenance of the combined B1 and B2 reservoir yards. Activity at the existing B1 reservoir yard is one operator visit per day (via pickup truck) and up to five additional visits per month. Post construction, maintenance of the B2 reservoir yard would be incorporated into MCWD's existing maintenance scheduled for the B1 reservoir yard. As a result, the project would not require additional vehicle trips for ongoing maintenance compared to existing conditions. The proposed project is anticipated to generate little to no pedestrian or bicycle traffic, or transit usage, due to the nature of the project (operation and maintenance of facilities), relative isolation of the project site from population areas, and the lack of pedestrian facilities in the immediate vicinity. The proposed project would not represent a significant impact to pedestrian or bicycle circulation or represent a significant demand for, or impact to transit service. Therefore, the proposed project would not conflict with a program, plan, ordinance, or policy addressing the circulation system. This impact would be less-than-significant.

b) **Less-Than-Significant Impact**. Historically, transportation analysis has utilized delay and congestion on the roadway system as the primary metric for the identification of traffic impacts and potential roadway improvements to relieve traffic congestion that may result due to proposed/planned growth. However, the State of California has recognized the limitations of measuring and mitigating only vehicle delay at intersections, and in 2013, passed Senate Bill (SB) 743, which requires jurisdictions to stop using congestion and delay metrics, such as Level of Service (LOS), as the measurement for CEQA transportation analysis. With the adoption of SB 743 legislation, public agencies are now required to base the determination of transportation impacts on Vehicle Miles Traveled (VMT) rather than on LOS. The intent of this change is to shift the focus of transportation analysis under CEQA from vehicle delay and roadway capacity to a reduction in vehicle emissions and the creation of robust multimodal networks that support integrated land uses.

VMT is generally defined as the total miles of travel by personal motorized vehicles that a project is expected to generate in a day. VMT is calculated using the Origin-Destination VMT method, which measures the full distance of personal motorized vehicle trips, with one trip-end being the project. As of this writing, neither CSUMB, the City of Seaside, nor the County of Monterey have adopted VMT thresholds of significance. The publication Technical Advisory on Evaluating Transportation Impacts in CEQA, State of California Governor's Land Use and Climate Innovation (LCI, formerly the Office of Planning and Research (OPR)), December 2018, lists screening thresholds for various types of land use development, including some that are presumed to have a less-than-significant VMT effect and, therefore, a less-than-significant adverse transportation impact. Small projects that generate or attract fewer than 110 trips per day are generally assumed to cause a less-than-significant transportation impact. In the absence of local thresholds, the screening threshold of 110 daily trips is used to assess VMT impacts related to the proposed project.

As discussed above, the construction and operational activities associated with the proposed project would not result in 110 trips per day, and, therefore, is assumed to result in a less-than-significant transportation impact. Furthermore, operation of the proposed project would result in no net transportation increase from existing conditions. The proposed project would not conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)(2). This impact would be less-than-significant.

c) **No Impact**. The proposed project involves the construction and operation of water facilities within existing easements and outside of any roadways. The proposed project would not involve changes to the design of existing roadways or include incompatible road uses. Therefore, no impact would occur.

d) **Less-Than-Significant Impact**. As discussed in Impact (a), the proposed project would result in minimal temporary increase in traffic in the area during construction. As discussed in *Section 5.2.9, Hazards and Hazardous Materials*, the project site is not part of a transportation network used by emergency vehicles. Therefore, the minimal temporary construction-related increase in traffic would not impede emergency vehicle response or result in inadequate emergency access. Operation of the proposed project would result in no net transportation increase from existing conditions and, therefore, would have no effect on emergency access. This impact would be less than significant.

Conclusion: The proposed project would have a less-than-significant impact on transportation.

5.2.18 TRIBAL CULTURAL RESOURCES

Setting

California Assembly Bill (AB) 52, in effect since July 2015, provides CEQA protections for tribal cultural resources. All lead agencies approving projects under CEQA are required, if formally requested by a culturally affiliated California Native American Tribe, to consult with such tribe regarding the potential impact of a project on tribal cultural resources before releasing an environmental document. Under California Public Resources Code § 21074, tribal cultural resources include site features, places, cultural landscapes, sacred places, or objects that are of cultural value to a tribe and that are eligible for or listed on the California Register of Historical Resources (CRHR) or a local historic register, or that the lead agency has determined to be of significant tribal cultural value.

At the time of preparation of this IS/MND, MCWD had yet to receive any requests for notification from tribes. The proposed project site is not located in the California Register nor is it included as a historic resource in a local historic register.

CEQA Thresholds

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Less-Than-Significant Impact with Mitigation	Less-Than-Significant Impact	No Impact	Checklist Source(s)
TRIBAL CULTURAL RESOURCES. Would the project:					
Cause a substantial adverse change in the significance of a tribal cultural resources, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:					1, 29
a) Listed or eligible for listing in the California Register of Historic Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or				X	1, 29

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Less-Than-Significant Impact with Mitigation	Less-Than-Significant Impact	No Impact	Checklist Source(s)
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.		X			1, 29

Explanation

a) **No Impact**. As indicated above in *Section 5.2.5, Cultural Resources*, the proposed project would not result in any adverse impacts to historical resources within the proposed project area, as the proposed project area does not contain any resources that are listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in RPC Section 5020.1(k). Therefore, no impact would occur.

b) **Less-Than-Significant Impact with Mitigation**. No tribal cultural resources or Native American resources have been documented on the project site. As discussed above in *Section 5.2.5, Cultural Resources*, ground disturbing activities on the site could impact unknown archeological resources, including Native American artifacts and human remains. Potential impacts would be reduced to a less-than-significant level with implementation of **Mitigation Measures CR-1** and **CR-2**. In addition, pursuant Public Resources Code Section 21080.3.1, Native American Tribes are required to request notification by MCWD of potential projects. If consultation is requested, MCWD shall provide formal written notification to the California Native American tribe or tribes that are traditionally and culturally affiliated with the project area. The tribe has 30 days from the notification to request consultation to determine if the project may have a significant effect on a tribal cultural resource. MCWD initiated tribal consultation on May 19, 2025, via mail and followed up via email on June 10, 2025. MCWD did not receive a request for consultation within 30 days. This impact is less-than-significant with mitigation incorporated.

Mitigation Measure TRC-1: Implement Mitigation Measures CR-1 and CR-2.

Conclusion: The proposed project would have a less-than-significant impact on tribal cultural resources with implementation of the mitigation measure identified above.

5.2.19 UTILITIES AND SERVICE SYSTEMS

Setting

Utilities and services are furnished to the project site by the following providers:

- Wastewater Treatment: MCWD;
- Water Service: MCWD;
- Solid Waste: Monterey Regional Waste Management District; and
- Natural Gas & Electricity: 3CE and PG&E.

CEQA Thresholds

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Less-Than-Significant Impact with Mitigation	Less-Than-Significant Impact	No Impact	Checklist Source(s)
UTILITIES AND SERVICE SYSTEMS. 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?		X			1
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?			X		1, 2, 3, 4
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?				X	1
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?			X		1, 38
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			X		1, 38

Explanation

a) **Less-Than-Significant Impact with Mitigation**. MCWD's 2020 Master Plan identifies several capital improvement projects needed in the immediate future, including the proposed project. The purpose of the proposed project is to meet the current and future water demand of the former Fort Ord community. The proposed project involves the construction and operation of the proposed B2 reservoir, improvements to the existing B1 reservoir, and associated infrastructure improvements. The proposed project would result in the expansion of water and stormwater drainage infrastructure, which may result in potentially significant impacts. However, mitigation measures have been identified throughout this Initial Study to reduce any potential impacts resulting from the proposed project to a less-than-significant level.

b) **Less-Than-Significant Impact**. The proposed project includes the construction and operation of new and upgraded water infrastructure to meet the current and future demand of the former Fort Ord community. The proposed project is consistent with MCWD's 2020 Master Plan, which determined that 2.2 million gallons of additional storage would be needed in the B-Zone. No new water demand would be created by the project itself. This impact would be less-than-significant.

c) **No Impact**. The proposed project does not generate wastewater and would not contribute to increased demand for wastewater treatment. No connection to wastewater treatment infrastructure would be required. Therefore, no impact would occur.

d, e) **Less-Than-Significant Impact**. Construction activities would generate temporary solid waste, including soil and construction materials. All construction waste would be disposed of at an appropriately permitted landfill or recycling facility in accordance with local and state regulations. The operational phase of the project would not generate ongoing solid waste. The proposed project would adhere to all applicable federal, state, and local solid waste regulations, including proper disposal and recycling of construction materials. This impact would be less than significant.

Conclusion: The proposed project would have a less-than-significant impact on utilities and service systems.

5.2.20 WILDFIRE

Setting

The proposed project site is not located within a State Responsibility Area (SRA) designated by the California Department of Forestry and Fire Protection, nor is the project in or near a Very High Fire Hazard Severity Zone (VHFHSZ) located within a Local Responsibility Area (LRA) (CALFIRE, 2024; County of Monterey, 2022). The nearest SRA is approximately 0.25 mile south of the proposed project site, and the nearest LRA designated as a VHFHSZ is approximately one mile southeast of the proposed project site.

CEQA Thresholds

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Less-Than-Significant Impact with Mitigation	Less-Than-Significant Impact	No Impact	Checklist Source(s)
WILDFIRE. 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?				X	1, 2, 3, 4, 32
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?				X	1, 30, 32
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?				X	1, 32
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?				X	1, 32

Explanation

a-d) **No Impact**. As discussed above, the proposed project is not located within a State Responsibility Area nor within or near any designated or recommended very high fire hazard severity zones within an LRA; the nearest SRA is approximately 0.25 mile south of the proposed project site, and the nearest LRA designated as a VHFHSZ is approximately one mile southeast of the proposed project

site. Furthermore, the addition of a second water tank to the system increases the amount of water available for firefighting. Therefore, these checklist questions do not apply to the proposed project and no impact would occur.

Conclusion: The proposed project would have no impact related to wildfire.

5.2.21 MANDATORY FINDINGS OF SIGNIFICANCE

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Less-Than-Significant Impact with Mitigation	Less-Than-Significant Impact	No Impact	Checklist Source(s)
MANDATORY FINDINGS OF SIGNIFICANCE. Does the project:					
a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, 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?		X			1-38
b) 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).		X			1-38
c) Have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?			X		1-38

Explanation

a) **Less-Than-Significant Impact with Mitigation**. The proposed project would not 1) degrade the quality of environment, 2) substantially reduce the habitat of a fish or wildlife species, 3) cause a fish or wildlife population to drop below self-sustaining levels, 4) threaten or eliminate a plant or animal community, 5) reduce the number or restrict the range of a rare or endangered plant or animal, or 6) eliminate important examples of major periods of California history or prehistory. The proposed project would result in potential impacts to biological, cultural, and tribal cultural resources that would be mitigated to a less-than-significant level through the implementation of the mitigation measures identified in this IS/MND. This represents a less-than-significant impact with mitigation incorporated and no additional mitigation is necessary beyond the mitigation identified in each of the respective topical CEQA sections contained in this IS/MND.

b) **Less-Than-Significant Impact with Mitigation**. The proposed project would not result in a cumulatively considerable adverse environmental effect. To determine whether a cumulative effect requires an Environmental Impact Report (EIR), the lead agency shall consider whether the impact is significant and whether the effects of the project are cumulatively considerable (CEQA Guidelines Section 15064(h)(1)). This IS/MND contains mitigation to ensure that all potential impacts are minimized to a less-than-significant level. CEQA allows a lead agency to determine

that a project's contribution to a potential cumulative impact is not considerable and thus not significant when mitigation measures identified in the initial study will render those potential impacts less than considerable (CEQA Guidelines 15064(h)(2)). The proposed project could result in potentially significant impacts to special-status species and habitat, previously undiscovered archaeological resources, human remains interred outside of a formal cemetery, and disturbance of tribal cultural resources.

Mitigation measures and BMPs are identified throughout this document to ensure that potentially significant impacts are reduced to a less-than-significant level. Potentially significant impacts to special-status species and habitat would be mitigated to a less than significant level with implementation of **Mitigation Measures BIO-1** through **BIO-8**. Potentially significant impacts to the potential disturbance of undiscovered archaeological resources would be mitigated to a less-than-significant level with implementation of **Mitigation Measure CR-1**. Potentially significant impacts from the potential disturbance of human remains interred outside of a formal cemetery would be mitigated to a less-than-significant level with implementation of **Mitigation Measure CR-2**. Potentially significant impacts from disturbance of tribal cultural resources would be mitigated to a less-than-significant level with implementation of **Mitigation Measures CR-1** and **CR-2**.

There are no proposed projects in the vicinity currently slated for approval that would combine with the proposed project to result in cumulative impacts to any of the potentially significant or less-than-significant impacts identified in this IS/MND. The proposed project would, therefore, not be considered to have any impacts that are individually limited but considered cumulatively considerable. The proposed project would have a less-than-significant cumulative impact with mitigation incorporated and no additional mitigation to address cumulative impacts is necessary beyond mitigation identified in each of the respective topical CEQA sections contained in this IS/MND.

c) **Less-Than-Significant Impact**. The proposed project would not have a substantial adverse effect on human beings, either directly or indirectly. This IS/MND contains mitigation measures to ensure that all potentially significant impacts would be reduced to a less-than-significant level. This represents a less-than-significant impact with mitigation incorporated and no additional mitigation is necessary beyond mitigation identified in each of the respective topical CEQA sections contained in this IS/MND.

Conclusion: The proposed project would have a less-than-significant impact on the CEQA mandatory findings of significance with the incorporation of mitigation measures, compliance with applicable local, state, and federal regulations, and adherence to standard BMPs identified in this document.

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6. DOCUMENT PREPARATION & REFERENCES

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Appendix A

AIR QUALITY & GREENHOUSE GAS IMPACT ASSESSMENT

AIR QUALITY & GREENHOUSE GAS IMPACT ASSESSMENT

FOR

MCWD B2 WATER RESERVOIR PROJECT

SEASIDE, CA

MARCH 2025

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APPENDICES

LIST OF COMMON TERMS & ACRONYMS

AAM	Annual Arithmetic Mean
AHERA	Asbestos Hazard Emergency Response Act
AQMP	Air Quality Management Plan
ARB	California Air Resources Board
BSC	Building Standards Code
CCAAP	Community Climate Action and Adaptation Plan
CAAQS	California Ambient Air Quality Standards
CBSC	California Building Standards Code
CCAA	California Clean Air Act
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CH_4	Methane
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
DPM	Diesel-Exhaust Particulate Matter or Diesel-Exhaust PM
DRRP	Diesel Risk Reduction Plan
FCAA	Federal Clean Air Act
GHG	Greenhouse Gases
HAP	Hazardous Air Pollutant
LOS	Level of Service
MBARD	Monterey Bay Air Resources District
N_2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NCCAB	North Central Coast Air Basin
NO_x	Oxides of Nitrogen
O_3	Ozone
Pb	Lead
PM	Particulate Matter
PM_{10}	Particulate Matter (less than 10 µm)
$PM_{2.5}$	Particulate Matter (less than 2.5 µm)
ppb	Parts per Billion
ppm	Parts per Million
ROG	Reactive Organic Gases
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
sqft.	Square Feet
TAC	Toxic Air Contaminant
TOG	Total Organic Gases
µg/m^3	Micrograms per cubic meter
UNFCCC	United Nations Framework Convention on Climate Change
U.S. EPA	United States Environmental Protection Agency
VOC	Volatile Organic Gases

INTRODUCTION

This report provides an evaluation of potential air quality and greenhouse gas (GHG) impacts associated with the proposed Monterey County Water District (MCWD) B2 Water Reservoir Project (project). An overview of the existing environmental setting related to air quality and GHGs, including a summary of the existing regulatory framework has also been included. The analysis was prepared in accordance with the Monterey Bay Air Resources District (MBARD)-recommended guidance.

PROJECT LOCATION

The proposed project, described below, is located within City of Seaside limits on the CSUMB campus on the former Fort Ord in Monterey County, California (refer to Figure 1). The 2.9-acre project site encompasses the proposed B2 reservoir yard and the adjacent existing B1 reservoir yard, within U.S. Army Parcel L32.2.2 (the western portion of Monterey Counter Assessor's Parcels 031-261-002). MCWD holds easements for both the existing and proposed reservoir yards.

Where it's not occupied by the B1 reservoir and associated infrastructure, the site consists of ruderal/disturbed habitat or coast live oak woodland habitat. The site is bounded to the north by vacant coast live oak woodland, to the west by a paved parking lot, to the south by Colonel Durham Street, and to the east by 6th Avenue. Regional access to the project site is provided from State Route (SR) 1 onto Lightfighter Drive and then to Colonel Durham Street.

PROJECT DESCRIPTION

OVERVIEW

The proposed project includes the construction of a new 2,160,000-gallon potable water reservoir, the B2 reservoir, adjacent to MCWD's existing B1 reservoir. As identified in the 2006 and 2020 Master Plans, the proposed additional water reservoir and associated improvements are necessary to meet the current and future water demand of the former Fort Ord Community.

The project includes the installation of approximately 270 feet of 20-inch pipeline to connect the B2 reservoir to the existing B1 transmission main. The project also includes various associated site improvements within the existing B1 reservoir yard and proposed B2 reservoir yard. Along with the reservoir itself, the new B2 yard would include a paved access road surrounding the tank and a paved driveway connection to Colonel Durham Street; an approximately 90-foot long retaining wall (varying from approximately three to four feet above grade) along the southeast edge of the paved access road; a percolation basin at the northwestern corner of the reservoir yard; 8-foot tall chain link fencing around the yard; and a 12-foot wide chain link swing access gate.

Improvements at the existing B1 reservoir yard would include adding an emergency generator, relocating the existing booster pump station with the associated yard piping, upgrading the electrical panels, a new connection to the B2 reservoir, and replacing the existing inlet and outlet valves at the B1 reservoir. In addition, the area between the two tanks would be regraded and the fence line along the northern and western sides of the B1 reservoir (bordering the B2 reservoir yard) would be removed to create one contiguous fenceline around both reservoir yards.

CONSTRUCTION

Ground disturbance for construction of the project would be up to 2.5 acres; although grading would not occur over the entire project site, the entire site except the existing reservoir would be utilized for improvements, access, or staging. The approximate quantity of earth work for site preparation is 6,762 cubic yards of cut and 115 cubic yards of fill. Excess soil would be off-hauled for reuse or disposal.

Construction equipment would include, but not be limited to, tracked excavator, wheeled excavator, roller compactor, dozer, loader, grader, crane, asphalt paving equipment, concrete trucks, various smaller vehicles and welders for tank construction. The new reservoir would be constructed without interrupting the existing water system, except for making the pipeline connections.

Construction activities are anticipated to begin in summer 2025 and last approximately 18 months, with work occurring between Monday through Friday, 8 AM – 5 PM. Staging would occur within the project site, and the existing dirt access driveway from Colonel Durham Street would be used to access the site. During the initial site grading up to 30 trucks trips per day may occur to export soil. Following that, 4 to 5 round trip truck trips per day are expected. Most days, five to six employees are expected on the construction site, depending on the activity. The maximum number of workers for any given day would be 15 employees.

TREE REMOVAL

The project site contains a number of coast live oak and pine trees which must be removed to allow construction. CSUMB requires that for every tree removed on campus, two coast live oak trees are planted as replacement. MCWD plans to replant coast live oak trees within the project site, as space permits, following construction; however, due to the existing and proposed facilities within the site and the number of pipelines within the site, replanting trees at a 2:1 ratio inside the facility easement would not be practical due to lack of space or because roots planted too close to infrastructure may damage pipelines. Therefore, MCWD would coordinate with CSUMB to replant additional coast live oak trees off-site (but within the campus) to achieve CSUMB's required 2:1 replanting ratio.

OPERATION AND MAINTENANCE

Operational activities would consist of the maintenance of the B2 reservoir and associated infrastructure. Activity at the existing B1 reservoir is one operator visit per pay (pickup truck) and up to five additional visits per month. Post construction, the combined B1/B2 site would have the same frequency of activity for no net increase.

AIR QUALITY

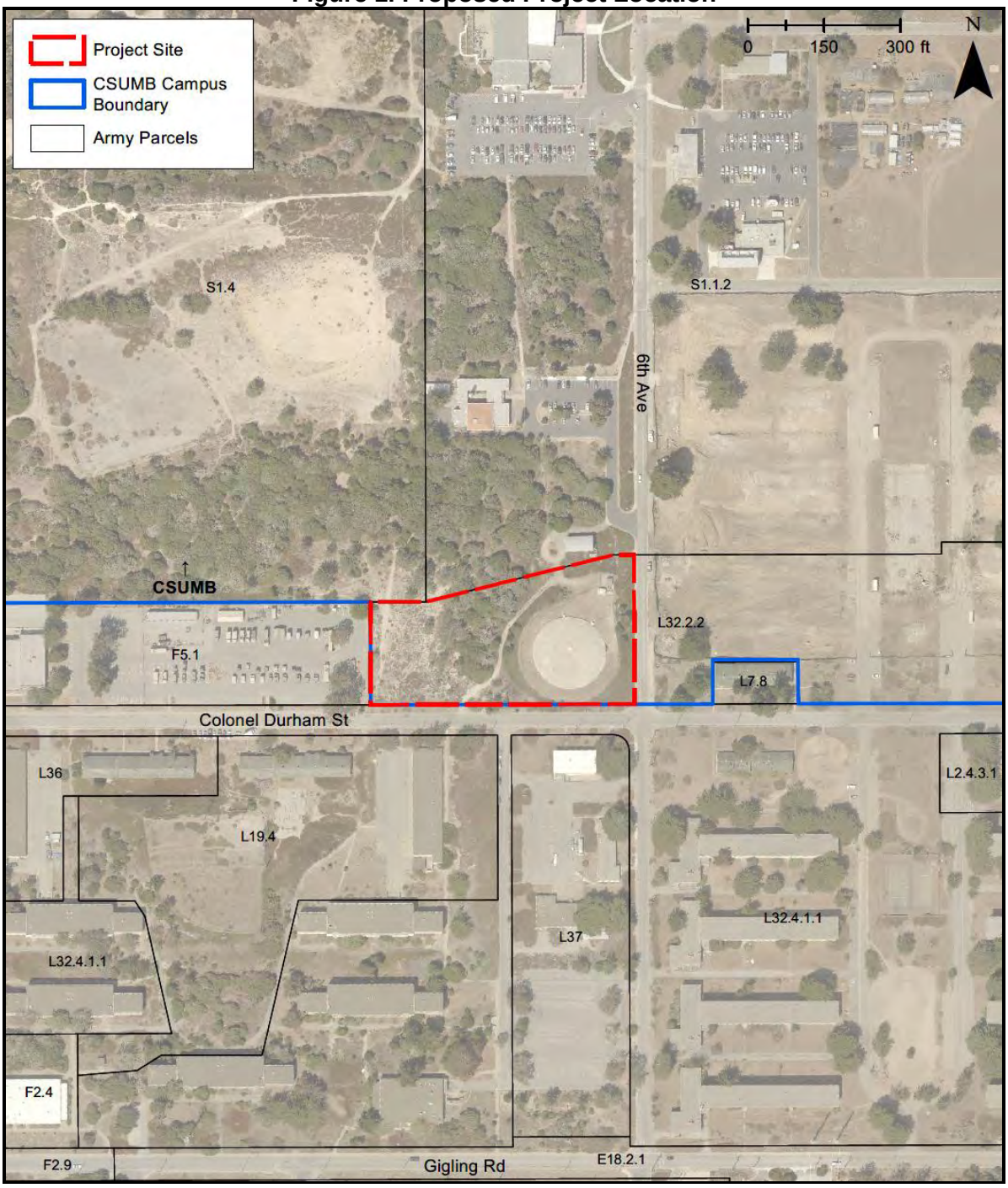
EXISTING SETTING

The proposed project is located within the North Central Coast Air Basin (NCCAB) and within the jurisdiction of the Monterey Bay Air Resources District (MBARD). Air quality in a region is affected by its topography, meteorology, and climate. These factors are discussed in more detail in the following sections:

TOPOGRAPHY

The NCCAB encompasses Santa Cruz, San Benito, and Monterey counties. The NCCAB is generally bounded by the Diablo Range to the northeast, which together with the southern portion of the Santa Cruz Mountains forms the Santa Clara Valley which extends into the northeastern tip of the NCCAB. Further south, the Santa Clara Valley transitions into the San Benito Valley, which runs northwest-southeast and has the Gabilan Range as its western boundary. To the west of the Gabilan Range is the Salinas Valley which extends from Salinas at the northwest end to King City at the southeast end. The northwest portion of the NCCAB is dominated by the Santa Cruz Mountains.

Figure 1. Proposed Project Location



Source: DDA 2025

METEOROLOGY AND CLIMATE

The climate of the NCCAB is dominated by a semi-permanent high-pressure cell over the Pacific Ocean. In the summer, the dominant high-pressure cell results in persistent west and northwest winds across the majority of coastal California. As air descends in the Pacific high-pressure cell, a stable temperature inversion is formed. As temperatures increase, the warmer air aloft expands, forcing the coastal layer of air to move onshore producing a moderate sea breeze over the coastal plains and valleys. Temperature inversions inhibit vertical air movement and often result in increased transport of air pollutants to inland receptor areas. Predominant wind flow during most times of the year is typically from the west to the east.

In the winter, when the high-pressure cell is weakest and farthest south, the inversion associated with the Pacific high-pressure cell is typically absent in the NCCAB. Air frequently flows in a southeasterly direction out of the Salinas and San Benito valleys in the NCCAB. The predominant offshore flow during this time of year tends to aid in pollutant dispersal producing relatively healthy to moderate air quality throughout the majority of the region. Conditions during this time are often characterized by afternoon and evening land breezes and occasional rainstorms. However, local inversions caused by the cooling of air close to the ground can form in some areas during the evening and early morning hours.

Winter daytime temperatures in the NCCAB typically average in the mid-50s during the day, with nighttime temperatures averaging in the low 40s. Summer daytime temperatures typically average in the 60s during the day, with nighttime temperatures averaging in the 50s. Precipitation varies within the region, but in general, annual rainfall is lowest in the coastal plain and inland valley, higher in the foothills, and highest in the mountains.

CRITERIA AIR POLLUTANTS

For the protection of public health and welfare, the Federal Clean Air Act (FCAA) required that the United States Environmental Protection Agency (U.S. EPA) establish National Ambient Air Quality Standards (NAAQS) for various pollutants. These pollutants are referred to as "criteria" pollutants because the U.S. EPA publishes criteria documents to justify the choice of standards. These standards define the maximum amount of air pollutants that can be present in ambient air. An ambient air quality standard is generally specified as a concentration averaged over a specific time period, such as one hour, eight hours, 24 hours, or one year. The different averaging times and concentrations are meant to protect against different exposure effects. Standards established for the protection of human health are referred to as primary standards; whereas standards established for the prevention of environmental and property damage are called secondary standards. The FCAA allows states to adopt additional or more health-protective standards. The air quality regulatory framework and ambient air quality standards are discussed in greater detail later in this report.

The following provides a summary discussion of the primary and secondary criteria air pollutants of primary concern. In general, primary pollutants are directly emitted into the atmosphere, and secondary pollutants are formed by chemical reactions in the atmosphere. The health effects of common criteria air pollutants are also summarized in Table 1.

Ozone (O_3) is a reactive gas consisting of three atoms of oxygen. In the troposphere, it is a product of the photochemical process involving the sun's energy. It is a secondary pollutant that is formed when NO_X and volatile organic compounds (VOC), also referred to as reactive organic gases (ROG), react in the presence of sunlight. Ozone at the earth's surface causes numerous adverse health effects and is a criteria pollutant. It is a major component of smog. In the stratosphere, ozone exists naturally and shields Earth from harmful incoming ultraviolet radiation.

High concentrations of ground-level ozone can adversely affect the human respiratory system and aggravate cardiovascular disease and many respiratory ailments. Ozone also damages natural ecosystems such as forests and foothill communities, agricultural crops, and some man-made materials, such as rubber, paint, and plastics.

Table 1. Summary of Criteria Air Pollutants and Health Effects

Pollutant	Major Man Made Sources	Human Health & Welfare Effects
Ozone (O_3)	Formed by a chemical reaction between volatile organic compounds (VOC) and nitrous oxides (NOx) in the presence of sunlight. Motor vehicle exhaust, industrial emissions, gasoline storage and transport, solvents, paints and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing, and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield. Damages rubber, some textiles, and dyes.
Particulate Matter (PM_{10} & $PM_{2.5}$)	Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles, and others.	Can get deep into your lungs or even enter your blood stream and cause serious health problems; Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; aggravated asthma; development of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility (haze).
Carbon Monoxide (CO)	Formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
Nitrogen Dioxide (NO_2)	Fuel combustion in motor vehicles and industrial sources. Motor vehicles; electric utilities, and other sources that burn fuel.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone and acid rain. Contributes to global warming, and nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.
Sulfur Dioxide (SO_2)	Formed when fuel containing sulfur, such as coal and oil, is burned; when gasoline is extracted from oil; or when metal is extracted from ore. Examples are petroleum refineries, cement manufacturing, metal processing facilities, locomotives, large ships, and fuel combustion in diesel engines.	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid which can damage marble, iron, and steel; damage crops and natural vegetation. Impairs visibility. Precursor to acid rain.
Source: ARB 2018a		

Reactive Organic Gas (ROG) is a reactive chemical gas, composed of hydrocarbon compounds that may contribute to the formation of smog by their involvement in atmospheric chemical reactions. No separate health standards exist for ROG as a group. Because some compounds that make up ROG are also toxic, like the carcinogen benzene, they are often evaluated as part of a toxic risk assessment. Total Organic Gases (TOGs) includes all of the ROGs, in addition to low reactivity organic compounds like methane and acetone. ROGs and VOC are subsets of TOG.

Volatile Organic Compounds (VOC) are hydrocarbon compounds that exist in the ambient air. VOCs contribute to the formation of smog and may also be toxic. VOC emissions are a major precursor to the formation of ozone. VOCs often have an odor, and some examples include gasoline, alcohol, and the solvents used in paints.

Oxides of Nitrogen (NO_X) are a family of gaseous nitrogen compounds and are a precursor to the formation of ozone and particulate matter. The major component of NO_X, nitrogen dioxide (NO_2), is a reddish-brown

gas that is toxic at high concentrations. NO_X results primarily from the combustion of fossil fuels under high temperature and pressure. On-road and off-road motor vehicles and fuel combustion are the major sources of this air pollutant.

Particulate Matter (PM), also known as particle pollution, is a complex mixture of extremely small particles and liquid droplets. Particle pollution is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. The size of particles is directly linked to their potential for causing health problems. U.S. EPA is concerned about particles that are 10 micrometers in diameter or smaller because those are the particles that generally pass through the throat and nose and enter the lungs. Once inhaled, these particles can affect the heart and lungs and cause serious health effects. U.S. EPA groups particle pollution into three categories based on their size and where they are deposited:

- Inhalable coarse particles ($PM_{2.5}$- PM_{10}), such as those found near roadways and dusty industries, are between 2.5 and 10 micrometers in diameter. $PM_{2.5}$-PM_{10} are deposited in the thoracic region of the lungs.
- Fine particles ($PM_{2.5}$), such as those found in smoke and haze, are 2.5 micrometers in diameter and smaller. These particles can be directly emitted from sources such as forest fires, or they can form when gases emitted from power plants, industries and automobiles react in the air. They penetrate deeply into the thoracic and alveolar regions of the lungs.
- Ultrafine particles (UFP) are very small particles less than 0.1 micrometers in diameter largely resulting from the combustion of fossils fuels, meat, wood, and other hydrocarbons. While UFP mass is a small portion of $PM_{2.5}$, its high surface area, deep lung penetration, and transfer into the bloodstream can result in disproportionate health impacts relative to their mass.

PM_{10}, $PM_{2.5}$, and UFP include primary pollutants (emitted directly to the atmosphere) as well as secondary pollutants (formed in the atmosphere by chemical reactions among precursors). Generally speaking, $PM_{2.5}$ and UFP are emitted by combustion sources like vehicles, power generation, industrial processes, and wood burning, while PM_{10} sources include these same sources plus roads and farming activities. Fugitive windblown dust and other area sources also represent a source of airborne dust.

Numerous scientific studies have linked both long- and short-term particle pollution exposure to a variety of health problems. Long-term exposures, such as those experienced by people living for many years in areas with high particle levels, have been associated with problems such as reduced lung function and the development of chronic bronchitis and even premature death. Short-term exposures to particles (hours or days) can aggravate lung disease, causing asthma attacks and also acute (short-term) bronchitis, and may also increase susceptibility to respiratory infections. In people with heart disease, short-term exposures have been linked to heart attacks and arrhythmias. Healthy children and adults have not been reported to suffer serious effects from short term exposures, although they may experience temporary minor irritation when particle levels are elevated.

Carbon Monoxide (CO) is an odorless, colorless gas that is highly toxic. It is formed by the incomplete combustion of fuels and is emitted directly into the air (unlike ozone). The main source of CO is on-road motor vehicles. Other CO sources include other mobile sources, miscellaneous processes, and fuel combustion from stationary sources. Because of the local nature of CO problems, California Air Resources Board (ARB) and U.S. EPA designate urban areas as CO nonattainment areas instead of the entire basin as with ozone and PM_{10}. Motor vehicles are by far the largest source of CO emissions. Emissions from motor vehicles have been declining since 1985, despite increases in vehicle miles traveled, with the introduction of new automotive emission controls and fleet turnover (Caltrans 1996).

Sulfur Dioxide (SO_2) is a colorless, irritating gas with a "rotten egg" smell formed primarily by the combustion of sulfur-containing fossil fuels. However, like airborne NO_X, suspended SO_X particles contribute to poor visibility. These SO_X particles can also combine with other pollutants to form $PM_{2.5}$. The prevalence of low-sulfur fuel use has minimized problems from this pollutant.

Lead (Pb) is a metal that is a natural constituent of air, water, and the biosphere. Lead is neither created nor destroyed in the environment, so it essentially persists forever. The health effects of lead poisoning include loss of appetite, weakness, apathy, and miscarriage. Lead can also cause lesions of the neuromuscular system, circulatory system, brain, and gastrointestinal tract. Gasoline-powered automobile engines were a major source of airborne lead through the use of leaded fuels. The use of leaded fuel has been mostly phased out, with the result that ambient concentrations of lead have dropped dramatically.

Hydrogen Sulfide (H_2S) is associated with geothermal activity, oil and gas production, refining, sewage treatment plants, and confined animal feeding operations. Hydrogen sulfide is extremely hazardous in high concentrations; especially in enclosed spaces (800 ppm can cause death). OSHA regulates workplace exposure to H_2S.

Other Pollutants

The State of California has established air quality standards for some pollutants not addressed by Federal standards. The ARB has established State standards for hydrogen sulfide, sulfates, vinyl chloride, and visibility reducing particles. The following section summarizes these pollutants and provides a description of the pollutants' physical properties, health and other effects, sources, and the extent of the problems.

Sulfates (SO_4^{2-}) are the fully oxidized ionic form of sulfur. Sulfates occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized to SO_2 during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The conversion of SO_2 to sulfates takes place comparatively rapidly and completely in urban areas of California due to regional meteorological features.

The ARB sulfate standard is designed to prevent aggravation of respiratory symptoms. Effects of sulfate exposure at levels above the standard include a decrease in ventilatory function, aggravation of asthmatic symptoms, and an increased risk of cardiopulmonary disease. Sulfates are particularly effective in degrading visibility, and, due to the fact that they are usually acidic, can harm ecosystems and damage materials and property.

Visibility Reducing Particles are a mixture of suspended particulate matter consisting of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. The standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.

Vinyl Chloride (C_2H_3Cl or VCM) is a colorless gas that does not occur naturally. It is formed when other substances such as trichloroethane, trichloroethylene, and tetrachloro-ethylene are broken down. Vinyl chloride is used to make polyvinyl chloride (PVC) which is used to make a variety of plastic products, including pipes, wire and cable coatings, and packaging materials.

ODORS

Typically, odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from the psychological (i.e. irritation, anger, or anxiety) to the physiological, including circulatory and respiratory effects, nausea, vomiting, and headache.

The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell very minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor and in fact, an odor that is offensive to one person may be perfectly acceptable to another (e.g., fast food restaurant). It is important to also note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is

describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word strong to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

Neither the state nor the federal governments have adopted rules or regulations for the control of odor sources. The MBARD does not have an individual rule or regulation that specifically addresses odors; however, odors would be subject to MBARD *Rule 402, Nuisance*. Any actions related to odors would be based on citizen complaints to local governments and the MBARD.

TOXIC AIR CONTAMINANTS

Toxic air contaminants (TACs) are air pollutants that may cause or contribute to an increase in mortality or serious illness, or which may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air, but due to their high toxicity, they may pose a threat to public health even at very low concentrations. Because there is no threshold level below which adverse health impacts are not expected to occur, TACs differ from criteria pollutants for which acceptable levels of exposure can be determined and for which state and federal governments have set ambient air quality standards. TACs, therefore, are not considered "criteria pollutants" under either the FCAA or the California Clean Air Act (CCAA) and are thus not subject to National or California ambient air quality standards (NAAQS and CAAQS, respectively). Instead, the U.S. EPA and the ARB regulate Hazardous Air Pollutants (HAPs) and TACs, respectively, through statutes and regulations that generally require the use of the maximum or best available control technology to limit emissions. In conjunction with MBARD rules, these federal and state statutes and regulations establish the regulatory framework for TACs. At the national levels, the U.S. EPA has established National Emission Standards for HAPs (NESHAPs), in accordance with the requirements of the FCAA and subsequent amendments. These are technology-based source-specific regulations that limit allowable emissions of HAPs.

Within California, TACs are regulated primarily through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). The Tanner Act sets forth a formal procedure for ARB to designate substances as TACs. The following provides a summary of the primary TACs of concern within the State of California and related health effects:

Diesel Particulate Matter (DPM) was identified as a TAC by the ARB in August 1998. DPM is emitted from both mobile and stationary sources. In California, on-road diesel-fueled vehicles contribute approximately 40 percent of the statewide total, with an additional 57 percent attributed to other mobile sources such as construction and mining equipment, agricultural equipment, and transport refrigeration units. Stationary sources, contributing about 3 percent of emissions, include shipyards, warehouses, heavy equipment repair yards, and oil and gas production operations. Emissions from these sources are from diesel-fueled internal combustion engines. Stationary sources that report DPM emissions also include heavy construction, manufacturers of asphalt paving materials and blocks, and diesel-fueled electrical generation facilities (ARB 2013).

In October 2000, the ARB issued a report entitled: "Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles", which is commonly referred to as the Diesel Risk Reduction Plan (DRRP). The DRRP provides a mechanism for combating the DPM problem. The goal of the DRRP is to reduce concentrations of DPM by 85 percent by the year 2020, in comparison to the year 2000 baseline emissions. The key elements of the DRRP are to clean up existing engines through engine retrofit emission control devices, to adopt stringent standards for new diesel engines, and to lower the sulfur content of diesel fuel to protect new, and very effective, advanced technology emission control devices on diesel engines. When fully implemented, the DRRP will significantly reduce emissions from both old and new diesel-fueled motor vehicles and from stationary sources that burn diesel fuel. In addition to these strategies, the ARB continues to promote the use of alternative fuels and electrification. As a result of these actions, DPM concentrations and associated health risks in future years are projected to decline (ARB 2013, ARB 2000).

Exposure to DPM can have immediate health effects. DPM can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. In studies with human volunteers, exposure to DPM also causes inflammation in the lungs, which may aggravate chronic respiratory symptoms and increase the frequency or intensity of asthma attacks. The elderly and people with emphysema, asthma, and chronic heart and lung disease are especially sensitive to fine-particle pollution. Because children's lungs and respiratory systems are still developing, they are also more susceptible than healthy adults to fine particles. Exposure to fine particles is associated with increased frequency of childhood illnesses and can also reduce lung function in children. In California, DPM has been identified as a carcinogen.

Acetaldehyde is a federal hazardous air pollutant. The ARB identified acetaldehyde as a TAC in April 1993. Acetaldehyde is both directly emitted into the atmosphere and formed in the atmosphere as a result of photochemical oxidation. Sources of acetaldehyde include emissions from combustion processes such as exhaust from mobile sources and fuel combustion from stationary internal combustion engines, boilers, and process heaters. A majority of the statewide acetaldehyde emissions can be attributed to mobile sources, including on-road motor vehicles, construction and mining equipment, aircraft, recreational boats, and agricultural equipment. Area sources of emissions include the burning of wood in residential fireplaces and wood stoves. The primary stationary sources of acetaldehyde are from fuel combustion from the petroleum industry (ARB 2013).

Acute exposure to acetaldehyde results in effects including irritation of the eyes, skin, and respiratory tract. Symptoms of chronic intoxication of acetaldehyde resemble those of alcoholism. The U.S. EPA has classified acetaldehyde as a probable human carcinogen. In California, acetaldehyde was classified on April 1, 1988, as a chemical known to the state to cause cancer (U.S. EPA 2018a; ARB 2013).

Benzene is highly carcinogenic and occurs throughout California. The ARB identified benzene as a TAC in January 1985. A majority of benzene emitted in California (roughly 88 percent) comes from motor vehicles, including evaporative leakage and unburned fuel exhaust. These sources include on-road motor vehicles, recreational boats, off-road recreational vehicles, and lawn and garden equipment. Benzene is also formed as a partial combustion product of larger aromatic fuel components. To a lesser extent, industry-related stationary sources are also sources of benzene emissions. The primary stationary sources of reported benzene emissions are crude petroleum and natural gas mining, petroleum refining, and electric generation that involves the use of petroleum products. The primary area sources include residential combustion of various types such as cooking and water heating (ARB 2013).

Acute inhalation exposure of humans to benzene may cause drowsiness, dizziness, headaches, as well as eye, skin, and respiratory tract irritation, and, at high levels, unconsciousness. Chronic inhalation exposure has caused various disorders in the blood, including reduced numbers of red blood cells and aplastic anemia in occupational settings. Reproductive effects have been reported for women exposed by inhalation to high levels, and adverse effects on developing fetuses have been observed in animal tests. Increased incidences of leukemia (cancer of the tissues that form white blood cells) have been observed in humans occupationally exposed to benzene. The U.S. EPA has classified benzene as a known human carcinogen for all routes of exposure (U.S. EPA 2018a).

1,3-butadiene was identified by the ARB as a TAC in 1992. Most of the emissions of 1,3-butadiene are from incomplete combustion of gasoline and diesel fuels. Mobile sources account for a majority of the total statewide emissions. Additional sources include agricultural waste burning, open burning associated with forest management, petroleum refining, manufacturing of synthetics and man-made materials, and oil and gas extraction. The primary natural sources of 1,3-butadiene emissions are wildfires (ARB 2013).

Acute exposure to 1,3-butadiene by inhalation in humans results in irritation of the eyes, nasal passages, throat, and lungs. Epidemiological studies have reported a possible association between 1,3-butadiene exposure and cardiovascular diseases. Epidemiological studies of workers in rubber plants have shown an association between 1,3-butadiene exposure and increased incidence of leukemia. Animal studies have reported tumors at various sites from 1,3-butadiene exposure. In California, 1,3-butadiene has been identified as a carcinogen.

Carbon Tetrachloride was identified by the ARB as a TAC in 1987 under California's TAC program (ARB 2013). The primary stationary sources reporting emissions of carbon tetrachloride include chemical and allied product manufacturers and petroleum refineries. In the past, carbon tetrachloride was used for dry cleaning and as a grain-fumigant. Usage for these purposes is no longer allowed in the United States. Carbon tetrachloride has not been registered for pesticidal use in California since 1987. Also, the use of carbon tetrachloride in products to be used indoors has been discontinued in the United States. The statewide emissions of carbon tetrachloride are small (about 1.96 tons per year), and background concentrations account for most of the health risks (ARB 2013).

The primary effects of carbon tetrachloride in humans are on the liver, kidneys, and central nervous system. Human symptoms of acute inhalation and oral exposures to carbon tetrachloride include headache, weakness, lethargy, nausea, and vomiting. Acute exposures to higher levels and chronic (long-term) inhalation or oral exposure to carbon tetrachloride produce liver and kidney damage in humans. Human data on the carcinogenic effects of carbon tetrachloride is limited. Studies in animals have shown that the ingestion of carbon tetrachloride increases the risk of liver cancer. In California, carbon tetrachloride has been identified as a carcinogen.

Hexavalent Chromium was identified as a TAC in 1986. Sources of hexavalent chromium include industrial metal finishing processes, such as chrome plating and chromic acid anodizing, and firebrick lining of glass furnaces. Other sources include mobile sources, including gasoline motor vehicles, trains, and ships (ARB 2013).

The respiratory tract is the major target organ for hexavalent chromium toxicity, for acute and chronic inhalation exposures. Shortness of breath, coughing, and wheezing were reported from a case of acute exposure to hexavalent chromium, while perforations and ulcerations of the septum, bronchitis, decreased pulmonary function, pneumonia, and other respiratory effects have been noted from chronic exposure. Human studies have clearly established that inhaled hexavalent chromium is a human carcinogen, resulting in an increased risk of lung cancer. In California, hexavalent chromium has been identified as a carcinogen.

Para-Dichlorobenzene was identified by the ARB as a TAC in April 1993. The primary area-wide sources that have reported emissions of para-dichlorobenzene include consumer products such as non-aerosol insect repellants and solid/gel air fresheners. These sources contribute nearly all of the statewide para-dichlorobenzene emissions (ARB 2013).

Acute exposure to para-dichlorobenzene via inhalation results in irritation to the eyes, skin, and throat in humans. In addition, long-term inhalation exposure may affect the liver, skin, and central nervous system in humans. The U.S. EPA has classified para-dichlorobenzene as a possible human carcinogen.

Formaldehyde was identified by the ARB as a TAC in 1992. Formaldehyde is both directly emitted into the atmosphere and formed in the atmosphere as a result of photochemical oxidation. Photochemical oxidation is the largest source of formaldehyde concentrations in California ambient air. Directly emitted formaldehyde is a product of incomplete combustion. One of the primary sources of directly emitted formaldehyde is vehicular exhaust. Formaldehyde is also used in resins, can be found in many consumer products as an antimicrobial agent, and is also used in fumigants and soil disinfectants. The primary area sources of formaldehyde emissions include wood burning in residential fireplaces and wood stoves (ARB 2013).

Exposure to formaldehyde may occur by breathing contaminated indoor air, tobacco smoke, or ambient urban air. Acute and chronic inhalation exposure to formaldehyde in humans can result in respiratory symptoms, and eye, nose, and throat irritation. Limited human studies have reported an association between formaldehyde exposure and lung and nasopharyngeal cancer. Animal inhalation studies have reported an increased incidence of nasal squamous cell cancer. Formaldehyde is classified as a probable human carcinogen.

Methylene Chloride was identified by the ARB as a TAC in 1987. Methylene chloride is used as a solvent, a blowing and cleaning agent in the manufacture of polyurethane foam and plastic fabrication, and as a solvent in paint stripping operations. Paint removers account for the largest use of methylene chloride in California, where methylene chloride is the main ingredient in many paint stripping formulations. Plastic

product manufacturers, manufacturers of synthetics, and aircraft and parts manufacturers are stationary sources reporting emissions of methylene chloride (ARB 2013).

The acute effects of methylene chloride inhalation in humans consist mainly of nervous system effects including decreased visual, auditory, and motor functions, but these effects are reversible once exposure ceases. The effects of chronic exposure to methylene chloride suggest that the central nervous system is a potential target in humans and animals. Human data is inconclusive regarding methylene chloride and cancer. Animal studies have shown increases in liver and lung cancer and benign mammary gland tumors following the inhalation of methylene chloride. In California, methylene chloride has been identified as a carcinogen.

Perchloroethylene was identified by the ARB as a TAC in 1991. Perchloroethylene is used as a solvent, primarily in dry cleaning operations. Perchloroethylene is also used in degreasing operations, paints and coatings, adhesives, aerosols, specialty chemical production, printing inks, silicones, rug shampoos, and laboratory solvents. In California, the stationary sources that have reported emissions of perchloroethylene are dry cleaning plants, aircraft parts, equipment manufacturers, and fabricated metal product manufacturers. The primary area sources include consumer products such as automotive brake cleaners, tire sealants, and inflators (ARB 2013).

Acute inhalation exposure to perchloroethylene vapors can result in irritation of the upper respiratory tract and eyes, kidney dysfunction, and at lower concentrations, neurological effects, such as reversible mood and behavioral changes, impairment of coordination, dizziness, headaches sleepiness, and unconsciousness. Chronic inhalation exposure can result in neurological effects, including sensory symptoms such as headaches, impairments in cognitive and motor neurobehavioral functioning, and color vision decrements. Cardiac arrhythmia, liver damage, and possible kidney damage may also occur. In California, perchloroethylene has been identified as a carcinogen.

Asbestos is a term used for several types of naturally-occurring fibrous minerals found in many parts of California. The most common type of asbestos is chrysotile, but other types are also found in California. Serpentine rock often contains chrysotile asbestos. Serpentine rock, and its parent material, ultramafic rock, are abundant in the Sierra foothills, the Klamath Mountains, and Coast Ranges. The project site, however, is not located in an area of known ultramafic rock.

Asbestos is commonly found in ultramafic rock, including serpentine, and near fault zones. The amount of asbestos that is typically present in these rocks ranges from less than 1 percent up to about 25 percent, and sometimes more. Asbestos is released from ultramafic and serpentine rock when they are broken or crushed. This can happen when cars drive over unpaved roads or driveways which are surfaced with these rocks when land is graded for building purposes, or at quarrying operations. It is also released naturally through weathering and erosion. Once released from the rock, asbestos can become airborne and may stay in the air for long periods of time.

Additional sources of asbestos include building materials and other manmade materials. The most common sources are heat-resistant insulators, cement, furnace or pipe coverings, inert filler material, fireproof gloves and clothing, and brake linings. Asbestos has been used in the United States since the early 1900s; however, asbestos is no longer allowed as a constituent in most home products and materials. Many older buildings, schools, and homes still have asbestos-containing products.

Naturally-occurring asbestos was identified by ARB as a TAC in 1986. The ARB has adopted two statewide control measures that prohibit the use of serpentine or ultramafic rock for unpaved surfacing and controls dust emissions from construction, grading, and surface mining in areas with these rocks. Various other laws have also been adopted, including laws related to the control of asbestos-containing materials during the renovation and demolition of buildings.

All types of asbestos are hazardous and may cause lung disease and cancer. Health risks to people are dependent upon their exposure to asbestos. The longer a person is exposed to asbestos and the greater the intensity of the exposure, the greater the chances for a health problem. Asbestos-related diseases, such as

lung cancer, may not occur for decades after breathing asbestos fibers. Cigarette smoking increases the risk of lung cancer from asbestos exposure.

REGULATORY FRAMEWORK

Air quality within the NCCAB is regulated by several jurisdictions including the U.S. EPA, ARB, and the MBARD. Each of these jurisdictions develops rules, regulations, and policies to attain the goals or directives imposed upon them through legislation. Although U.S. EPA regulations may not be superseded, both state and local regulations may be more stringent.

FEDERAL

U.S. Environmental Protection Agency

At the federal level, the U.S. EPA has been charged with implementing national air quality programs. The U.S. EPA's air quality mandates are drawn primarily from the FCAA, which was signed into law in 1970. Congress substantially amended the FCAA in 1977 and again in 1990.

Federal Clean Air Act

The FCAA required the U.S. EPA to establish NAAQS, and also set deadlines for their attainment. Two types of NAAQS have been established: primary standards, which protect public health, and secondary standards, which protect public welfare from non-health-related adverse effects, such as visibility restrictions. NAAQS are summarized in Table 2.

The FCAA also required each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The FCAA Amendments of 1990 added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. The U.S. EPA has the responsibility to review all state SIPs to determine conformance with the mandates of the FCAA, and the amendments thereof, and determine if implementation will achieve air quality goals. If the U.S. EPA determines a SIP to be inadequate, a Federal Implementation Plan (FIP) may be prepared for the nonattainment area that imposes additional control measures.

Toxic Substances Control Act

The Toxic Substances Control Act (TSCA) first authorized the U.S. EPA to regulate asbestos in schools and Public and Commercial buildings under Title II of the law, which is also known as the Asbestos Hazard Emergency Response Act (AHERA). AHERA requires Local Education Agencies (LEAs) to inspect their schools for ACBM and prepare management plans to reduce the asbestos hazard. The Act also established a program for the training and accreditation of individuals performing certain types of asbestos work.

Asbestos School Hazard Abatement and Reauthorization Act

The Asbestos School Hazard Abatement and Reauthorization Act (ASHARA) reauthorized AHERA and made some minor changes in the Act. It also reauthorized the Asbestos School Hazard Abatement Act.

Asbestos School Hazard Abatement Act

The Asbestos School Hazard Abatement Act (ASHAA) of 1984 provided loans and grants to help financially needy public and private schools correct serious asbestos hazards. This program was funded from 1985 until 1993. There have been no funds appropriated since that date.

National Emission Standards for Hazardous Air Pollutants

Pursuant to the FCAA of 1970, the U.S. EPA established the National Emission Standards for Hazardous Air Pollutants. These are technology-based source-specific regulations that limit allowable emissions of HAPs.

STATE

California Clean Air Act

The CCAA requires that all air districts in the state endeavor to achieve and maintain CAAQS for Ozone, CO, SO_2, and NO_2 by the earliest practicable date. The CCAA specifies that districts focus particular attention on reducing the emissions from transportation and area-wide emission sources, and the act provides districts with authority to regulate indirect sources. Each district plan is required to either (1) achieve a five percent annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each non-attainment pollutant or its precursors, or (2) to provide for implementation of all feasible measures to reduce emissions. Any planning effort for air quality attainment would thus need to consider both state and federal planning requirements.

Assembly Bills 1807 & 2588 - Toxic Air Contaminants

Within California, TACs are regulated primarily through AB 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics Hot Spots Information and Assessment Act of 1987). The Tanner Air Toxics Act sets forth a formal procedure for ARB to designate substances as TACs. This includes research, public participation, and scientific peer review before ARB designates a substance as a TAC. Existing sources of TACs that are subject to the Air Toxics Hot Spots Information and Assessment Act are required to: (1) prepare a toxic emissions inventory; (2) prepare a risk assessment if emissions are significant; (3) notify the public of significant risk levels; and (4) prepare and implement risk reduction measures.

California Building Standards Code

The California Building Standards Code (CBSC), commonly referred to as Title 24, contains standards that regulate the method of use, properties, performance, or types of materials used in the construction, alteration, improvement, repair, or rehabilitation of a building or other improvement to real property. Included in the CBSC are energy efficiency standards, which are commonly referred to as green building standards or CalGreen standards. The CBSC is adopted every three years by the Building Standards Commission (BSC). In the interim, the BSC also adopts annual updates to make necessary mid-term corrections. The CBSC was most recently updated in 2022.

California Air Resources Board

The ARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the CCAA of 1988. Other ARB duties include monitoring air quality in conjunction with air monitoring networks maintained by air pollution control districts and air quality management districts, establishing CAAQS, which in many cases are more stringent than the NAAQS, and setting emissions standards for new motor vehicles. The CAAQS are summarized in Table 2. The emission standards established for motor vehicles differ depending on various factors including the model year, and the type of vehicle, fuel, and engine used.

REGIONAL

Monterey Bay Air Resources District

The MBARD is the agency primarily responsible for ensuring that NAAQS and CAAQS are not exceeded and that air quality conditions are maintained in the NCCAB, within which the project is located. Responsibilities of the MBARD include but are not limited to, preparing plans for the attainment of ambient air quality standards, adopting, and enforcing rules and regulations concerning sources of air pollution, issuing permits for stationary sources of air pollution, inspecting stationary sources of air pollution, and responding to citizen complaints, monitoring ambient air quality and meteorological conditions, and implementing programs and regulations required by the FCAA and the CCAA. In an attempt to achieve NAAQS and CAAQS and maintain air quality, the MBARD has completed several air quality plans including the 2014 *Plug-In Electric Vehicle Readiness Plan*, the *2012-2015 Air Quality Management Plan (AQMP)* for achieving the state ozone standards and the *2007 Federal Maintenance Plan* for maintaining federal ozone standards (MBARD 2018b).

Table 2. Summary of National Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards*	National Standards* (Primary)
Ozone (O_3)	1-hour	0.09 ppm	–
	8-hour	0.070 ppm	0.070 ppm
Particulate Matter (PM_{10})	AAM	20 µg/m³	–
	24-hour	50 µg/m³	150 µg/m³
Fine Particulate Matter ($PM_{2.5}$)	AAM	12 µg/m³	12 µg/m³
	24-hour	No Standard	35 µg/m³
Carbon Monoxide (CO)	1-hour	20 ppm	35 ppm
	8-hour	9 ppm	9 ppm
	8-hour (Lake Tahoe)	6 ppm	–
Nitrogen Dioxide (NO_2)	AAM	0.030 ppm	0.053 ppm
	1-hour	0.18 ppm	0.100 ppb
Sulfur Dioxide (SO_2)	AAM	–	0.03 ppm
	24-hour	0.04 ppm	0.14 ppm
	3-hour	–	0.5 ppm (1300 µg/m³)**
	1-hour	0.25 ppm	75 ppb
Lead	30-day Average	1.5 µg/m³	–
	Calendar Quarter	–	1.5 µg/m³
	Rolling 3-Month Average	–	0.15 µg/m³
Sulfates	24-hour	25 µg/m³	No Federal Standards
Hydrogen Sulfide	1-hour	0.03 ppm (42 µg/m³)	
Vinyl Chloride	24-hour	0.01 ppm (26 µg/m³)	
Visibility-Reducing Particle Matter	8-hour	Extinction coefficient: 0.23/kilometer-visibility of 10 miles or more (0.07-30 miles or more for Lake Tahoe) due to particles when the relative humidity is less than 70 percent.	

ppm=parts per million; ppb=parts per billion; AAM=Annual Arithmetic Mean; µg/m³=micrograms per cubic meter
** For more information on standards visit: http//ww.arb.ca.gov.research/aaqs/aaqs2.pdf*
***Secondary Standard*
Source: ARB 2023a

To achieve and maintain ambient air quality standards, the MBARD has adopted various rules and regulations for the control of airborne pollutants. The MBARD Rules and Regulations that apply to the proposed project include, but are not limited to, the following:

- Rule 400 (Visible Emissions). The purpose of this rule is to provide limits for visible emissions from sources within the district.
- Rule 402 (Nuisances). The purpose of this rule is to prohibit emissions that may create a public nuisance. Applies to any source operation that emits or may emit air contaminants or other materials.
- Rule 425 (Use of Cutback Asphalt). The purpose of this rule is to limit the emissions of vapors of organic compounds from the use of cutback and emulsified asphalt. This rule applies to the manufacture and use of cutback, slow cure, and emulsified asphalt during paving and maintenance operations.

Monterey County General Plan

The Conservation/Open Space Element contained within the County of Monterey's General Plan aims to guide the County toward long-term conservation and preservation of open space lands and natural resources. This Open Space element includes numerous policies related to air quality to help provide for the protection and enhancement of Monterey County's Air quality. Relevant policies relating to the proposed project include but are not limited to the following (County of Monterey 2010):

- OS-10.1 Land use policy and development decisions shall be consistent with the natural limitations of the County's air basins.
- OS-10.2 Mass transit, bicycles, pedestrian modes of transportation, and other transportation alternatives to automobiles shall be encouraged.
- OS-10.3 Monterey County shall promote conservation of naturally vegetated and forested areas for their air purifying functions.
- OS-10.5 Mixed land uses that reduce the need for vehicular travel shall be encouraged.
- OS-10.6 The Monterey Bay Unified Air Pollution Control District's air pollution control strategies, air quality monitoring, and enforcement activities shall be supported.
- OS-10.7 Use of the best available technology for reducing air pollution emissions shall be encouraged.
- OS-10.8 Air quality shall be protected from naturally occurring asbestos by requiring mitigation measures to control dust and emissions during construction, grading, quarrying, or surface mining operations. This policy shall not apply to Routine and Ongoing Agricultural Activities except as required by state and federal law.
- OS-10.9 The County of Monterey shall require that future development implement applicable Monterey Bay Unified Air Pollution Control District control measures. Applicants for discretionary projects shall work with the Monterey Bay Unified Air Pollution Control District to incorporate feasible measures that assure that health-based standards for diesel particulate emissions are met. The County of Monterey will require that future construction operate and implement MBUAPCD PM_{10} control measures to ensure that construction related PM_{10} emissions do not exceed the MBUAPCD's daily threshold for PM_{10}. The County shall implement MBUAPCD measures to address off-road mobile source and heavy-duty equipment emissions as conditions of approval for future development to ensure that construction-related NOX emissions from non-typical construction equipment do not exceed the MBUAPCD's daily threshold for NOX.
- OS-10.14 The County of Monterey shall require that construction contracts be given to those contractors who show evidence of the use of soot traps, ultra-low sulfur fuels, and other diesel engine emissions upgrades that reduce PM_{10} emissions to less than 50% of the statewide PM_{10} emissions averages for comparable equipment.

Regulatory Attainment Designations

An attainment designation for an area signifies that pollutant concentrations did not violate the standard for that pollutant in that area. A nonattainment designation indicates that a pollutant concentration violated the standard at least once, excluding those occasions when a violation(s) was caused by an exceptional event, as defined in the criteria. Unclassified designations indicate insufficient data is available to determine attainment status.

The attainment status of the NCCAB is summarized in Table 3. Under the CCAA, the basin is designated as a nonattainment transitional area for the state ozone Ambient Air Quality Standards (AAQS) and non-attainment for the State's PM_{10} standard. The basin is designated attainment or unclassified for the remaining CAAQS and NAAQS.

Table 3. NCCAB Attainment Status Designations

Pollutant	State Designation	National Designation
Ozone (O_3)	Nonattainment-Transitional[1]	Attainment/Unclassified[2]
Inhalable Particulates (PM_{10})	Nonattainment	Unclassified
Fine Attainment ($PM_{2.5}$)	Attainment	Attainment/Unclassified[3]
Carbon Monoxide (CO)	Monterey County-Attainment	Attainment/Unclassified
Nitrogen Dioxide (NO_2)	Attainment	Attainment/Unclassified[4]
Sulfur Dioxide (SO_2)	Attainment	Attainment/Unclassified[5]
Lead	Attainment	Attainment/Unclassified[6]

Notes
1) Effective July 26, 2007, the ARB designated the NCCAB a nonattainment area for the State ozone standard, which was revised in 2006 to include an 8-hour standard of 0.070 ppm.
2) In 2015, EPA adopted a new 8-hour ozone standard of 0.070 ppm.
3) This includes the 2006 24-hour standard of 35 µg/m3 and the 2012 annual standard of 12 µg/m3.
4) In 2012, EPA designated the entire state as attainment/unclassified for the 2010 NO_2 standard.
5) In June 2011, the ARB recommended to EPA that the entire state be designated as attainment for the 2010 primary SO_2 standard. Final designations to be addressed in future EPA actions.
6) On October 15, 2008, EPA lowered the NAAQS for lead to 0.15 µg/m^3. Final designations were made by EPA in November 2011.
Source: ARB 2018a, MBARD 2018a.

Ambient Air Quality

Air pollutant concentrations are measured at several monitoring stations in Monterey County. The "Carmel Valley-Ford Road Monitoring Station" is the closest representative monitoring site to the proposed project site with sufficient data to meet U.S. EPA and/or ARB criteria for quality assurance. This monitoring station monitors ambient concentrations of ozone and $PM_{2.5}$. Ambient monitoring data for nitrogen dioxide was obtained from the "Salinas #3 Monitoring Station." Ambient monitoring data for PM_{10} was obtained from the "King City 415 Pearl Street Monitoring Station." Carbon monoxide standards have not been exceeded in years and, as a result, is no longer monitored in Monterey County.

Ambient monitoring data for the last three years of available measurement data (i.e., 2021 through 2023) are summarized in Table 4. As depicted, state and federal standards for O_3, NO_2, and $PM_{2.5}$ did not exceed ambient air quality standards during the last three years of available data. Ambient PM_{10} concentrations have not exceeded the NAAQS but have exceed the CAAQS on multiple days during each of the last three years of available data.

Table 4. Summary of Ambient Air Quality Monitoring Data[1]

	2021	2022	2023
Ozone (O_3)			
Maximum concentration, ppm (1-hour/8-hour average)	0.065/0.062	0.060/0.052	0.075/0.055
Number of days state/national 1-hour standard exceeded	0/0	0/0	0/0
Number of days state/national 8-hour standard exceeded	0/0	0/0	0/0
Nitrogen Dioxide (NO_2)[3]			
Maximum concentration, ppm (1-hour average)	27	30	31
Annual average	3	3	3
Number of days state/national standard exceeded	0/0	0/0	0/0
Suspended Particulate Matter (PM_{10})[4]			
Maximum concentration, µg/m³ (state/national)	94.9/77.2	64.5/64.4	84.7/81.8
Annual Average	24.0	23.1	18.4
Number of days state/national standard exceeded	13/0	16/0	7/0
Suspended Particulate Matter ($PM_{2.5}$)			
Maximum concentration, µg/m³ (state/national)	13.1/13.1	13.7/13.7	22.0/22.0
Annual Average	3.5	3.5	4.0
Number of days national standard exceeded (measured/calculated[2])	0/0	0/0	0/0

ppm = parts per million by volume, µg/m³ = micrograms per cubic meter
1. Ambient data was obtained from the Carmel Valley-Ford Road Monitoring Station.
2. Measured days are those days that an actual measurement was greater than the standard. Calculated days are the estimated number of days that measurement would have been greater than the level of the standard had measurements been collected every day.
3. Based on data obtained from the Salinas #3 Monitoring Station.
4. Based on data obtained from the King City-415 Pearl Street Monitoring Station.
** = Insufficient data available to determine the value.*
Source: ARB 2025

AIR QUALITY INDEX

The health effects of ambient air pollutant concentrations can be evaluated and presented in various ways. The most common method is the use of the Air Quality Index (AQI). The U.S. EPA developed the AQI as an easy-to-understand measure of health impacts based on measured ambient air quality in comparison to established ambient air quality standards. Tables 5 and 6 present a summary of the health impacts for ozone and fine particulate matter ($PM_{2.5}$), respectively, based on the U.S. EPA's AQI.

A summary of the annual AQI for the project area, based on monitoring data obtained from the Monterey County monitoring area for the last three years of available data, is provided in Table 7. As depicted in Table 7, the project area typically experiences "Good" air quality with the total number of days ranging from 274 to 337 days per year. Days classified as "Moderate" AQI ranged from 28 to 90 days per year. There were no days classified as "Unhealthy" or "Hazardous" (U.S. EPA 2023).

Table 5. Air Quality Index Summary for Ozone & Related Health Effects

Air Quality Index / 8 hour Ozone Concentration	Health Effects Description
AQI 51-100: Moderate Ambient Ozone Concentrations: 55-70 ppb	Sensitive Groups: Children and people with asthma are the groups at most risk. Health Effects Statements: Unusually sensitive individuals may experience respiratory symptoms. Cautionary Statements: Unusually sensitive people should consider limiting prolonged outdoor exertion.
AQI 101-150: Unhealthy for Sensitive Groups Ambient Ozone Concentrations: 71-85 ppb	Sensitive Groups: Children and people with asthma are the groups at most risk. Health Effects Statements: Increasing likelihood of respiratory symptoms and breathing discomfort in active children and adults and people with respiratory disease, such as asthma. Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should limit prolonged outdoor exertion.
AQI 151–200: Unhealthy Ambient Ozone Concentrations: 86-105 ppb	Sensitive Groups: Children and people with asthma are the groups at most risk. Health Effects Statements: Greater likelihood of respiratory symptoms and breathing difficulty in active children and adults and people with respiratory disease, such as asthma; possible respiratory effects in general population. Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should limit prolonged outdoor exertion; everyone else, especially children, should limit prolonged outdoor exertion.
AQI 201-300: Very Unhealthy Ambient Ozone Concentrations: 106-200 ppb	Sensitive Groups: Children and people with asthma are the groups at most risk. Health Effects Statements: Increasingly severe symptoms and impaired breathing likely in active children and adults and people with respiratory disease, such as asthma; increasing likelihood of respiratory effects in general population. Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should avoid outdoor exertion; everyone else, especially children, should limit outdoor exertion.
An AQI of 50 and below is categorized as "Good" and air quality is satisfactory and poses little or no risk. An AQI of 301 or higher is categorized as "Hazardous" having a health warning of emergency conditions: everyone is more likely to be affected. Outdoor activities should be avoided for all individuals. *AQI = Air quality index, ppb = parts per billion* *Source: U.S. EPA 2023a*	

Table 6. Air Quality Index Summary for Fine Particulate Matter & Related Health Effects

Air Quality Index / 8 hour Ozone Concentration	Health Effects Description
AQI 51-100: Moderate Ambient Concentrations: 12.1-35.4 µg/m³	Sensitive Groups: Some people who may be unusually sensitive to particulate. Health Effects Statements: Unusually sensitive people should consider reducing prolonged or heavy exertion. Cautionary Statements: Unusually sensitive people: Consider reducing prolonged or heavy exertion. Watch for symptoms such as coughing or shortness of breath. These are signs to take it easier.
AQI 101-150: Unhealthy for Sensitive Groups Ambient Concentrations: 35.5-55.4 µg/m³	Sensitive Groups: People with heart or lung disease, older adults, children, and teenagers. Health Effects Statements: Increasing likelihood of respiratory symptoms for sensitive individuals, aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease, and the elderly. Cautionary Statements: If you have heart disease: Symptoms such as palpations, shortness of breath, or unusual fatigue may indicate a serious problem. If you have any of these, contact a health care provider.
AQI 151–200: Unhealthy Ambient Concentrations: 55.5-150.4 µg/m³	Sensitive Groups: Everyone. Health Effects Statements: Increased aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease, and the elderly; increased respiratory effects in general population. Cautionary Statements: Sensitive groups: Avoid prolonged or heavy exertion. Consider moving activities indoors or rescheduling. Everyone else: Reduce prolonged or heavy exertion. Take more breaks during outdoor activities.
AQI 201-300: Very Unhealthy Ambient Concentrations: 150.5-250.4 µg/m³	Sensitive Groups: Everyone. Health Effects Statements: Significant aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease, and the elderly; significant increase in respiratory effects in general population. Cautionary Statements: Sensitive groups: Avoid all physical activity outdoors. Move activities indoors or reschedule to a time when air quality is better. Everyone else: Avoid prolonged or heavy exertion. Consider moving activities indoors or reschedule to a time when air quality is better.
An AQI of 50 and below is categorized as "Good" and air quality is satisfactory and poses little or no risk. An AQI of 301 or higher is categorized as "Hazardous" having a health warning of emergency conditions: everyone is more likely to be affected. Outdoor activities should be avoided for all individuals. *AQI = Air quality index, µg/m3 = micrograms per cubic meter* *Source: U.S. EPA 2023a*	

Table 7. Air Quality Index Annual Historical Summary for Monterey County

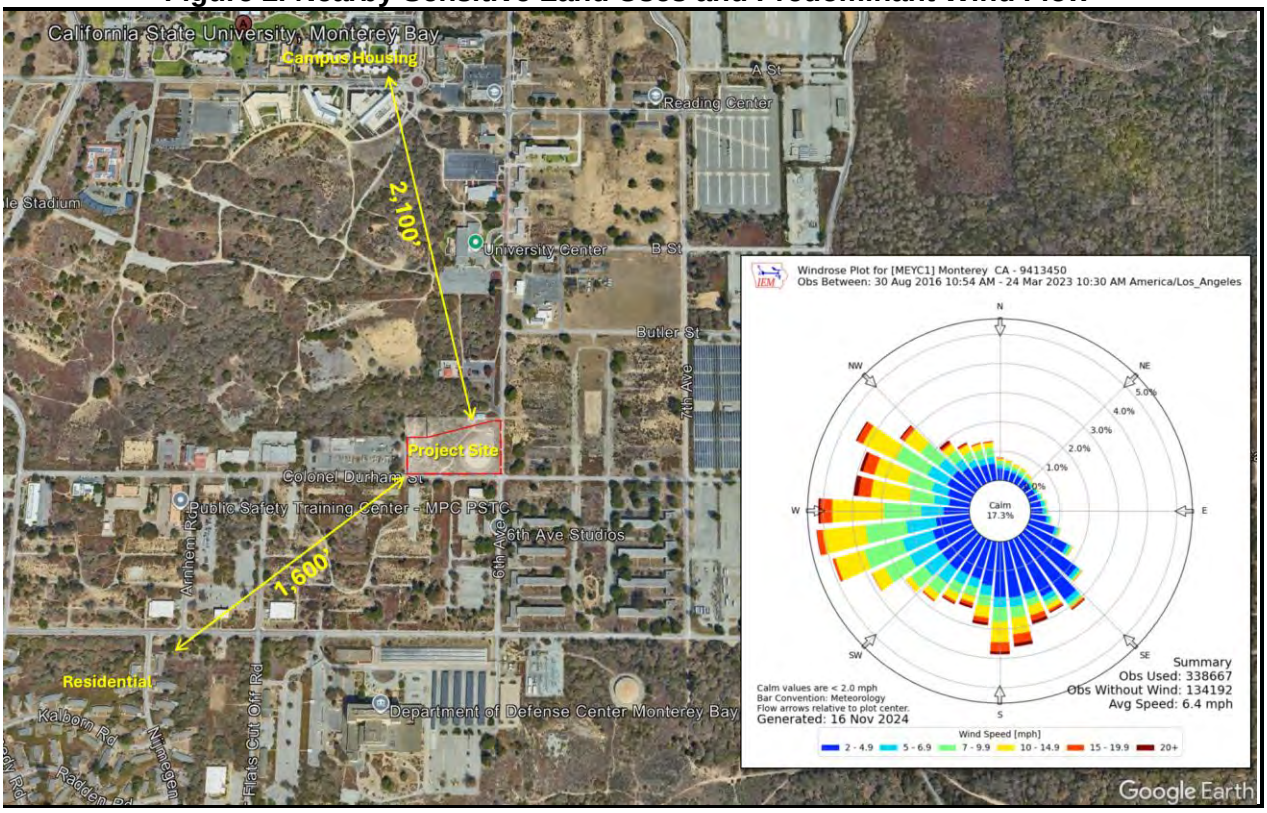
Year	Air Quality Index (AQI) Number of Days					
	Good	Moderate	Unhealthy for Sensitive Groups	Unhealthy	Very Unhealthy	Hazardous
2024	292	74	0	0	0	0
2023	274	90	0	0	0	0
2022	337	28	0	0	0	0
Represents overall air quality taking into account all criteria pollutants measured. *Source: U.S, EPA 2023*						

SENSITIVE RECEPTORS

One of the most important reasons for air quality standards is the protection of those members of the population who are most sensitive to the adverse health effects of air pollution termed "sensitive receptors." The term sensitive receptors refer to specific population groups, as well as the land uses where individuals would reside for long periods. Commonly identified sensitive population groups are children, the elderly, the acutely ill, and the chronically ill. Commonly identified sensitive land uses would include facilities that house or attract children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Residential dwellings, schools, parks, playgrounds, childcare centers, convalescent homes, and hospitals are examples of sensitive land uses.

No sensitive land uses were identified within 1,500 feet of the project site. The nearest sensitive land uses are residential dwellings located approximately 1,600 feet southwest of the project site, south of Gigling Road. The nearest on-campus student housing located at California State University Monterey Bay is located approximately 2,100 feet to the north of the project site. No sensitive land uses were identified downwind of predominant wind flows in the project vicinity. Nearby sensitive land uses and predominant wind flow are depicted in Figure 2.

Figure 2. Nearby Sensitive Land Uses and Predominant Wind Flow



Wind rose plot depicts predominant winds flowing from for the Monterey area (IEM 2025).
Distance are approximate. Not to scale.

PROJECT IMPACTS

THRESHOLDS OF SIGNIFICANCE

Criteria for determining the significance of air quality impacts were developed based on information contained in the California Environmental Quality Act Guidelines (CEQA Guidelines, Appendix G). According to those guidelines, a project may have a significant effect on the environment if it would result in the following conditions:

1. Conflict with or obstruct implementation of any applicable air quality plan.
2. 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.
3. Expose sensitive receptors to substantial pollutant concentrations.
4. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

To assist local jurisdictions in the evaluation of air quality impacts, the MBARD has published the *CEQA Air Quality Guidelines* (MBARD 2008). This guidance document includes recommended thresholds of significance to be used for the evaluation of short-term construction, long-term operational, odor, toxic air contaminant, and cumulative air quality impacts. These thresholds were developed taking into consideration potential impacts on regional and local air quality and related public-health concerns. The following MBARD-recommended thresholds of significance were relied upon for the determination of impact significance:

- Short-term Emissions of Criteria Air Pollutants. Construction impacts would be significant if the proposed project would emit greater than 82 pounds per day (lbs/day) of PM_{10} or would cause a violation of PM_{10} National or State AAQS at nearby receptors. Construction-generated emissions of ozone precursors (i.e., ROG or NO_X) are accommodated in the emission inventories of State and federally-required air plans. For this reason, the MBARD has not identified recommended thresholds of significance for construction-generated ozone precursors (i.e., ROG and NOx).
- Long-Term Emissions of Criteria Air Pollutants. Emissions of 137 pounds per day or more of direct and indirect VOC emissions would have a significant impact on regional air quality by emitting substantial amounts of ozone precursors (i.e., ROG and NO_x) (MBARD 2008). Such projects would significantly impact attainment and maintenance of ozone AAQS. In addition, operational impacts would be significant if the proposed project would emit greater than 82 lbs/day of PM_{10}, or if the project would contribute to local PM_{10} concentrations that exceed AAQS. Emissions of SO_X would be significant if the project generates direct emissions of greater than 150 lbs/day.
- Local Mobile-Source CO Concentrations. Local mobile-source impacts would be significant if the project generates direct emissions of greater than 550 lbs/day of CO or if the project would contribute to local CO concentrations that exceed the CAAQS of 9.0 ppm for 8 hours or 20 ppm for 1 hour. Indirect emissions are typically considered to include mobile sources that access the project site but generally emit off-site; direct emissions typically include sources that emitted on-site (e.g., stationary sources, on-site mobile equipment).
- Toxic Air Contaminants. TAC impacts would be significant if the project would expose the public to substantial levels of TACs so that the probability of contracting cancer for the Maximally Exposed Individual would exceed 10 in 1 million and/or so that ground-level concentrations of non-carcinogenic toxic air contaminants would result in a Hazard Index (HI) greater than 1 for the Maximally Exposed Individual.
- Odorous Emissions. Odor impacts would be significant if the project has the potential to frequently expose members of the public to objectionable odors.

METHODOLOGY

Short-term Construction

Short-term construction emissions associated with the project were quantified using the California Emissions Estimator Model (CalEEMod), version 2022.1.1.29. Emissions were quantified based on project-specific data provided, and default modeling parameters contained in the model for Monterey County. To be conservative modeling does not include reductions in fugitive dust associated with watering of exposed surfaces. Modeling assumes that approximately 99 percent of construction vehicle travel would occur on paved roads based on information provided. Refer to Appendix A for emissions modeling assumptions and results.

Long-term Operation

Long-term operational emissions of the project were quantified using CalEEMod, version 2022.1.1.29. Emissions were quantified for stationary, energy use, and mobile sources based on information provided and CalEEMod defaults for Monterey County. Refer to Appendix A for emissions modeling assumptions and results.

IMPACT ASSESSMENT

Impact AQ 1: Conflict with or obstruct implementation of any applicable air quality plan.

The NCCAB is currently classified as non-attainment for the state's PM_{10} standard and nonattainment transitional for the state's 8-hour and one-hour ozone standards. MBARD has adopted the 2012-2015 Air Quality Management Plan for the purpose of enforcing state and federal air quality standards (MBARD 2018b). Consistency with the AQMP is assessed by comparing the proposed growth associated with a proposed project with the population and dwelling unit forecasts adopted by the Association of Monterey Bay Area Governments (AMBAG). These projections are used to generate emission forecasts upon which the AQMP is based. Projects that are consistent with AMBAG's regional forecasts would be considered consistent with the AQMP. In addition, projects that would result in a significant increase in emissions, in excess of MBARD significance thresholds, would also be considered to potentially conflict with or obstruct implementation of the AQMP.

The proposed project would not result in increased population growth or increases in VMT. In addition, as noted in Impact AQ-2, the proposed project would not result in PM_{10} emissions that would exceed MBARD's significance threshold of 82 lbs/day. For this reason, implementation of the proposed project would not result in a substantial increase in either direct or indirect emissions that could conflict with or obstruct implementation of the AQMP. This impact is considered less-than-significant.

Impact AQ 2: 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.

Construction Emissions

Construction-generated emissions are short-term and of temporary duration, lasting only as long as construction activities occur, but possess the potential to represent a significant air quality impact. The construction of the proposed uses would result in the temporary generation of emissions resulting from site demolition, site preparation, grading, building construction, paving, architectural coating, and motor vehicle exhaust associated with construction equipment and on-road vehicle trips. Emissions of PM are largely associated with ground disturbance and the movement of construction vehicles and equipment on unpaved surfaces.

Construction-generated emissions associated with the project are summarized in Table 8. As depicted, construction of the individual construction phases would not exceed MBARD's thresholds of significance for PM_{10}. In the event that multiple construction activities (e.g., demolition, site preparation, grading) were to be conducted simultaneously, short-term construction associated with the project would generate approximately 17 lbs/day of PM_{10}. Construction-generated emissions would not exceed MBARD's significance threshold of 82 lbs/day for PM_{10}. Furthermore, compliance with existing MBARD rules and regulations, such as Rule 402 (Nuisances) and Rule 400 (Visible Emissions), would further minimize emissions of PM_{10} during construction. Additionally, construction projects using typical construction equipment such as dump trucks, scrapers, bulldozers, compactors, and front-end loaders that temporarily emit precursors of ozone [i.e., VOCs or NOx], are accommodated in the emission inventories of State- and federally-required air plans and would not have a significant impact on the attainment and maintenance of ozone AAQS (MBARD 2008). For these reasons, this impact would be considered less than significant.

Operational Emissions

Daily operational emissions of criteria air pollutants associated with the project would be predominantly associated with the occasional operation of the proposed emergency generator for maintenance and testing operations. According to MBARD permitting requirements, maintenance and testing of the generator would be limited to a maximum of 60 hours per year and only permitted for emergency power when normal power service is interrupted. In comparison to existing operations, implementation of the proposed project would not be anticipated to result in changes in long-term site maintenance activities, including onsite landscape maintenance, and worker vehicle trips. Estimated daily emissions associated with the proposed emergency generator are summarized in Table 9. As depicted, the emergency generator would generate maximum daily emissions of approximately 2.95 lbs/day of ROG, 9.63 lbs/day of NO_X, 10.7 lbs/day of CO, 0.43 lbs/day of PM_{10}, 0.43 lbs/day of $PM_{2.5}$, and 0.01 lbs/day of SO_X. Operational emissions would not exceed MBARD's daily significance thresholds. As a result, this impact would be considered less than significant.

Table 9. Operational Emissions (Criteria Air Pollutants)

Source	Emissions (lbs/day) [1]					
	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$	SOX
Stationary Source (Emergency Generator)[4]	2.95	9.63	10.7	0.43	0.43	0.01
MBARD Significance Threshold[2]:	137	137	550	82	--	150
Exceeds Threshold:	No	No	No	No	--	No

1. Assumes operation of proposed 75-bhp emergency generator 24-hours/day. Refer to Appendix A for emissions modeling assumptions and results.

Table 8. Unmitigated Construction Emissions (Criteria Air Pollutants)

Construction Phase	Unmitigated Emissions (lbs/day)[1]									
					PM10			PM2.5		
	ROG	NOx	CO	SO_2	Exhaust	Dust[3,4]	Total	Exhaust	Dust	Total
Demolition	0.68	4.70	5.60	0.02	0.18	0.36	0.54	0.17	0.06	0.23
Site Preparation	1.76	16.22	17.41	0.03	0.71	6.91	7.62	0.65	3.43	4.08
Grading	1.14	12.50	10.56	0.03	0.47	7.89	8.36	0.44	3.59	4.03
Excavation & Trenching - 2025	0.49	4.32	5.63	0.01	0.16	0.37	0.54	0.15	0.06	0.21
Excavation & Trenching - 2026	0.47	4.14	5.60	0.01	0.14	0.37	0.52	0.13	0.06	0.19
Facility Construction & Equipment Install - 2025	0.22	2.37	3.38	0.01	0.09	0.36	0.45	0.08	0.06	0.14
Facility Construction & Equipment Install - 2026	0.21	2.23	3.34	0.01	0.08	0.36	0.44	0.07	0.06	0.13
Paving	0.44	3.75	4.45	0.01	0.16	0.36	0.52	0.15	0.06	0.20
Pump Building Construction	0.21	1.93	1.98	0.01	0.07	0.36	0.43	0.07	0.06	0.12
Tank Construction - 2025	1.03	9.44	9.58	0.02	0.34	0.36	0.71	0.32	0.06	0.38
Tank Construction - 2026	0.99	9.07	9.46	0.02	0.32	0.36	0.68	0.29	0.06	0.35
Maximum Daily Emissions[1]										
Demolition, Site Preparation, Grading:	3.57	33.42	33.57	0.07	1.37	15.17	16.53	1.26	7.07	8.33
Excavation & Trenching, Construction, Install, Paving:	4.05	37.25	43.42	0.09	1.37	2.92	4.29	1.26	0.47	1.73
MBARD Significance Threshold[2]:							82			
Exceeds Threshold?							No			

1. Based on the highest daily emissions during summer or winter conditions without the implementation of fugitive dust control measures. Assumes some construction phases could potentially occur simultaneously.

2. The MBARD has not identified significance thresholds for ROG, NO_X, CO or $PM_{2.5}$. Emissions of ROG and NO_X are accommodated in the emission inventories of State- and federally-required air plans and would not have a significant impact on the attainment and maintenance of ozone AAQS. Emissions of $PM_{2.5}$ are a component of PM_{10}.

3. To be conservative, does not include reductions in fugitive dust associated with watering of exposed surfaces.

4. Assumes 99 percent of construction vehicle travel occurs on paved surfaces.

Refer to Appendix A for emissions modeling assumptions and results.

Impact AQ 3: Expose sensitive receptors to substantial pollutant concentrations.

Short-term and long-term pollutants of primary concern with regard to potential health-related impacts include construction-generated emissions of TACs, naturally-occurring asbestos, and particulate matter. Short-term and long-term localized air quality impacts are discussed in greater detail, as follows:

Short-term Construction

Naturally-Occurring Asbestos

The ARB identifies naturally-occurring asbestos (NOA) as a TAC. In accordance with ARB Air Toxics Control Measure, prior to any grading activities, a geologic evaluation should be conducted to determine if NOA is present within the area that would be disturbed. If NOA is not present, an exemption request form, along with a copy of the geologic report, must be filed with the local air district. If NOA is found at the site, the applicant must comply with all requirements outlined in the Asbestos Air Toxics Control Measure. The project site is not located within an area identified as having a potential for naturally-occurring ultramafic rock and serpentine soils. As a result, this impact would be considered less than significant.

Asbestos-Containing Materials

Demolition activities can have potential negative air quality impacts, including issues surrounding the proper handling, demolition, and disposal of asbestos-containing material (ACM). ACM could be encountered during the demolition of existing buildings, particularly older structures constructed prior to 1970. Asbestos can also be found in various building products, including (but not limited to) utility pipes/pipelines (transit pipes or insulation on pipes). If a project involves the disturbance or potential disturbance of ACM, various regulatory requirements may apply, including the requirements stipulated in the National Emission Standard for Hazardous Air Pollutants (40CFR61, Subpart M-Asbestos NESHAP). The proposed project would include the demolition of approximately 50,000 sq. ft. of existing on-site structures. The demolition of existing structures may result in disturbance of ACM. Consequently, the project would be subject to the National Emission Standard for Hazardous Air Pollutants requirements. These requirements include but are not limited to: 1) notification, within at least 10 business days of activities commencing, to the APCD, 2) an asbestos survey conducted by a Certified Asbestos Consultant, and 3) applicable removal and disposal requirements of identified ACM. With NESHAP compliance this impact is considered less than significant.

Particulate Matter

Implementation of the proposed project would result in short-term emissions of fugitive PM associated with ground disturbance. In addition, the use of diesel-fueled off-road equipment and on-road haul trucks would result in emissions of diesel-exhaust particulate matter (DPM). As noted in Table 1, inhalable particulates can contribute to Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; as well as, aggravated asthma. Long-term exposure can contribute to chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Health-related risks associated with diesel-exhaust emissions are primarily associated with long-term exposure and the associated risk of contracting cancer.

For off-site work and residential land uses, the calculation of cancer risk associated with exposure to DPM is typically calculated based on a 25-year and 30-year period of exposure, respectively. The use of diesel-powered construction equipment would be temporary and episodic, typically only occurring over a short period (i.e., weeks or months) and would constitute less than six percent of the typically applied risk exposure period. Furthermore, no sensitive land uses were identified within 1,000 feet of the project site. The nearest sensitive land uses are residential dwellings located approximately 1,600 feet southwest of the project site, south of Gigling Road, and on-campus student housing located in excess of 2,100 feet north of the project site. No sensitive land uses are not located in the project vicinity downwind of the project site(refer to Figure 2). For these reasons, and given the highly dispersive nature of DPM, exposure to construction-generated DPM would not be anticipated to exceed applicable thresholds (i.e., incremental increase in cancer risk of 10 in one million or a hazard index greater than 1). As a result, this impact would be considered less than significant.

Long-term Operation

The proposed project would not result in an increase in worker maintenance trips. As a result, the proposed project would not result in long-term increases in mobile-source emissions. However, the project would include the installation of an emergency back-up generator. The generator would be diesel-fueled and would be required to comply with MBARD permitting requirements for the operation of stationary emission sources. According to MBARD permitting requirements, maintenance and testing of the generator would be limited to a maximum of 60 hours per year and only permitted for emergency power when normal power service is interrupted. As part of the permitting process, the generator would be evaluated to ensure that related human health risks would not exceed applicable significance thresholds. For this reason, this impact would be considered less than significant.

Impact AQ 4: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Other emissions potentially associated with the proposed project would be predominantly associated with the generation of odors during project construction. The occurrence and severity of odor impacts depend on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of the receptors. While offensive odors rarely cause any physical harm, they still can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and regulatory agencies. Construction of the proposed project would involve the use of a variety of gasoline or diesel-powered equipment that would emit exhaust fumes. Exhaust fumes, particularly diesel-exhaust, may be considered objectionable by some people. In addition, paving activities would also emit temporary odors. However, construction-generated emissions would occur intermittently throughout the workday and would dissipate rapidly within increasing distance from the source. As a result, short-term construction activities would not expose a substantial number of people to frequent odorous emissions. In addition, no major sources of odors have been identified in the project area. This impact would be considered less than significant.

GREENHOUSE GASES AND CLIMATE CHANGE

EXISTING SETTING

To fully understand global climate change, it is important to recognize the naturally occurring "greenhouse effect" and to define the GHGs that contribute to this phenomenon. Various gases in the earth's atmosphere, classified as atmospheric GHGs, play a critical role in determining the Earth's surface temperature. Solar radiation enters the Earth's atmosphere from space and a portion of the radiation is absorbed by the Earth's surface. The Earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation. Greenhouse gases, which are transparent to solar radiation, are effective in absorbing infrared radiation. As a result, this radiation that otherwise would have escaped back into space is now retained, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect. Among the prominent GHGs contributing to the greenhouse effect are carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Primary GHGs attributed to global climate change, are discussed, as follows:

- Carbon Dioxide. Carbon dioxide (CO_2) is a colorless, odorless gas. CO_2 is emitted in a number of ways, both naturally and through human activities. The largest source of CO_2 emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources. A number of specialized industrial production processes and product uses such as mineral production, metal production, and the use of petroleum-based products can also lead to CO_2 emissions. The atmospheric lifetime of CO_2 is variable because it is so readily exchanged in the atmosphere (U.S. EPA 2018b).

- Methane. Methane (CH_4) is a colorless, odorless gas that is not flammable under most circumstances. CH_4 is the major component of natural gas, about 87 percent by volume. It is also formed and released to the atmosphere by biological processes occurring in anaerobic environments. Methane is emitted from a variety of both human-related and natural sources. Human-related sources include fossil fuel production, animal husbandry (enteric fermentation in livestock and manure management), rice cultivation, biomass burning, and waste management. These activities release significant quantities of methane to the atmosphere. Natural sources of methane include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and other sources such as wildfires. Methane's atmospheric lifetime is about 12 years (U.S. EPA 2018b).

- Nitrous Oxide. Nitrous oxide (N_2O) is a clear, colorless gas with a slightly sweet odor. N_2O is produced by both natural and human-related sources. Primary human-related sources of N_2O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. N_2O is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N_2O is approximately 120 years (U.S. EPA 2018b).

- Hydrofluorocarbons. Hydrofluorocarbons (HFCs) are man-made chemicals, many of which have been developed as alternatives to ozone-depleting substances for industrial, commercial, and consumer products. The only significant emissions of HFCs before 1990 were of the chemical HFC-23, which is generated as a byproduct of the production of HCFC-22 (or Freon 22, used in air conditioning applications). The atmospheric lifetime for HFCs varies from just over a year for HFC-152a to 270 years for HFC-23. Most of the commercially used HFCs have atmospheric lifetimes of less than 15 years (e.g., HFC-134a, which is used in automobile air conditioning and refrigeration, has an atmospheric life of 14 years) (U.S. EPA 2018b).

- Perfluorocarbons. Perfluorocarbons (PFCs) are colorless, highly dense, chemically inert, and non-toxic. There are seven PFC gases: perfluoromethane (CF_4), perfluoroethane (C_2F_6), perfluoropropane (C_3F_8), perfluorobutane (C_4F_{10}), perfluorocyclobutane (C_4F_8), perfluoropentane (C_5F_{12}), and perfluorohexane (C_6F1_4). Natural geological emissions have been responsible for the PFCs that have accumulated in the atmosphere in the past; however, the largest current source is aluminum production, which

releases CF_4 and C_2F_6 as byproducts. The estimated atmospheric lifetimes for PFCs ranges from 2,600 to 50,000 years (U.S. EPA 2018b).

- Nitrogen Trifluoride. Nitrogen trifluoride (NF_3) is an inorganic, colorless, odorless, toxic, nonflammable gas used as an etchant in microelectronics. Nitrogen trifluoride is predominantly employed in the cleaning of the plasma-enhanced chemical vapor deposition chambers in the production of liquid crystal displays and silicon-based thin-film solar cells. It has a global warming potential of 16,100 carbon dioxide equivalents (CO_2e). While NF_3 may have a lower global warming potential than other chemical etchants, it is still a potent GHG. In 2009, NF_3 was listed by California as a high global warming potential GHG to be listed and regulated under Assembly Bill (AB) 32 (Section 38505 Health and Safety Code).

- Sulfur Hexafluoride. Sulfur hexafluoride (SF_6) is an inorganic compound that is colorless, odorless, non-toxic, and generally non-flammable. SF_6 is primarily used as an electrical insulator in high voltage equipment. The electric power industry uses roughly 80 percent of all SF_6 produced worldwide. Leaks of SF_6 occur from aging equipment and during equipment maintenance and servicing. SF_6 has an atmospheric life of 3,200 years (U.S. EPA 2018b).

- Black Carbon. Black carbon is the strongest light-absorbing component of particulate matter (PM) emitted from burning fuels such as coal, diesel, and biomass. Black carbon contributes to climate change both directly by absorbing sunlight and indirectly by depositing on snow and by interacting with clouds and affecting cloud formation. Black carbon is considered a short-lived species, which can vary spatially and, consequently, it is very difficult to quantify associated global-warming potentials. The main sources of black carbon in California are wildfires, off-road vehicles (locomotives, marine vessels, tractors, excavators, dozers, etc.), on-road vehicles (cars, trucks, and buses), fireplaces, agricultural waste burning, and prescribed burning (planned burns of forest or wildlands) (CCAC 2018, U.S. EPA 2018b).

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. Often, estimates of GHG emissions are presented in CO_2e, which weighs each gas by its global warming potential (GWP). Expressing GHG emissions in CO_2e takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted. Table 10 provides a summary of the GWP for GHG emissions of typical concern with regard to community development projects, based on a 100-year time horizon. As indicated, Methane traps over 25 times more heat per molecule than CO_2, and N_2O absorbs roughly 298 times more heat per molecule than CO_2. Additional GHG with high GWP includes Nitrogen trifluoride, Sulfur hexafluoride, Perfluorocarbons, and black carbon.

Table 10. Global Warming Potential for GHGs

Greenhouse Gas	Global Warming Potential (100 year)
Carbon Dioxide (CO_2)	1
Methane (CH_4)	25
Nitrous Dioxide (N_2O)	298
Based on IPCC GWP values for a 100-year time horizon *Source: IPCC 2007*	

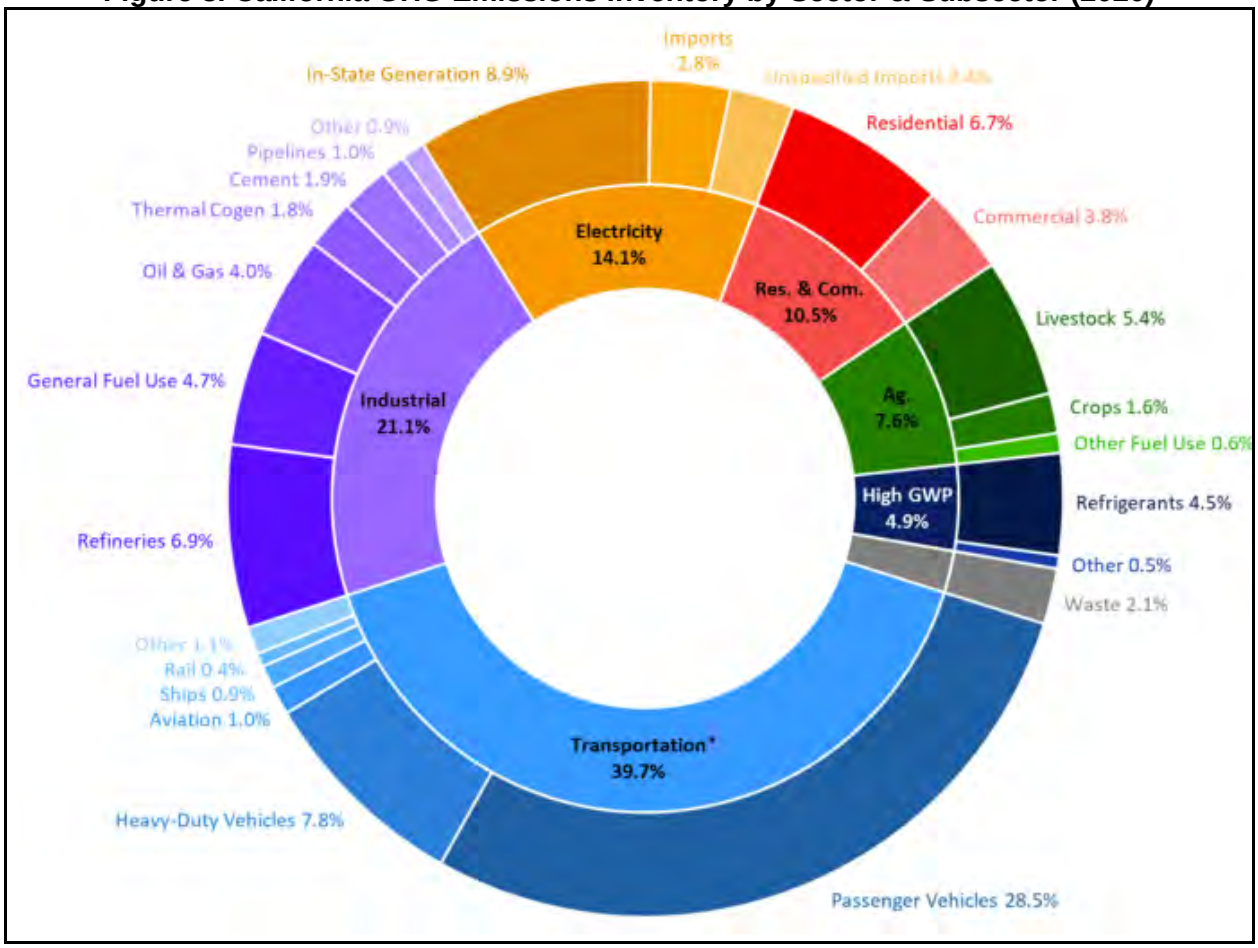
SOURCES OF GHG EMISSIONS

REGIONAL

On a global scale, GHG emissions are predominantly associated with activities related to energy production; changes in land use, such as deforestation and land clearing; industrial sources; agricultural activities; transportation; waste and wastewater generation; and commercial and residential land uses. Worldwide, energy production including the burning of coal, natural gas, and oil for electricity and heat is the largest single source of global GHG emissions (U.S. EPA 2018c).

In 2020, GHG emissions within California totaled 369.2 million metric tons (MMT) of CO_2e. GHG emissions, by sector, are summarized in Figure 3. Within California, the transportation sector is the largest contributor, accounting for approximately 37 percent of the total state-wide GHG emissions. Emissions associated with industrial uses are the second largest contributor, totaling roughly 20 percent. Electricity generation totaled roughly 16 percent (ARB 2022a).

Figure 3. California GHG Emissions Inventory by Sector & Subsector (2020)



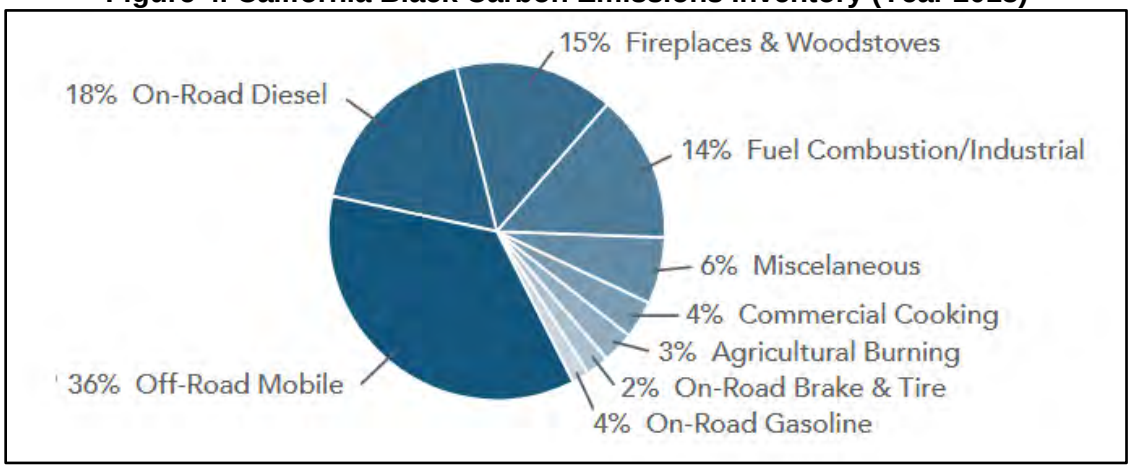
Source: ARB 2022a

Short-Lived Climate Pollutants

Short-lived climate pollutants (SLCPs), such as black carbon, fluorinated gases, and methane also have a dramatic effect on climate change. Though short-lived, these pollutants create a warming influence on the climate that is many times more potent than that of carbon dioxide.

As part of the ARB's efforts to address SLCPs, the ARB has developed a statewide emission inventory for black carbon. The black carbon inventory will help support the implementation of the SLCP Strategy, but it is not part of the State's GHG Inventory that tracks progress towards the State's climate targets. The most recent inventory for year 2013 conditions is depicted in Figure 4. As depicted, off-road mobile sources account for a majority of black carbon emissions totaling roughly 36 percent of the inventory. Other major anthropogenic sources of black carbon include on-road transportation, residential wood burning, fuel combustion, and industrial processes (ARB 2017).

Figure 4. California Black Carbon Emissions Inventory (Year 2013)



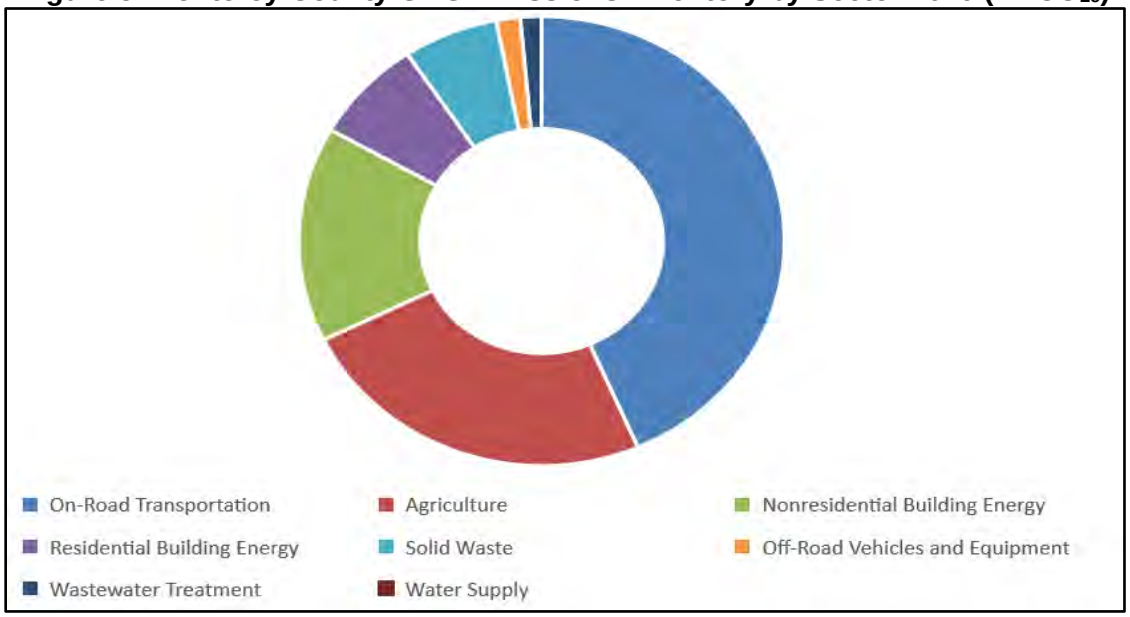
Source: ARB 2017

LOCAL

COUNTY OF MONTEREY

Within the County of Monterey, GHG emissions are predominantly associated with transportation, agriculture, and building energy. In 2019, GHG emissions within Monterey County totaled 1,101,405 metric tons (MT) of CO_2e. GHG emissions, by sector, are summarized in Figure 5. Within Monterey County, the transportation sector is the largest contributor, accounting for approximately 43 percent of the total county-wide GHG emissions. Emissions associated with agriculture uses are the second largest contributor, totaling roughly 24 percent. Building energy generation both non-residential and residential totaled roughly 23 percent (MCHD 2024).

Figure 5. Monterey County GHG Emissions Inventory by Sector 2019 ($MTCO_{2e}$)



Source: MCHDC 2024

EFFECTS OF GLOBAL CLIMATE CHANGE

There are uncertainties as to exactly what the climate changes would occur in various local areas of Earth. There are also uncertainties associated with the magnitude and timing of other consequences of a warmer planet: sea-level rise, the spread of certain diseases out of their usual geographic range, the effect on agricultural production, water supply, sustainability of ecosystems, increased strength and frequency of storms, extreme heat events, increased air pollution episodes, and the consequence of these effects on the economy.

Within California, climate changes would likely alter the ecological characteristics of many ecosystems throughout the state. Such alterations would likely include increases in surface temperatures and changes in the form, timing, and intensity of precipitation. For instance, historical records depict an increasing trend toward earlier snowmelt in the Sierra Nevada. This snowpack is a principal supply of water for the state, providing roughly 50 percent of the state's annual runoff. If this trend continues, some areas of the state may experience an increased danger of floods during the winter months and possible exhaustion of the snowpack during the spring and summer months. An earlier snowmelt would also impact the State's energy resources. Currently, approximately 20 percent of California's electricity comes from hydropower. An early exhaustion of the Sierra snowpack may force electricity producers to switch to more costly or non-renewable forms of electricity generation during the spring and summer months. A changing climate may also impact agricultural crop yields, coastal structures, and biodiversity. As a result, resultant changes in climate would likely have detrimental effects on some of California's largest industries, including agriculture, wine, tourism, skiing, recreational and commercial fishing, and forestry (ARB 2017).

REGULATORY FRAMEWORK

FEDERAL

Executive Order 13514

Executive Order 13514 is focused on reducing GHGs internally in federal agency missions, programs, and operations. In addition, the executive order directs federal agencies to participate in the Interagency Climate Change Adaptation Task Force, which is engaged in developing a national strategy for adaptation to climate change.

On April 2, 2007, in Massachusetts v. U.S. EPA, 549 U.S. 497 (2007), the Supreme Court found that GHGs are air pollutants covered by the FCAA and that the U.S. EPA has the authority to regulate GHG. The Court held that the U.S. EPA Administrator must determine whether or not emissions of GHGs from new motor vehicles cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision.

On December 7, 2009, the U.S. EPA Administrator signed two distinct findings regarding GHGs under section 202(a) of the Clean Air Act:

- Endangerment Finding: The Administrator found that the current and projected concentrations of the six key well-mixed GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) in the atmosphere threaten the public health and welfare of current and future generations.
- Cause or Contribute Finding: The Administrator found that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution which threatens public health and welfare.

Although these findings did not themselves impose any requirements on industry or other entities, this action was a prerequisite to finalizing the U.S. EPA's "Proposed Greenhouse Gas Emission Standards for Light-Duty Vehicles", which was published on September 15, 2009. On May 7, 2010, the final "Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards" was published in the Federal Register.

U.S. EPA and the National Highway Traffic Safety Administration (NHTSA) are taking coordinated steps to enable the production of a new generation of clean vehicles with reduced GHG emissions and improved fuel efficiency from on-road vehicles and engines. These next steps include developing the first-ever GHG regulations for heavy-duty engines and vehicles, as well as additional light-duty vehicle GHG regulations. These steps were outlined by President Obama in a Presidential Memorandum on May 21, 2010.

The final combined U.S. EPA and NHTSA standards that make up the first phase of this national program apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. The standards require these vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile (the equivalent to 35.5 miles per gallon if the automobile industry were to meet this CO_2 level solely through fuel economy improvements). Together, these standards would cut GHG emissions by an estimated 960 MMT and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016). On August 28, 2012, U.S. EPA and NHTSA issued their joint rule to extend this national program of coordinated GHG and fuel economy standards to model years 2017 through 2025 passenger vehicles.

STATE

Assembly Bill 1493

AB 1493 (Pavley) of 2002 (Health and Safety Code Sections 42823 and 43018.5) requires the ARB to develop and adopt the nation's first GHG emission standards for automobiles. These standards are also known as Pavley I. The California Legislature declared in AB 1493 that global warming is a matter of increasing concern for public health and the environment. It cites several risks that California faces from climate change, including a reduction in the state's water supply; an increase in air pollution caused by higher temperatures; harm to agriculture; an increase in wildfires; damage to the coastline; and economic losses caused by higher food, water, energy, and insurance prices. The bill also states that technological solutions to reduce GHG emissions would stimulate California's economy and provide jobs. In 2004, the State of California submitted a request for a waiver from federal clean air regulations, as the State is authorized to do under the FCAA, to allow the State to require reduced tailpipe emissions of CO_2. In late 2007, the U.S. EPA denied California's waiver request and declined to promulgate adequate federal regulations limiting GHG emissions. In early 2008, the State brought suit against the U.S. EPA related to this denial.

In January 2009, President Obama instructed the U.S. EPA to reconsider the Bush Administration's denial of California's and 13 other states' requests to implement global warming pollution standards for cars and trucks. In June 2009, the U.S. EPA granted California's waiver request, enabling the State to enforce its GHG emissions standards for new motor vehicles beginning with the current model year.

In 2009, President Obama announced a national policy aimed at both increasing fuel economy and reducing GHG pollution for all new cars and trucks sold in the US. The new standards would cover model years 2012 to 2016 and would raise passenger vehicle fuel economy to a fleet average of 35.5 miles per gallon by 2016. When the national program takes effect, California has committed to allowing automakers who show compliance with the national program to also be deemed in compliance with state requirements. California is committed to further strengthening these standards beginning in 2017 to obtain a 45 percent GHG reduction from the 2020 model year vehicles.

Executive Order No. S-3-05

Executive Order S-3-05 (State of California) proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra's snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the Executive Order established total GHG emission targets. Specifically, emissions are to be reduced to the 2000 level by 2010, to the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

The Executive Order directed the secretary of the California Environmental Protection Agency (CalEPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. The secretary will also submit

biannual reports to the governor and state legislature describing (1) progress made toward reaching the emission targets, (2) impacts of global warming on California's resources, and (3) mitigation and adaptation plans to combat these impacts. To comply with the Executive Order, the secretary of CalEPA created a Climate Action Team made up of members from various state agencies and commissions. The Climate Action Team released its first report in March 2006 and continues to release periodic reports on progress. The report proposed to achieve the targets by building on voluntary actions of California businesses, local government, and community actions, as well as through state incentive and regulatory programs.

Assembly Bill 32 - California Global Warming Solutions Act of 2006

AB 32 (Health and Safety Code Sections 38500, 38501, 28510, 38530, 38550, 38560, 38561–38565, 38570, 38571, 38574, 38580, 38590, 38592–38599) requires that statewide GHG emissions be reduced to 1990 levels by the year 2020. The gases that are regulated by AB 32 include CO_2, CH_4, N_2O, HFCs, PFCs, NF_3, and SF_6. The reduction to 1990 levels will be accomplished through an enforceable statewide cap on GHG emissions that were phased in starting in 2012. To effectively implement the cap, AB 32 directs ARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then ARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

AB 32 requires that ARB adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrives at the cap, institute a schedule to meet the emissions cap, and develop tracking, reporting, and enforcement mechanisms to ensure that the state achieves reductions in GHG emissions necessary to meet the cap. AB 32 also includes guidance to institute emissions reductions in an economically efficient manner and conditions to ensure that businesses and consumers are not unfairly affected by the reductions (ARB 2018c).

Climate Change Scoping Plan

In October 2008, ARB published its *Climate Change Proposed Scoping Plan,* which is the State's plan to achieve GHG reductions in California required by AB 32. This initial Scoping Plan contained the main strategies to be implemented in order to achieve the target emission levels identified in AB 32. The Scoping Plan included ARB-recommended GHG reductions for each emissions sector of the state's GHG inventory. The largest proposed GHG reduction recommendations were associated with improving emissions standards for light-duty vehicles, implementing the Low Carbon Fuel Standard program, implementing energy efficiency measures in buildings and appliances, the widespread development of combined heat and power systems, and developing a renewable portfolio standard for electricity production. The Scoping Plan states that land use planning and urban growth decisions will play important roles in the state's GHG reductions because local governments have primary authority to plan, zone, approve, and permit how land is developed to accommodate population growth and the changing needs of their jurisdictions. ARB further acknowledges that decisions on how land is used will have large impacts on the GHG emissions that will result from the transportation, housing, industry, forestry, water, agriculture, electricity, and natural gas emissions sectors. With regard to land use planning, the Scoping Plan expects approximately 5.0 MMT CO_2e will be achieved associated with the implementation of Senate Bill 375, which is discussed further below.

The initial Scoping Plan was first approved by ARB on December 11, 2008, and is updated every five years. The first update of the Scoping Plan was approved by the ARB on May 22, 2014, which looked past 2020 to set mid-term goals (2030-2035) on the road to reaching the 2050 goals., The *2017 Climate Change Scoping Plan*, was released in November 2017. The *2017 Climate Change Scoping Plan* incorporates strategies for achieving the 2030 GHG-reduction target established in SB 32 and EO B-30-15. Most notably, the *2017 Climate Change Scoping Plan* encourages zero net increases in GHG emissions. However, the *2017 Climate Change Scoping Plan* recognizes that achieving net zero increases in GHG emissions may not be possible or appropriate for all projects and that the inability of a project to mitigate its GHG emissions to zero would not imply the project results in a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA.

On November 16, 2022, the ARB approved the *2022 Scoping Plan for Achieving Carbon Neutrality*. The 2022 Scoping Plan continues the path to achieve the SB 32 2030 target and expands upon earlier plans by targeting an 85 percent reduction in GHG below 1990 levels by 2045 (CARB 2022b).

Senate Bill 1078 and Governor's Order S-14-08 (California Renewables Portfolio Standards)

Senate Bill 1078 (Public Utilities Code Sections 387, 390.1, 399.25, and Article 16) addresses electricity supply and requires that retail sellers of electricity, including investor-owned utilities and community choice aggregators, provide a minimum of 20 percent of their supply from renewable sources by 2017. This Senate Bill will affect statewide GHG emissions associated with electricity generation. In 2008, Governor Schwarzenegger signed Executive Order S-14-08, which set the Renewables Portfolio Standard target to 33 percent by 2020. It directed state government agencies and retail sellers of electricity to take all appropriate actions to implement this target. Executive Order S-14-08 was later superseded by Executive Order S-21-09 on September 15, 2009. Executive Order S-21-09 directed the ARB to adopt regulations requiring 33 percent of electricity sold in the State to come from renewable energy by 2020. Statute SB X1-2 superseded this Executive Order in 2011, which obligated all California electricity providers, including investor-owned utilities and publicly owned utilities, to obtain at least 33 percent of their energy from renewable electrical generation facilities by 2020.

ARB is required by current law, AB 32 of 2006, to regulate sources of GHGs to meet a state goal of reducing GHG emissions to 1990 levels by 2020 and an 80 percent reduction of 1990 levels by 2050. The California Energy Commission and California Public Utilities Commission serve in advisory roles to help ARB develop the regulations to administer the 33 percent by 2020 requirement. ARB is also authorized to increase the target and accelerate and expand the time frame.

Mandatory Reporting of GHG Emissions

The California Global Warming Solutions Act (AB 32, 2006) requires the reporting of GHGs by major sources to the ARB. Major sources required to report GHG emissions include industrial facilities, suppliers of transportation fuels, natural gas, natural gas liquids, liquefied petroleum gas and carbon dioxide, operators of petroleum and natural gas systems, and electricity retail providers and marketers.

Cap-and-Trade Regulation

The cap-and-trade regulation is a key element in California's climate plan. It sets a statewide limit on sources responsible for 85 percent of California's GHG emissions and establishes a price signal needed to drive long-term investment in cleaner fuels and more efficient use of energy. The cap-and-trade rules came into effect on January 1, 2013, and apply to large electric power plants and large industrial plants. In 2015, fuel distributors, including distributors of heating and transportation fuels, also became subject to the cap-and-trade rules. At that stage, the program will encompass around 360 businesses throughout California and nearly 85 percent of the state's total GHG emissions.

Under the cap-and-trade regulation, companies must hold enough emission allowances to cover their emissions and are free to buy and sell allowances on the open market. California held its first auction of GHG allowances on November 14, 2012. California's GHG cap-and-trade system is projected to reduce GHG emissions to 1990 levels by the year 2020 and would achieve an approximate 80 percent reduction from 1990 levels by 2050.

Senate Bill 32

Senate Bill 32 (SB 32) was signed by Governor Brown on September 8, 2016. SB 32 effectively extends California's GHG emission-reduction goals from the year 2020 to year 2030. This new emission-reduction target of 40 percent below 1990 levels by 2030 is intended to promote further GHG-reductions in support of the State's ultimate goal of reducing GHG emissions by 80 percent below 1990 levels by 2050. SB 32 also directs the ARB to update the Climate Change Scoping Plan to address this interim 2030 emission-reduction target.

Senate Bill 375

Senate Bill 375 (SB 375) requires Metropolitan Planning Organizations (MPOs) to adopt a sustainable communities strategy (SCS) or alternative planning strategy (APS) that will address land-use allocation in that MPOs regional transportation plan. ARB, in consultation with MPOs, establishes regional reduction targets for GHGs emitted by passenger cars and light trucks for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. ARB is also charged with reviewing each MPO's SCS or APS for consistency with its assigned targets. If MPOs do not meet the GHG reduction targets, funding for transportation projects may be withheld.

California Building Code

The California Building Code (CBC) contains standards that regulate the method of use, properties, performance, or types of materials used in the construction, alteration, improvement, repair, or rehabilitation of a building or other improvements to real property. The CBC is adopted every three years by the BSC. In the interim, the BSC also adopts annual updates to make necessary mid-term corrections. The CBC standards apply statewide; however, a local jurisdiction may amend a CBC standard if it makes a finding that the amendment is reasonably necessary due to local climatic, geological, or topographical conditions.

Green Building Standards

In essence, green building standards are indistinguishable from any other building standards. Both standards are contained in the CBC and regulate the construction of new buildings and improvements. The only practical distinction between the two is that whereas the focus of traditional building standards has been protecting public health and safety, the focus of green building standards is to improve environmental performance. The standards are updated periodically to allow for the consideration and possible incorporation of new energy efficiency technologies and methods.

Senate Bill 97

Senate Bill 97 (SB 97) was enacted in 2007. SB 97 required OPR to develop, and the Natural Resources Agency to adopt, amendments to the CEQA Guidelines addressing the analysis and mitigation of GHG emissions. Those CEQA Guidelines amendments clarified several points, including the following:

- Lead agencies must analyze the GHG emissions of proposed projects and must reach a conclusion regarding the significance of those emissions.
- When a project's GHG emissions may be significant, lead agencies must consider a range of potential mitigation measures to reduce those emissions.
- Lead agencies must analyze potentially significant impacts associated with placing projects in hazardous locations, including locations potentially affected by climate change.
- Lead agencies may significantly streamline the analysis of GHGs on a project level by using a programmatic GHG emissions reduction plan meeting certain criteria.
- CEQA mandates analysis of a proposed project's potential energy use (including transportation-related energy), sources of energy supply, and ways to reduce energy demand, including through the use of efficient transportation alternatives.

As part of the administrative rulemaking process, the California Natural Resources Agency developed a Final Statement of Reasons explaining the legal and factual bases, intent, and purpose of the CEQA Guidelines amendments. The amendments to the CEQA Guidelines implementing SB 97 became effective on March 18, 2010.

Short-Lived Climate Pollutant Reduction Strategy

In March 2017, the ARB adopted the "Short-Lived Climate Pollutant Reduction Strategy" (*SLCP Strategy*) establishing a path to decrease GHG emissions and displace fossil-based natural gas use. Strategies include avoiding landfill methane emissions by reducing the disposal of organics through edible food recovery, composting, in-vessel digestion, and other processes; and recovering methane from wastewater treatment

facilities, and manure methane at dairies, and using the methane as a renewable source of natural gas to fuel vehicles or generate electricity. The *SLCP Strategy* also identifies steps to reduce natural gas leaks from oil and gas wells, pipelines, valves, and pumps to improve safety, avoid energy losses, and reduce methane emissions associated with natural gas use. Lastly, the *SLCP Strategy* also identifies measures that can reduce hydrofluorocarbon (HFC) emissions at national and international levels, in addition to State-level action that includes an incentive program to encourage the use of low-Global Warming Potential (GWP) refrigerants, and limitations on the use of high-GWP refrigerants in new refrigeration and air-conditioning equipment (ARB 2017).

Association of Monterey Bay Area Governments 2022-2045 MTP/SCS

The Association of Monterey Bay Area Governments (AMBAG) 2022-2045 MTP/SCS seeks to ensure that transportation within the county operates and will continue to operate efficiently. The metropolitan transportation plan focuses on regional transportation infrastructure needs while the SCS addresses planned growth patterns. Linking MTP and SCS ensures that future changes to the regional transportation network will address both existing and future needs. Key State goals, policies, and Executive Orders considered in the 2045 MTP/SCS include but are not limited to the following:

- SB 375 and SCS Program and Evaluation Guidelines
- 2017 Regional Transportation Plan Guidelines for Metropolitan Planning Organizations
- California Transportation Plan 2050
- California Senate Bill 32 (Pavley, 2016): Reduce GHG emissions 40% below 1990 levels by 2030
- EO B-55-18: Carbon Neutrality by 2045
- EO S-3-05: Reduce GHG emissions 80% below 1990 levels by 2050
- EO N-19-19: empowers the California State Transportation Agency (CalSTA) to leverage discretionary state transportation funds to help meet the state's climate goals.
- EO N-79-20: 100% zero-emission vehicle sales by 2035

PROJECT IMPACTS

THRESHOLDS OF SIGNIFICANCE

In accordance with CEQA Guidelines, a project would be considered to have a significant impact on climate change if it would:

a) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or,

b) Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

For stationary sources subject to MBARD permitting requirements, MBARD has established a threshold of 10,000 $MTCO_2e$/year. For non-permitted projects subject to CEQA review, MBARD has not adopted recommended GHG significance thresholds or GHG impact assessment guidance. However, other air districts in the State have recently released guidance for the evaluation of GHG impacts. For instance, the Bay Area Air Quality Management District (BAAQMD) has recently released recommended GHG significance thresholds that are based on a "fair share" approach for achieving carbon neutrality goals and to ensure consistency with the State's GHG-reduction efforts, including the State's Climate Change Scoping Plan. Consistent with this approach, new land use development projects would be considered to be consistent with the State's carbon neutrality goals and would be considered to have a less-than-significant impact if: 1) the project is deemed consistent with regional VMT-reduction targets; 2) the project reduces the need for natural gas infrastructure; and 3) the project would not result in a wasteful, inefficient, or unnecessary energy use as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines. Similarly, the Sacramento Metropolitan Air Quality Management District (SMAQMD) has also recently released Best Management Practices (BMPs), which also include the prohibited

installation of natural gas infrastructure for development projects as well as a requirement that projects meet current CalGreen Tier 2 standards for electric-vehicle (EV) spaces, except that EV-capable spaces shall instead be EV ready. This additional requirement requires the installation of electrical infrastructure sufficient to service the future installation of EV chargers. The BAAQMD and SMAQMD thresholds are based on an approach endorsed by the Supreme Court in *Center for Biological Diversity v. Department of Fish & Wildlife* (2015). Although not located within these jurisdictions, development in Monterey County and associated GHG emissions are comparable to those generated by developments within other areas of the state, including the BAAQMD and SMAQMD jurisdictions. Given that climate change is inherently a cumulative impact that occurs on a global scale, these BMPs would, likewise, be considered representative of the project's "fair share" of what would be required to meet the State's long-term climate goals, including achieving carbon neutrality by 2045, and ensuring consistency with the State's Climate Change Scoping Plan. It is also important to note that the CARB 2022 Scoping Plan states that under the Lead Agencies discretion with supporting evidence projects that incorporate some but not all key attributes could be found by the lead agency as being consistent with the State's Scoping Plan.

For purposes of this analysis, project-generated GHG emissions would be considered to have a potentially-significant impact if the project would conflict with applicable GHG-reduction plans, or if the project would not incorporate applicable BMPs for the reduction of GHG emissions. In addition, stationary-source GHG emissions exceeding MBARD's significance threshold of 10,000 $MTCO_2e$/year would be considered to have a potentially significant impact on the environment.

METHODOLOGY

Short-term construction and long-term operational emissions associated with the construction of the project were quantified using the CalEEMod, version 2022.1.1.29. Emissions were quantified based on project-specific data provided and default modeling parameters contained in the model for Monterey County. Construction-generated GHG emissions were amortized over an approximate 30-year project life and included with operational emissions estimates. Operational emission sources included water use for tree establishment (approximately two years), electricity use for onsite lighting, and emissions associated with the operation of the proposed emergency generator. In comparison to existing operations, the proposed project would not result in a significant change in worker vehicle trips. GHG emissions attributable to the proposed project are presented for informational purposes. Refer to Appendix A for emissions modeling assumptions and results.

PROJECT IMPACTS

Impact GHG A	*Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*

Implementation of the proposed project would contribute to increases in GHG emissions that are associated with global climate change. Short-term and long-term GHG emissions associated with the development of the proposed project are discussed in greater detail, as follows:

Short-term Greenhouse Gas Emissions

Short-term annual GHG emissions are summarized in Table 11. Based on the modeling conducted, annual emissions of GHGs associated with the construction of the proposed project would total approximately 311 $MTCO_2e$/year in 2025 and 255 $MTCO_2e$/year in 2026. There would also be a small amount of GHG emissions from waste generated during construction; however, this amount is speculative. Actual emissions would vary, depending on various factors including construction schedules, equipment required, and activities conducted. Assuming an average project life of 30 years, amortized construction-generated GHG emissions would total approximately 18.9 $MTCO_2e$/yr.

Table 11. Annual Construction GHG Emissions

Construction Year	GHG Emissions ($MTCO_2e$/year)
2025	311
2026	255
Total:	566
Amortized Construction Emissions:	18.9

1. Includes construction of proposed competition swimming pool.
2. Includes construction of proposed library expansion and proposed parking.
Based on CalEEMod computer modeling. Amortized construction-generated GHG emissions assume a 30-year project life. Refer to Appendix A for modeling results and assumptions.

Long-term Greenhouse Gas Emissions

Estimated long-term operational increases in GHG emissions are summarized in Table 12. As depicted, annual operational GHG emissions associated with water use and electricity use would total approximately 0.04 $MTCO_2e$/year. It is important to note that the proposed project would include the installation of high-efficiency exterior lighting to reduce electricity demand and water-efficient drip irrigation systems for reducing water demand. The drip irrigation systems are anticipated to only be required during initial tree establishment, which is anticipated to be during the initial two years of project operations. With the inclusion of amortized construction emissions, total GHG emissions from all emission sources, including permitted and non-permitted sources, would total approximately 1,535 $MTCO_2e$/year.

As depicted in Table 12, annual operational GHG emissions associated with the operation of the emergency generator would total approximately 1,516 $MTCO_{2e}$/year. Operational GHG emissions associated with the emergency generator would not exceed MBARD's significance threshold of 10,000 $MTCO_2e$/year for permitted stationary sources. As a result, operational GHG emissions for permitted stationary sources would be considered to have a less-than-significant impact.

Table 12. Annual Operational GHG Emissions

Construction	GHG Emissions ($MTCO_2e$/year)
Electricity Use	0.03
Water Use	0.01
Amortized Construction Emissions	18.9
Total Non-Permitted Sources:	18.9
Permitted Stationary Source - Emergency Generator	1,516
Total All Sources:	1,535
Total Permitted Stationary Sources:	1,516
MBARD Significance Threshold for Permitted Stationary Sources:	10,000
Exceeds MBARD Significance Threshold for Permitted Stationary Sources?	No

1. Includes construction of proposed competition swimming pool.
2. Includes construction of proposed library expansion and proposed parking.
Based on CalEEMod computer modeling. Amortized construction-generated GHG emissions assume a 30-year project life. Refer to Appendix A for modeling results and assumptions.

Impact GHG B	*Would the project conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?*

Applicable GHG-reduction plans include the Monterey Bay Association of Governments (AMBAG) *2022-245 MTP/SCS* and ARB's *Climate Change Scoping Plan*. Project consistency with these plans is discussed in greater detail, as follows:

AMBAG 2022-2045 MTP/SCS Consistency

To support the State's GHG-reduction goals, including the goals mandated by SB 32, California established the Sustainable Communities and Climate Protection Act (SB 375). SB 375 requires regional metropolitan planning organizations, such as AMBAG, to develop SCSs that align transportation, housing, and land use decisions toward achieving the State's GHG emissions-reduction targets. Under SB 375, the development and implementation of SCSs, which link transportation, land use, housing, and climate policy at the regional level, are designed to reduce per capita mobile-source GHG emissions, which is accomplished through the implementation of measures that would result in reductions in per capita VMT.

As previously noted, the AMBAG 2022-2045 MTP/SCS was developed in accordance with state and federal requirements including SB 375 which aims to reduce GHG emissions related to mobile sources. The proposed project would not result in a long-term increase in vehicle trips. As a result, the proposed project would not conflict with any goals or objectives identified in the AMBAG 2022-2045 MTP/SCS.

Climate Change Scoping Plan

The previously adopted 2017 Climate Change Scoping Plan incorporated the State's GHG emissions reduction target of 40 percent below 1990 emissions levels by 2030, as mandated by SB 32. On November 16, 2022, the ARB approved the 2022 Scoping Plan for Achieving Carbon Neutrality. The recently adopted 2022 Scoping Plan continues the path to achieve the SB 32 2030 target and expands upon earlier Scoping Plans by targeting an 85 percent reduction in GHG below 1990 levels by 2045. A significant part of achieving the SB 32 goals are strategies to promote sustainable communities, such as the promotion of zero net energy buildings, and improved transportation choices that result in reducing VMT. Other measures include the increased use of low-carbon fuels and cleaner vehicles.

As previously noted, the proposed project would include the installation of high-efficiency exterior lighting to reduce electricity demand and water-efficient drip irrigation systems for reducing water demand. The drip irrigation systems are anticipated to only be required during initial tree establishment, which is anticipated to be during the initial two years of project operations. As such, the proposed project includes BMPs that would constitute its "fair share" of what would be required to meet the State's long-term climate goals, including achieving carbon neutrality by 2045. In addition, implementation of the proposed project would not result in increases in VMT and associated mobile-source emissions. The proposed project would not have the potential to generate GHG emissions that would have a significant impact on the environment, or potentially conflicting with applicable greenhouse emission reduction plans and policies. As a result, this impact would be considered less than significant.

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APPENDIX A
Emissions Modeling

MCWD CSUMB Water Tank Detailed Report

Notes: Not all modeled emission sources apply to this project. Construction mitigation measures have been included for informational purposes.

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	MCWD CSUMB Water Tank
Construction Start Date	6/2/2025
Operational Year	2027
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.80
Precipitation (days)	32.6
Location	36.654008225032285, -121.79996723848703
County	Monterey
City	Seaside
Air District	Monterey Bay ARD
Air Basin	North Central Coast
TAZ	3262
EDFZ	6
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.29

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
General Light Industry	1.00	1000sqft	2.50	1,000	500	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-2*	Limit Heavy-Duty Diesel Vehicle Idling
Construction	C-5	Use Advanced Engine Tiers
Construction	C-10-A	Water Exposed Surfaces
Construction	C-10-B	Water Active Demolition Sites
Construction	C-10-C	Water Unpaved Construction Roads
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads
Construction	C-12	Sweep Paved 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.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.44	20.9	23.0	0.05	0.89	8.25	8.91	0.82	3.65	4.30	5,655
Mit.	1.02	22.7	26.0	0.05	0.91	3.39	4.08	0.82	1.15	1.81	5,655
% Reduced	58%	-8%	-13%	—	-2%	59%	54%	1%	68%	58%	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.10	19.2	22.8	0.05	0.70	1.46	2.16	0.64	0.23	0.88	5,408
Mit.	1.21	23.6	25.3	0.05	1.02	1.46	2.48	0.93	0.23	1.16	5,408
% Reduced	42%	-23%	-11%	—	-46%	—	-15%	-45%	—	-33%	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.71	6.72	7.34	0.02	0.25	1.24	1.50	0.23	0.48	0.71	1,877

Mit.	0.37	7.60	8.12	0.02	0.31	0.66	0.97	0.28	0.18	0.46	1,877
% Reduced	48%	-13%	-11%	—	-22%	47%	35%	-20%	63%	35%	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.13	1.23	1.34	< 0.005	0.05	0.23	0.27	0.04	0.09	0.13	311
Mit.	0.07	1.39	1.48	< 0.005	0.06	0.12	0.18	0.05	0.03	0.08	311
% Reduced	48%	-13%	-11%	—	-22%	47%	35%	-20%	63%	35%	—

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
2025	2.44	20.9	23.0	0.05	0.89	8.25	8.91	0.82	3.65	4.30	5,655
2026	1.11	10.0	13.4	0.02	0.38	1.10	1.47	0.35	0.18	0.52	3,048
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
2025	1.74	16.1	18.6	0.04	0.60	1.10	1.70	0.55	0.18	0.73	4,423
2026	2.10	19.2	22.8	0.05	0.70	1.46	2.16	0.64	0.23	0.88	5,408
Average Daily	—	—	—	—	—	—	—	—	—	—	—
2025	0.71	6.72	7.34	0.02	0.25	1.24	1.50	0.23	0.48	0.71	1,877
2026	0.57	5.21	6.65	0.01	0.19	0.46	0.65	0.17	0.08	0.25	1,538
Annual	—	—	—	—	—	—	—	—	—	—	—
2025	0.13	1.23	1.34	< 0.005	0.05	0.23	0.27	0.04	0.09	0.13	311
2026	0.10	0.95	1.21	< 0.005	0.03	0.08	0.12	0.03	0.01	0.05	255

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
2025	1.02	22.7	26.0	0.05	0.91	3.39	4.08	0.82	1.15	1.81	5,655
2026	0.56	12.3	13.9	0.02	0.55	1.10	1.65	0.51	0.18	0.68	3,048
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
2025	1.02	19.3	20.8	0.04	0.81	1.10	1.91	0.74	0.18	0.92	4,423
2026	1.21	23.6	25.3	0.05	1.02	1.46	2.48	0.93	0.23	1.16	5,408
Average Daily	—	—	—	—	—	—	—	—	—	—	—
2025	0.37	7.60	8.12	0.02	0.31	0.66	0.97	0.28	0.18	0.46	1,877
2026	0.32	6.47	7.05	0.01	0.28	0.46	0.75	0.26	0.08	0.33	1,538
Annual	—	—	—	—	—	—	—	—	—	—	—
2025	0.07	1.39	1.48	< 0.005	0.06	0.12	0.18	0.05	0.03	0.08	311
2026	0.06	1.18	1.29	< 0.005	0.05	0.08	0.14	0.05	0.01	0.06	255

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.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.99	9.64	10.9	0.01	0.43	0.01	0.45	0.43	< 0.005	0.44	1,532
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.99	9.64	10.8	0.01	0.43	0.01	0.45	0.43	< 0.005	0.44	1,531
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.05	0.06	0.18	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	23.4
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.01	0.01	0.03	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.87

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.01	0.01	0.10	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	12.6
Area	0.03	< 0.005	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.18
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.03
Water	—	—	—	—	—	—	—	—	—	—	0.01
Waste	—	—	—	—	—	—	—	—	—	—	2.34
Refrig.	—	—	—	—	—	—	—	—	—	—	0.26
Stationary	2.95	9.63	10.7	0.01	0.43	0.00	0.43	0.43	0.00	0.43	1,516
Total	2.99	9.64	10.9	0.01	0.43	0.01	0.45	0.43	< 0.005	0.44	1,532
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.01	0.01	0.09	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	11.9
Area	0.02	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.03
Water	—	—	—	—	—	—	—	—	—	—	0.01
Waste	—	—	—	—	—	—	—	—	—	—	2.34
Refrig.	—	—	—	—	—	—	—	—	—	—	0.26
Stationary	2.95	9.63	10.7	0.01	0.43	0.00	0.43	0.43	0.00	0.43	1,516
Total	2.99	9.64	10.8	0.01	0.43	0.01	0.45	0.43	< 0.005	0.44	1,531
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.01	0.01	0.09	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	12.0
Area	0.03	< 0.005	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.12
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.03
Water	—	—	—	—	—	—	—	—	—	—	0.01

Waste	—	—	—	—	—	—	—	—	—	—	2.34
Refrig.	—	—	—	—	—	—	—	—	—	—	0.26
Stationary	0.02	0.05	0.06	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	8.65
Total	0.05	0.06	0.18	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	23.4
Annual	—	—	—	—	—	—	—	—	—	—	—
Mobile	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.98
Area	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.02
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.01
Water	—	—	—	—	—	—	—	—	—	—	< 0.005
Waste	—	—	—	—	—	—	—	—	—	—	0.39
Refrig.	—	—	—	—	—	—	—	—	—	—	0.04
Stationary	< 0.005	0.01	0.01	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	1.43
Total	0.01	0.01	0.03	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.87

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.01	0.01	0.10	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	12.6
Area	0.03	< 0.005	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.18
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.03
Water	—	—	—	—	—	—	—	—	—	—	0.01
Waste	—	—	—	—	—	—	—	—	—	—	2.34
Refrig.	—	—	—	—	—	—	—	—	—	—	0.26
Stationary	2.95	9.63	10.7	0.01	0.43	0.00	0.43	0.43	0.00	0.43	1,516
Total	2.99	9.64	10.9	0.01	0.43	0.01	0.45	0.43	< 0.005	0.44	1,532
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—

Mobile	0.01	0.01	0.09	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	11.9
Area	0.02	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.03
Water	—	—	—	—	—	—	—	—	—	—	0.01
Waste	—	—	—	—	—	—	—	—	—	—	2.34
Refrig.	—	—	—	—	—	—	—	—	—	—	0.26
Stationary	2.95	9.63	10.7	0.01	0.43	0.00	0.43	0.43	0.00	0.43	1,516
Total	2.99	9.64	10.8	0.01	0.43	0.01	0.45	0.43	< 0.005	0.44	1,531
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.01	0.01	0.09	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	12.0
Area	0.03	< 0.005	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.12
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.03
Water	—	—	—	—	—	—	—	—	—	—	0.01
Waste	—	—	—	—	—	—	—	—	—	—	2.34
Refrig.	—	—	—	—	—	—	—	—	—	—	0.26
Stationary	0.02	0.05	0.06	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	8.65
Total	0.05	0.06	0.18	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	23.4
Annual	—	—	—	—	—	—	—	—	—	—	—
Mobile	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.98
Area	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.02
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.01
Water	—	—	—	—	—	—	—	—	—	—	< 0.005
Waste	—	—	—	—	—	—	—	—	—	—	0.39
Refrig.	—	—	—	—	—	—	—	—	—	—	0.04
Stationary	< 0.005	0.01	0.01	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	1.43
Total	0.01	0.01	0.03	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.87

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.64	4.23	5.16	0.01	0.17	—	0.17	0.16	—	0.16	1,617
Demolition	—	—	—	—	—	0.00	0.00	—	0.00	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.26	0.31	< 0.005	0.01	—	0.01	0.01	—	0.01	97.4
Demolition	—	—	—	—	—	0.00	0.00	—	0.00	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
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.05	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	16.1
Demolition	—	—	—	—	—	0.00	0.00	—	0.00	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
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.27	0.00	0.00	0.12	0.12	0.00	0.02	0.02	44.1
Vendor	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	0.45	0.17	< 0.005	0.01	0.24	0.24	0.01	0.04	0.05	376
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	2.52
Vendor	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	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	22.6
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.42
Vendor	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	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.74

3.2. Demolition (2025) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.33	7.97	8.47	0.01	0.35	—	0.35	0.32	—	0.32	1,617
Demolition	—	—	—	—	—	0.00	0.00	—	0.00	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.48	0.51	< 0.005	0.02	—	0.02	0.02	—	0.02	97.4
Demolition	—	—	—	—	—	0.00	0.00	—	0.00	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
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.09	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	16.1
Demolition	—	—	—	—	—	0.00	0.00	—	0.00	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
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.27	0.00	0.00	0.12	0.12	0.00	0.02	0.02	44.1
Vendor	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	0.45	0.17	< 0.005	0.01	0.24	0.24	0.01	0.04	0.05	376
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	2.52
Vendor	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	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	22.6
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.42
Vendor	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	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.74

3.3. Site Preparation (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.72	15.7	17.0	0.03	0.70	—	0.70	0.65	—	0.65	2,970
Dust From Material Movement	—	—	—	—	—	6.55	6.55	—	3.37	3.37	—
Onsite truck	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	0.05	0.43	0.46	< 0.005	0.02	—	0.02	0.02	—	0.02	81.4
Dust From Material Movement	—	—	—	—	—	0.18	0.18	—	0.09	0.09	—
Onsite truck	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	0.08	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	13.5
Dust From Material Movement	—	—	—	—	—	0.03	0.03	—	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
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.27	0.00	0.00	0.12	0.12	0.00	0.02	0.02	44.1
Vendor	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	0.45	0.17	< 0.005	0.01	0.24	0.24	0.01	0.04	0.05	376
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.14
Vendor	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	0.01	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	10.3
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.19
Vendor	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	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.70

3.4. Site Preparation (2025) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.50	13.8	16.7	0.03	0.54	—	0.54	0.49	—	0.49	2,970
Dust From Material Movement	—	—	—	—	—	1.70	1.70	—	0.88	0.88	—
Onsite truck	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	0.01	0.38	0.46	< 0.005	0.01	—	0.01	0.01	—	0.01	81.4
Dust From Material Movement	—	—	—	—	—	0.05	0.05	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.07	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	13.5
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
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.27	0.00	0.00	0.12	0.12	0.00	0.02	0.02	44.1

Vendor	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	0.45	0.17	< 0.005	0.01	0.24	0.24	0.01	0.04	0.05	376
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.14
Vendor	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	0.01	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	10.3
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.19
Vendor	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	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.70

3.5. Grading (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	10.2	9.42	0.02	0.44	—	0.44	0.41	—	0.41	1,674
Dust From Material Movement	—	—	—	—	—	6.56	6.56	—	3.37	3.37	—
Onsite truck	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	0.10	0.95	0.88	< 0.005	0.04	—	0.04	0.04	—	0.04	156

Dust From Material Movement	—	—	—	—	—	0.61	0.61	—	0.31	0.31	—
Onsite truck	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	0.17	0.16	< 0.005	0.01	—	0.01	0.01	—	0.01	25.8
Dust From Material Movement	—	—	—	—	—	0.11	0.11	—	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
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.27	0.00	0.00	0.12	0.12	0.00	0.02	0.02	44.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.04	2.30	0.86	0.01	0.03	1.20	1.24	0.03	0.20	0.24	1,900
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	3.89
Vendor	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	0.22	0.08	< 0.005	< 0.005	0.11	0.11	< 0.005	0.02	0.02	177
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.64
Vendor	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	0.04	0.01	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	29.3

3.6. Grading (2025) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.28	7.51	8.76	0.02	0.29	—	0.29	0.26	—	0.26	1,674
Dust From Material Movement	—	—	—	—	—	1.71	1.71	—	0.88	0.88	—
Onsite truck	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	0.70	0.82	< 0.005	0.03	—	0.03	0.02	—	0.02	156
Dust From Material Movement	—	—	—	—	—	0.16	0.16	—	0.08	0.08	—
Onsite truck	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	< 0.005	0.13	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	25.8
Dust From Material Movement	—	—	—	—	—	0.03	0.03	—	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
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.27	0.00	0.00	0.12	0.12	0.00	0.02	0.02	44.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.04	2.30	0.86	0.01	0.03	1.20	1.24	0.03	0.20	0.24	1,900
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	3.89
Vendor	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	0.22	0.08	< 0.005	< 0.005	0.11	0.11	< 0.005	0.02	0.02	177
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.64
Vendor	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	0.04	0.01	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	29.3

3.7. Construction (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	1.86	2.94	< 0.005	0.08	—	0.08	0.08	—	0.08	442
Architectural Coatings	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	1.86	2.94	< 0.005	0.08	—	0.08	0.08	—	0.08	442
Architectural Coatings	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.56	0.88	< 0.005	0.02	—	0.02	0.02	—	0.02	132

Architectural Coatings	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
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.10	0.16	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	21.9
Architectural Coatings	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
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.27	0.00	0.00	0.12	0.12	0.00	0.02	0.02	44.1
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.38
Hauling	0.01	0.45	0.17	< 0.005	0.01	0.24	0.24	0.01	0.04	0.05	376
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.26	0.00	0.00	0.12	0.12	0.00	0.02	0.02	41.5
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.38
Hauling	0.01	0.48	0.17	< 0.005	0.01	0.24	0.24	0.01	0.04	0.05	375
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.07	0.00	0.00	0.03	0.03	0.00	0.01	0.01	12.5
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.01
Hauling	< 0.005	0.14	0.05	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	112
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	2.07
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.17
Hauling	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	18.6

3.8. Construction (2025) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	2.29	3.10	< 0.005	0.09	—	0.09	0.08	—	0.08	442
Architectural Coatings	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	2.29	3.10	< 0.005	0.09	—	0.09	0.08	—	0.08	442
Architectural Coatings	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.69	0.93	< 0.005	0.03	—	0.03	0.03	—	0.03	132
Architectural Coatings	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
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.13	0.17	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	21.9
Architectural Coatings	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
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.27	0.00	0.00	0.12	0.12	0.00	0.02	0.02	44.1

Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.38
Hauling	0.01	0.45	0.17	< 0.005	0.01	0.24	0.24	0.01	0.04	0.05	376
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.26	0.00	0.00	0.12	0.12	0.00	0.02	0.02	41.5
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.38
Hauling	0.01	0.48	0.17	< 0.005	0.01	0.24	0.24	0.01	0.04	0.05	375
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.07	0.00	0.00	0.03	0.03	0.00	0.01	0.01	12.5
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.01
Hauling	< 0.005	0.14	0.05	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	112
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	2.07
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.17
Hauling	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	18.6

3.9. Construction (2026) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	1.74	2.92	< 0.005	0.07	—	0.07	0.06	—	0.06	442
Architectural Coatings	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.17	1.74	2.92	< 0.005	0.07	—	0.07	0.06	—	0.06	442
Architectural Coatings	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.57	0.97	< 0.005	0.02	—	0.02	0.02	—	0.02	146
Architectural Coatings	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
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.10	0.18	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	24.2
Architectural Coatings	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
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.25	0.00	0.00	0.12	0.12	0.00	0.02	0.02	43.3
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.32
Hauling	0.01	0.44	0.16	< 0.005	0.01	0.24	0.24	0.01	0.04	0.05	368
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.24	0.00	0.00	0.12	0.12	0.00	0.02	0.02	40.7
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.31
Hauling	0.01	0.46	0.17	< 0.005	0.01	0.24	0.24	0.01	0.04	0.05	368
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.08	0.00	0.00	0.04	0.04	0.00	0.01	0.01	13.5
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.10

Hauling	< 0.005	0.15	0.05	< 0.005	< 0.005	0.07	0.08	< 0.005	0.01	0.01	122
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	2.24
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.18
Hauling	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	20.2

3.10. Construction (2026) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	2.29	3.10	< 0.005	0.09	—	0.09	0.08	—	0.08	442
Architectural Coatings	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	2.29	3.10	< 0.005	0.09	—	0.09	0.08	—	0.08	442
Architectural Coatings	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.76	1.02	< 0.005	0.03	—	0.03	0.03	—	0.03	146
Architectural Coatings	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
Annual	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	< 0.005	0.14	0.19	< 0.005	0.01	—	0.01	0.01	—	0.01	24.2
Architectural Coatings	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
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.25	0.00	0.00	0.12	0.12	0.00	0.02	0.02	43.3
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.32
Hauling	0.01	0.44	0.16	< 0.005	0.01	0.24	0.24	0.01	0.04	0.05	368
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.24	0.00	0.00	0.12	0.12	0.00	0.02	0.02	40.7
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.31
Hauling	0.01	0.46	0.17	< 0.005	0.01	0.24	0.24	0.01	0.04	0.05	368
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.08	0.00	0.00	0.04	0.04	0.00	0.01	0.01	13.5
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.10
Hauling	< 0.005	0.15	0.05	< 0.005	< 0.005	0.07	0.08	< 0.005	0.01	0.01	122
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	2.24
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.18
Hauling	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	20.2

3.11. Tank Install (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.99	8.93	9.14	0.02	0.34	—	0.34	0.31	—	0.31	1,958
Onsite truck	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	0.99	8.93	9.14	0.02	0.34	—	0.34	0.31	—	0.31	1,958
Onsite truck	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	0.30	2.67	2.74	0.01	0.10	—	0.10	0.09	—	0.09	586
Onsite truck	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	0.05	0.49	0.50	< 0.005	0.02	—	0.02	0.02	—	0.02	97.1
Onsite truck	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	0.03	0.02	0.27	0.00	0.00	0.12	0.12	0.00	0.02	0.02	44.1
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.38
Hauling	0.01	0.45	0.17	< 0.005	0.01	0.24	0.24	0.01	0.04	0.05	376
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.26	0.00	0.00	0.12	0.12	0.00	0.02	0.02	41.5
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.38
Hauling	0.01	0.48	0.17	< 0.005	0.01	0.24	0.24	0.01	0.04	0.05	375
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.07	0.00	0.00	0.03	0.03	0.00	0.01	0.01	12.5

Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.01
Hauling	< 0.005	0.14	0.05	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	112
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	2.07
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.17
Hauling	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	18.6

3.12. Tank Install (2025) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	10.7	11.0	0.02	0.46	—	0.46	0.42	—	0.42	1,958
Onsite truck	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	10.7	11.0	0.02	0.46	—	0.46	0.42	—	0.42	1,958
Onsite truck	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	0.19	3.21	3.31	0.01	0.14	—	0.14	0.13	—	0.13	586
Onsite truck	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	0.59	0.60	< 0.005	0.03	—	0.03	0.02	—	0.02	97.1
Onsite truck	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	0.03	0.02	0.27	0.00	0.00	0.12	0.12	0.00	0.02	0.02	44.1
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.38
Hauling	0.01	0.45	0.17	< 0.005	0.01	0.24	0.24	0.01	0.04	0.05	376
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.26	0.00	0.00	0.12	0.12	0.00	0.02	0.02	41.5
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.38
Hauling	0.01	0.48	0.17	< 0.005	0.01	0.24	0.24	0.01	0.04	0.05	375
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.07	0.00	0.00	0.03	0.03	0.00	0.01	0.01	12.5
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.01
Hauling	< 0.005	0.14	0.05	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	112
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	2.07
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.17
Hauling	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	18.6

3.13. Tank Install (2026) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	8.57	9.05	0.02	0.31	—	0.31	0.29	—	0.29	1,958
Onsite truck	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	0.11	1.01	1.06	< 0.005	0.04	—	0.04	0.03	—	0.03	230
Onsite truck	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	0.18	0.19	< 0.005	0.01	—	0.01	0.01	—	0.01	38.1
Onsite truck	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	0.03	0.02	0.24	0.00	0.00	0.12	0.12	0.00	0.02	0.02	40.7
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.31
Hauling	0.01	0.46	0.17	< 0.005	0.01	0.24	0.24	0.01	0.04	0.05	368
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	4.81
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.39
Hauling	< 0.005	0.05	0.02	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	0.01	43.2
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.80
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.06
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	7.15

3.14. Tank Install (2026) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	10.7	11.0	0.02	0.46	—	0.46	0.42	—	0.42	1,958
Onsite truck	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	0.07	1.26	1.30	< 0.005	0.05	—	0.05	0.05	—	0.05	230
Onsite truck	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	0.23	0.24	< 0.005	0.01	—	0.01	0.01	—	0.01	38.1
Onsite truck	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	0.03	0.02	0.24	0.00	0.00	0.12	0.12	0.00	0.02	0.02	40.7
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.31
Hauling	0.01	0.46	0.17	< 0.005	0.01	0.24	0.24	0.01	0.04	0.05	368
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	4.81
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.39
Hauling	< 0.005	0.05	0.02	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	0.01	43.2
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.80
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.06
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	7.15

3.15. Pump Building (2026) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	1.47	1.56	< 0.005	0.06	—	0.06	0.06	—	0.06	257
Onsite truck	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	0.02	0.18	0.19	< 0.005	0.01	—	0.01	0.01	—	0.01	31.7
Onsite truck	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	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	5.25
Onsite truck	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	0.03	0.02	0.25	0.00	0.00	0.12	0.12	0.00	0.02	0.02	43.3
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.32
Hauling	0.01	0.44	0.16	< 0.005	0.01	0.24	0.24	0.01	0.04	0.05	368
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	5.05
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.41

Hauling	< 0.005	0.06	0.02	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	0.01	45.4
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.84
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.07
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	7.51

3.16. Pump Building (2026) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	1.58	1.59	< 0.005	0.06	—	0.06	0.06	—	0.06	257
Onsite truck	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	0.02	0.20	0.20	< 0.005	0.01	—	0.01	0.01	—	0.01	31.7
Onsite truck	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	< 0.005	0.04	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	5.25
Onsite truck	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	0.03	0.02	0.25	0.00	0.00	0.12	0.12	0.00	0.02	0.02	43.3
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.32

Hauling	0.01	0.44	0.16	< 0.005	0.01	0.24	0.24	0.01	0.04	0.05	368
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	5.05
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.41
Hauling	< 0.005	0.06	0.02	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	0.01	45.4
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.84
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.07
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	7.51

3.17. Paving (2026) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.40	3.26	4.03	0.01	0.15	—	0.15	0.14	—	0.14	601
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.40	3.26	4.03	0.01	0.15	—	0.15	0.14	—	0.14	601
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.05	0.40	0.50	< 0.005	0.02	—	0.02	0.02	—	0.02	74.1
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
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	12.3
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
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.25	0.00	0.00	0.12	0.12	0.00	0.02	0.02	43.3
Vendor	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	0.44	0.16	< 0.005	0.01	0.24	0.24	0.01	0.04	0.05	368
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.24	0.00	0.00	0.12	0.12	0.00	0.02	0.02	40.7
Vendor	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	0.46	0.17	< 0.005	0.01	0.24	0.24	0.01	0.04	0.05	368
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	5.05
Vendor	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	0.06	0.02	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	0.01	45.4
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.84
Vendor	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	0.01	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	7.51

3.18. Paving (2026) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	3.88	4.20	0.01	0.20	—	0.20	0.19	—	0.19	601
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	3.88	4.20	0.01	0.20	—	0.20	0.19	—	0.19	601
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.48	0.52	< 0.005	0.02	—	0.02	0.02	—	0.02	74.1
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
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.09	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	12.3
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
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.25	0.00	0.00	0.12	0.12	0.00	0.02	0.02	43.3

Vendor	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	0.44	0.16	< 0.005	0.01	0.24	0.24	0.01	0.04	0.05	368
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.24	0.00	0.00	0.12	0.12	0.00	0.02	0.02	40.7
Vendor	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	0.46	0.17	< 0.005	0.01	0.24	0.24	0.01	0.04	0.05	368
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	5.05
Vendor	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	0.06	0.02	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	0.01	45.4
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.84
Vendor	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	0.01	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	7.51

3.19. Excavation & Trenching (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.45	3.81	5.17	0.01	0.16	—	0.16	0.14	—	0.14	763
Onsite truck	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	0.45	3.81	5.17	0.01	0.16	—	0.16	0.14	—	0.14	763
Onsite truck	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	0.14	1.14	1.55	< 0.005	0.05	—	0.05	0.04	—	0.04	229
Onsite truck	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	0.21	0.28	< 0.005	0.01	—	0.01	0.01	—	0.01	37.8
Onsite truck	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	0.03	0.02	0.29	0.00	0.00	0.13	0.13	0.00	0.02	0.02	47.8
Vendor	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	0.45	0.17	< 0.005	0.01	0.24	0.24	0.01	0.04	0.05	376
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.28	0.00	0.00	0.13	0.13	0.00	0.02	0.02	44.9
Vendor	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	0.48	0.17	< 0.005	0.01	0.24	0.24	0.01	0.04	0.05	375
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.08	0.00	0.00	0.04	0.04	0.00	0.01	0.01	13.5
Vendor	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	0.14	0.05	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	112
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	2.24
Vendor	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	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	18.6

3.20. Excavation & Trenching (2025) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	4.78	5.29	0.01	0.24	—	0.24	0.22	—	0.22	763
Onsite truck	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	0.21	4.78	5.29	0.01	0.24	—	0.24	0.22	—	0.22	763
Onsite truck	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	0.06	1.43	1.58	< 0.005	0.07	—	0.07	0.07	—	0.07	229
Onsite truck	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	0.26	0.29	< 0.005	0.01	—	0.01	0.01	—	0.01	37.8
Onsite truck	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	0.03	0.02	0.29	0.00	0.00	0.13	0.13	0.00	0.02	0.02	47.8
Vendor	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	0.45	0.17	< 0.005	0.01	0.24	0.24	0.01	0.04	0.05	376
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.28	0.00	0.00	0.13	0.13	0.00	0.02	0.02	44.9
Vendor	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	0.48	0.17	< 0.005	0.01	0.24	0.24	0.01	0.04	0.05	375
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.08	0.00	0.00	0.04	0.04	0.00	0.01	0.01	13.5
Vendor	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	0.14	0.05	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	112
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	2.24
Vendor	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	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	18.6

3.21. Excavation & Trenching (2026) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.43	3.66	5.16	0.01	0.14	—	0.14	0.13	—	0.13	763
Onsite truck	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	0.43	3.66	5.16	0.01	0.14	—	0.14	0.13	—	0.13	763
Onsite truck	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	0.28	2.40	3.38	< 0.005	0.09	—	0.09	0.08	—	0.08	500
Onsite truck	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	0.05	0.44	0.62	< 0.005	0.02	—	0.02	0.02	—	0.02	82.8
Onsite truck	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	0.03	0.02	0.27	0.00	0.00	0.13	0.13	0.00	0.02	0.02	46.9
Vendor	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	0.44	0.16	< 0.005	0.01	0.24	0.24	0.01	0.04	0.05	368
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.26	0.00	0.00	0.13	0.13	0.00	0.02	0.02	44.1
Vendor	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	0.46	0.17	< 0.005	0.01	0.24	0.24	0.01	0.04	0.05	368
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.16	0.00	0.00	0.08	0.08	0.00	0.01	0.01	29.1
Vendor	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	0.30	0.11	< 0.005	< 0.005	0.15	0.15	< 0.005	0.03	0.03	241
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	4.82
Vendor	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	0.05	0.02	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	0.01	39.9

3.22. Excavation & Trenching (2026) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.21	4.78	5.29	0.01	0.24	—	0.24	0.22	—	0.22	763
Onsite truck	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	0.21	4.78	5.29	0.01	0.24	—	0.24	0.22	—	0.22	763
Onsite truck	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	0.14	3.13	3.47	< 0.005	0.16	—	0.16	0.14	—	0.14	500
Onsite truck	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	0.57	0.63	< 0.005	0.03	—	0.03	0.03	—	0.03	82.8
Onsite truck	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	0.03	0.02	0.27	0.00	0.00	0.13	0.13	0.00	0.02	0.02	46.9
Vendor	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	0.44	0.16	< 0.005	0.01	0.24	0.24	0.01	0.04	0.05	368
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.26	0.00	0.00	0.13	0.13	0.00	0.02	0.02	44.1
Vendor	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	0.46	0.17	< 0.005	0.01	0.24	0.24	0.01	0.04	0.05	368
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.16	0.00	0.00	0.08	0.08	0.00	0.01	0.01	29.1
Vendor	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	0.30	0.11	< 0.005	< 0.005	0.15	0.15	< 0.005	0.03	0.03	241

Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	4.82
Vendor	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	0.05	0.02	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	0.01	39.9

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.01	0.01	0.10	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	12.6
Total	0.01	0.01	0.10	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	12.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.01	0.01	0.09	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	11.9
Total	0.01	0.01	0.09	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	11.9
Annual	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.98
Total	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.98

4.1.2. Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.01	0.01	0.10	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	12.6
Total	0.01	0.01	0.10	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	12.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.01	0.01	0.09	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	11.9
Total	0.01	0.01	0.09	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	11.9
Annual	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.98
Total	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.98

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	0.03
Total	—	—	—	—	—	—	—	—	—	—	0.03
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	0.03
Total	—	—	—	—	—	—	—	—	—	—	0.03
Annual	—	—	—	—	—	—	—	—	—	—	—

General Light Industry	—	—	—	—	—	—	—	—	—	—	0.01
Total	—	—	—	—	—	—	—	—	—	—	0.01

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	0.03
Total	—	—	—	—	—	—	—	—	—	—	0.03
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	0.03
Total	—	—	—	—	—	—	—	—	—	—	0.03
Annual	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	0.01
Total	—	—	—	—	—	—	—	—	—	—	0.01

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	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
Annual	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	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

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	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
Annual	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	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

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.02	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.00	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.01	< 0.005	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.18
Total	0.03	< 0.005	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.18
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.02	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.00	—	—	—	—	—	—	—	—	—	—
Total	0.02	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	< 0.005	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.00	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.02
Total	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.02

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—

Consumer Products	0.02	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.00	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.01	< 0.005	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.18
Total	0.03	< 0.005	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.18
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.02	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.00	—	—	—	—	—	—	—	—	—	—
Total	0.02	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	< 0.005	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.00	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.02
Total	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.02

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	0.01

Total	—	—	—	—	—	—	—	—	—	—	0.01
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	0.01
Total	—	—	—	—	—	—	—	—	—	—	0.01
Annual	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	< 0.005

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	0.01
Total	—	—	—	—	—	—	—	—	—	—	0.01
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	0.01
Total	—	—	—	—	—	—	—	—	—	—	0.01
Annual	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	< 0.005

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	2.34
Total	—	—	—	—	—	—	—	—	—	—	2.34
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	2.34
Total	—	—	—	—	—	—	—	—	—	—	2.34
Annual	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	0.39
Total	—	—	—	—	—	—	—	—	—	—	0.39

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	2.34
Total	—	—	—	—	—	—	—	—	—	—	2.34
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	2.34
Total	—	—	—	—	—	—	—	—	—	—	2.34

Annual	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	0.39
Total	—	—	—	—	—	—	—	—	—	—	0.39

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	0.26
Total	—	—	—	—	—	—	—	—	—	—	0.26
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	0.26
Total	—	—	—	—	—	—	—	—	—	—	0.26
Annual	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	0.04
Total	—	—	—	—	—	—	—	—	—	—	0.04

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—

General Light Industry	—	—	—	—	—	—	—	—	—	—	0.26
Total	—	—	—	—	—	—	—	—	—	—	0.26
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	0.26
Total	—	—	—	—	—	—	—	—	—	—	0.26
Annual	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	0.04
Total	—	—	—	—	—	—	—	—	—	—	0.04

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	2.95	9.63	10.7	0.01	0.43	0.00	0.43	0.43	0.00	0.43	1,516
Total	2.95	9.63	10.7	0.01	0.43	0.00	0.43	0.43	0.00	0.43	1,516
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	2.95	9.63	10.7	0.01	0.43	0.00	0.43	0.43	0.00	0.43	1,516
Total	2.95	9.63	10.7	0.01	0.43	0.00	0.43	0.43	0.00	0.43	1,516
Annual	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	< 0.005	0.01	0.01	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	1.43
Total	< 0.005	0.01	0.01	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	1.43

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	2.95	9.63	10.7	0.01	0.43	0.00	0.43	0.43	0.00	0.43	1,516
Total	2.95	9.63	10.7	0.01	0.43	0.00	0.43	0.43	0.00	0.43	1,516
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	2.95	9.63	10.7	0.01	0.43	0.00	0.43	0.43	0.00	0.43	1,516
Total	2.95	9.63	10.7	0.01	0.43	0.00	0.43	0.43	0.00	0.43	1,516
Annual	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	< 0.005	0.01	0.01	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	1.43
Total	< 0.005	0.01	0.01	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	1.43

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—

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	Demolition	6/2/2025	7/1/2025	5.00	22.0	—
Site Preparation	Site Preparation	6/2/2025	6/15/2025	5.00	10.0	—
Grading	Grading	6/16/2025	7/31/2025	5.00	34.0	—
Construction	Building Construction	8/1/2025	6/18/2026	5.00	230	—
Tank Install	Building Construction	8/1/2025	3/1/2026	5.00	151	—
Pump Building	Building Construction	6/1/2026	8/1/2026	5.00	45.0	—
Paving	Paving	3/1/2026	5/1/2026	5.00	45.0	—
Excavation & Trenching	Trenching	8/1/2025	12/1/2026	5.00	348	—

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	Forklifts	Diesel	Average	1.00	8.00	33.0	0.73

Demolition	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	367	0.40
Site Preparation	Other General Industrial Equipment	Diesel	Average	2.00	8.00	100	0.41
Site Preparation	Rubber Tired Dozers	Diesel	Average	1.00	8.00	423	0.48
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Construction	Forklifts	Diesel	Average	1.00	8.00	82.0	0.20
Construction	Excavators	Diesel	Average	1.00	8.00	84.0	0.37
Tank Install	Cranes	Diesel	Average	1.00	8.00	367	0.29
Tank Install	Forklifts	Diesel	Average	1.00	8.00	82.0	0.20
Tank Install	Generator Sets	Diesel	Average	3.00	8.00	14.0	0.74
Tank Install	Aerial Lifts	Diesel	Average	1.00	8.00	84.0	0.37
Tank Install	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Pump Building	Forklifts	Diesel	Average	1.00	8.00	82.0	0.20
Pump Building	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Excavation & Trenching	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Excavation & Trenching	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Excavation & Trenching	Forklifts	Diesel	Average	1.00	8.00	82.0	0.20
Excavation & Trenching	Plate Compactors	Diesel	Average	1.00	8.00	8.00	0.43
Excavation & Trenching	Rollers	Diesel	Average	1.00	8.00	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	Forklifts	Diesel	Tier 3	1.00	8.00	33.0	0.73
Demolition	Tractors/Loaders/Backhoes	Diesel	Tier 3	1.00	8.00	367	0.40
Site Preparation	Other General Industrial Equipment	Diesel	Tier 3	2.00	8.00	100	0.41
Site Preparation	Rubber Tired Dozers	Diesel	Tier 3	1.00	8.00	423	0.48
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Tier 3	1.00	8.00	84.0	0.37
Grading	Rubber Tired Dozers	Diesel	Tier 3	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 3	1.00	8.00	84.0	0.37
Construction	Forklifts	Diesel	Tier 3	1.00	8.00	82.0	0.20
Construction	Excavators	Diesel	Tier 3	1.00	8.00	84.0	0.37
Tank Install	Cranes	Diesel	Tier 3	1.00	8.00	367	0.29
Tank Install	Forklifts	Diesel	Tier 3	1.00	8.00	82.0	0.20
Tank Install	Generator Sets	Diesel	Average	3.00	8.00	14.0	0.74
Tank Install	Aerial Lifts	Diesel	Tier 3	1.00	8.00	84.0	0.37
Tank Install	Welders	Diesel	Tier 3	1.00	8.00	46.0	0.45
Pump Building	Forklifts	Diesel	Tier 3	1.00	8.00	82.0	0.20
Pump Building	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Paving	Pavers	Diesel	Tier 3	1.00	8.00	81.0	0.42
Paving	Rollers	Diesel	Tier 3	2.00	8.00	36.0	0.38
Excavation & Trenching	Excavators	Diesel	Tier 3	1.00	8.00	36.0	0.38
Excavation & Trenching	Tractors/Loaders/Backhoes	Diesel	Tier 3	1.00	8.00	84.0	0.37
Excavation & Trenching	Forklifts	Diesel	Tier 3	1.00	8.00	82.0	0.20

Excavation & Trenching	Plate Compactors	Diesel	Average	1.00	8.00	8.00	0.43
Excavation & Trenching	Rollers	Diesel	Tier 3	1.00	8.00	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	—	—	—	—
Demolition	Worker	6.00	9.47	LDA,LDT1,LDT2
Demolition	Vendor	—	6.03	HHDT,MHDT
Demolition	Hauling	5.00	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	6.00	9.47	LDA,LDT1,LDT2
Site Preparation	Vendor	—	6.03	HHDT,MHDT
Site Preparation	Hauling	5.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	6.00	9.47	LDA,LDT1,LDT2
Grading	Vendor	—	6.03	HHDT,MHDT
Grading	Hauling	25.3	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Excavation & Trenching	—	—	—	—
Excavation & Trenching	Worker	6.50	9.47	LDA,LDT1,LDT2
Excavation & Trenching	Vendor	—	6.03	HHDT,MHDT
Excavation & Trenching	Hauling	5.00	20.0	HHDT
Excavation & Trenching	Onsite truck	—	—	HHDT

Paving	—	—	—	—
Paving	Worker	6.00	9.47	LDA,LDT1,LDT2
Paving	Vendor	—	6.03	HHDT,MHDT
Paving	Hauling	5.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Construction	—	—	—	—
Construction	Worker	6.00	9.47	LDA,LDT1,LDT2
Construction	Vendor	0.16	6.03	HHDT,MHDT
Construction	Hauling	5.00	20.0	HHDT
Construction	Onsite truck	—	—	HHDT
Tank Install	—	—	—	—
Tank Install	Worker	6.00	9.47	LDA,LDT1,LDT2
Tank Install	Vendor	0.16	6.03	HHDT,MHDT
Tank Install	Hauling	5.00	20.0	HHDT
Tank Install	Onsite truck	—	—	HHDT
Pump Building	—	—	—	—
Pump Building	Worker	6.00	9.47	LDA,LDT1,LDT2
Pump Building	Vendor	0.16	6.03	HHDT,MHDT
Pump Building	Hauling	5.00	20.0	HHDT
Pump Building	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	6.00	9.47	LDA,LDT1,LDT2
Demolition	Vendor	—	6.03	HHDT,MHDT
Demolition	Hauling	5.00	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT

Site Preparation	—	—	—	—
Site Preparation	Worker	6.00	9.47	LDA,LDT1,LDT2
Site Preparation	Vendor	—	6.03	HHDT,MHDT
Site Preparation	Hauling	5.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	6.00	9.47	LDA,LDT1,LDT2
Grading	Vendor	—	6.03	HHDT,MHDT
Grading	Hauling	25.3	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Excavation & Trenching	—	—	—	—
Excavation & Trenching	Worker	6.50	9.47	LDA,LDT1,LDT2
Excavation & Trenching	Vendor	—	6.03	HHDT,MHDT
Excavation & Trenching	Hauling	5.00	20.0	HHDT
Excavation & Trenching	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	6.00	9.47	LDA,LDT1,LDT2
Paving	Vendor	—	6.03	HHDT,MHDT
Paving	Hauling	5.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Construction	—	—	—	—
Construction	Worker	6.00	9.47	LDA,LDT1,LDT2
Construction	Vendor	0.16	6.03	HHDT,MHDT
Construction	Hauling	5.00	20.0	HHDT
Construction	Onsite truck	—	—	HHDT
Tank Install	—	—	—	—
Tank Install	Worker	6.00	9.47	LDA,LDT1,LDT2
Tank Install	Vendor	0.16	6.03	HHDT,MHDT

Tank Install	Hauling	5.00	20.0	HHDT
Tank Install	Onsite truck	—	—	HHDT
Pump Building	—	—	—	—
Pump Building	Worker	6.00	9.47	LDA,LDT1,LDT2
Pump Building	Vendor	0.16	6.03	HHDT,MHDT
Pump Building	Hauling	5.00	20.0	HHDT
Pump Building	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)
Construction	0.00	0.00	0.00	0.00	—

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 (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	0.00	—
Site Preparation	0.00	0.00	5.00	0.00	—
Grading	115	6,762	17.0	0.00	—
Paving	0.00	0.00	0.00	0.00	0.00

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
General Light Industry	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	204	0.03	< 0.005
2026	0.00	204	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
General Light Industry	2.00	2.00	2.00	730	15.8	15.8	15.8	5,764

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
General Light Industry	2.00	2.00	2.00	730	15.8	15.8	15.8	5,764

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	1,500	500	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

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)
General Light Industry	55.0	204	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)

General Light Industry	55.0	204	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)
General Light Industry	0.00	15,514

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Light Industry	0.00	15,514

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Light Industry	1.24	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Light Industry	1.24	—

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

General Light Industry	Other commercial A/C and heat pumps	R-410A	2,088	0.30	4.00	4.00	18.0

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Light Industry	Other commercial A/C and heat pumps	R-410A	2,088	0.30	4.00	4.00	18.0

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
Emergency Generator	Diesel	1.00	24.0	50.0	75.0	0.73

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	6.01	annual days of extreme heat
Extreme Precipitation	1.90	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	31.4	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	N/A	N/A	N/A	N/A
Drought	0	0	0	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	N/A	N/A	N/A	N/A
Drought	1	1	1	2
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	10.6

AQ-PM	2.50
AQ-DPM	70.1
Drinking Water	49.2
Lead Risk Housing	—
Pesticides	0.00
Toxic Releases	5.74
Traffic	3.49
Effect Indicators	—
CleanUp Sites	68.9
Groundwater	10.6
Haz Waste Facilities/Generators	62.5
Impaired Water Bodies	0.00
Solid Waste	0.00
Sensitive Population	—
Asthma	49.9
Cardio-vascular	18.4
Low Birth Weights	—
Socioeconomic Factor Indicators	—
Education	—
Housing	—
Linguistic	—
Poverty	—
Unemployment	99.9

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	—
Employed	—
Median HI	—
Education	—
Bachelor's or higher	—
High school enrollment	—
Preschool enrollment	—
Transportation	—
Auto Access	—
Active commuting	—
Social	—
2-parent households	—
Voting	—
Neighborhood	—
Alcohol availability	—
Park access	—
Retail density	—
Supermarket access	—
Tree canopy	—
Housing	—
Homeownership	—
Housing habitability	—
Low-inc homeowner severe housing cost burden	—
Low-inc renter severe housing cost burden	—
Uncrowded housing	—
Health Outcomes	—
Insured adults	—
Arthritis	0.0

Asthma ER Admissions	76.7
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	0.0
Cognitively Disabled	98.0
Physically Disabled	98.4
Heart Attack ER Admissions	95.7
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	0.0
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	99.4
Elderly	99.8
English Speaking	0.0
Foreign-born	0.0

Outdoor Workers	98.2
Climate Change Adaptive Capacity	—
Impervious Surface Cover	22.0
Traffic Density	0.0
Traffic Access	0.0
Other Indices	—
Hardship	0.0
Other Decision Support	—
2016 Voting	0.0

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	—
Healthy Places Index Score for Project Location (b)	—
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
Land Use	Based on total area of disturbance of 2.5 acres
Construction: Construction Phases	Based on project info provided.
Construction: Off-Road Equipment	Based on project information provided
Construction: Trips and VMT	Based on project information provided
Construction: Architectural Coatings	No arch coating required
Operations: Vehicle Data	Assumes an average of one maintenance trip per day (2 one-way trips/day).
Operations: Fleet Mix	Based on project information provided
Operations: Road Dust	Assumes travel on paved surfaces. Project site would be paved.
Operations: Architectural Coatings	Arch coatings not required
Operations: Energy Use	Exterior lighting assumes average of 11 kWh/yr per high-efficiency light (e.g. LED) and an estimated 5 lights. No nat gas required.
Operations: Water and Waste Water	ETWU 15514 g/y for two years
Operations: Off-Road Equipment	75 hp diesel gen set tier 3
Construction: On-Road Fugitive Dust	Based on project information provided

Appendix B
SPECIAL-STATUS SPECIES TABLE AND REPORTS

Special-Status Species Table

Marina, Monterey, Moss Landing, Prunedale, Salinas, Seaside, and Spreckels Quadrangles

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
MAMMALS			
Corynorhinus townsendii Townsend's big-eared bat	— / CSC / —	Found primarily in rural settings from inland deserts to coastal redwoods, oak woodland of the inner Coast Ranges and Sierra foothills, and low to mid-elevation mixed coniferous-deciduous forests. Typically roost during the day in limestone caves, lava tubes, and mines, but can roost in buildings that offer suitable conditions. Night roosts are in more open settings and include bridges, rock crevices, and trees.	**Low** Marginally night roosting habitat is present within the project site. No suitable day roosting habitat is present. The CNDDB reports one occurrence of this species within the quadrangles reviewed, located approximately 3.6 miles east of the project site.
Neotoma macrotis luciana Monterey dusky-footed woodrat	— / CSC / —	Forest and oak woodland habitats of moderate canopy with moderate to dense understory. Also occurs in chaparral habitats.	**Moderate** Suitable habitat is present within the project site. The CNDDB reports only one occurrence of this species within the quadrangles reviewed, located approximately 6.8 miles east of the project site. However, this species is known to occur throughout the former Fort Ord.
Sorex ornatus salarius **Monterey ornate shrew**	— / CSC / —	Mostly moist or riparian woodland habitats and within chaparral, grassland, and emergent wetland habitats where there is a thick duff or downed logs.	**Unlikely** No suitable habitat in project site.
Taxidea taxus American badger	— / CSC / —	Dry, open grasslands, fields, pastures savannas, and mountain meadows near timberline are preferred. The principal requirements seem to be sufficient food, friable soils, and relatively open, uncultivated grounds.	**Unlikely** No suitable habitat in project site.
BIRDS			
Agelaius tricolor Tricolored blackbird (nesting colony)	— / SC+CSC / —	Nest in colonies in dense riparian vegetation, along rivers, lagoons, lakes, and ponds. Forages over grassland or aquatic habitats.	**Unlikely** No suitable habitat in project site.
Asio flammeus Short-eared owl (nesting)	— / CSC / —	Usually found in open areas with few trees, such as annual and perennial grasslands, prairies, meadows, dunes, irrigated lands, and saline and freshwater emergent marshes. Dense vegetation is required for roosting and nesting cover. This includes tall grasses, brush, ditches, and wetlands. Open, treeless areas containing elevated sites for perching, such as fence posts or small mounds, are also needed. Some individuals breed in northern California.	**Unlikely** No suitable habitat in project site.

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Athene cunicularia Burrowing owl (burrow sites and some wintering sites)	— / SC / —	Year-round resident of open, dry grassland and desert habitats, and in grass, forb and open shrub stages of pinyon-juniper and ponderosa pine habitats. Frequent open grasslands and shrublands with perches and burrows. Use rodent burrows (often California ground squirrel) for roosting and nesting cover. Pipes, culverts, and nest boxes may be substituted for burrows in areas where burrows are not available.	**Unlikely** No suitable habitat in project site.
Brachyramphus marmoratus Marbled murrelet	FT / SE / —	Occur year-round in marine subtidal and pelagic habitats from the Oregon border to Point Sal. Partial to coastlines with stands of mature redwood and Douglas-fir. Requires dense mature forests of redwood and/or Douglas-fir for breeding and nesting.	**Unlikely** No suitable habitat in project site.
Charadrius alexandrinus nivosus Western snowy plover	FT / CSC / —	Sandy beaches on marine and estuarine shores, also salt pond levees and the shores of large alkali lakes. Requires sandy, gravelly or friable soil substrate for nesting.	**Unlikely** No suitable habitat in project site.
Coturnicops noveboracensis Yellow rail	— / CSC / —	Wet meadows and coastal tidal marshes. Occurs year round in California, but in two primary seasonal roles: as a very local breeder in the northeastern interior and as a winter visitor (early Oct to mid-Apr) on the coast and in the Suisun Marsh region	**Unlikely** No suitable habitat in project site.
Cypseloides niger Black swift	— / CSC / —	Regularly nests in moist crevice or cave on sea cliffs above the surf, or on cliffs behind, or adjacent to, waterfalls in deep canyons. Forages widely over many habitats.	**Unlikely** No suitable habitat in project site.
Elanus leucurus White-tailed kite (nesting)	— / CFP / —	Open groves, river valleys, marshes, and grasslands. Prefer such area with low roosts (fences etc.). Nest in shrubs and trees adjacent to grasslands.	**Unlikely** No suitable habitat in project site.
Empidonax traillii extimus Southwestern willow flycatcher	FE / SE / —	Breeds in riparian habitat in areas ranging in elevation from sea level to over 2,600 meters. Builds nest in trees in densely vegetated areas. This species establishes nesting territories and builds, and forages in mosaics of relatively dense and expansive areas of trees and shrubs, near or adjacent to surface water or underlain by saturated soils. Not typically found nesting in areas without willows (*Salix sp*.), tamarisk (*Tamarix ramosissima*), or both.	**Unlikely** No suitable habitat in project site.
Falco peregrinus anatum American peregrine falcon (nesting)	— / CFP / —	Forages for other birds over a variety of habitats. Breeds primarily on rocky cliffs.	**Unlikely** No suitable habitat in project site.

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Gymnogyps californianus California condor	FE / SE /—	Roosting sites in isolated rocky cliffs, rugged chaparral, and pine covered mountains 2000-6000 feet above sea level. Foraging area removed from nesting/roosting site (includes rangeland and coastal area - up to 19 mile commute one way). Nest sites in cliffs, crevices, potholes.	**Unlikely** No suitable habitat in project site.
Laterallus jamaicensis coturniculus California black rail	— / ST+CFP / —	Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that does not fluctuate during the year and dense vegetation for nesting habitat.	**Unlikely** No suitable habitat in project site.
Pelecanus occidentalis californicus California brown pelican	— / CFP / —	Found in estuarine, marine subtidal, and marine pelagic waters along the California coast. Usually rests on water or inaccessible rocks, but also uses mudflats, sandy beaches, wharfs, and jetties.	**Unlikely** No suitable habitat in project site.
Rallus obsoletus obsoletus California Ridgway's rail	FE / SE+CFP / —	Salt and brackish marshes.	**Unlikely** No suitable habitat in project site.
Riparia riparia Bank swallow (nesting)	— / ST / —	Nest colonially in sand banks. Found near water; fields, marshes, streams, and lakes.	**Unlikely** No suitable habitat in project site.
Sterna antillarum browni California least tern	FE / SE / —	Prefers undisturbed nest sites on open, sandy/gravelly shores near shallow-water feeding areas in estuaries. Sea beaches, bays, large rivers, bars.	**Unlikely** No suitable habitat in project site.
Vireo bellii pusillus Least Bell's Vireo	FE / SE / —	Riparian areas and drainages. Breed in willow riparian forest supporting a dense, shrubby understory. Oak woodland with a willow riparian understory is also used in some areas, and individuals sometimes enter adjacent chaparral, coastal sage scrub, or desert scrub habitats to forage.	**Unlikely** No suitable habitat in project site.
REPTILES AND AMPHIBIANS			
Actinemys marmorata Northwestern pond turtle	FC / CSC / —	Associated with permanent or nearly permanent water in a wide variety of habitats including streams, lakes, ponds, irrigation ditches, etc. Require basking sites such as partially submerged logs, rocks, mats of vegetation, or open banks.	**Unlikely** No suitable habitat in project site.
Actinemys pallida Southwestern pond turtle	FC / CSC / —	Associated with permanent or nearly permanent water in a wide variety of habitats including streams, lakes, ponds, irrigation ditches, etc. Require basking sites such as partially submerged logs, rocks, mats of vegetation, or open banks.	**Unlikely** No suitable habitat in project site.
Ambystoma californiense **California tiger salamander**	FT / ST /—	Annual grassland and grassy understory of valley-foothill hardwood habitats in central and northern California. Need underground refuges and vernal pools or other seasonal water sources.	**Unlikely** No suitable habitat in project site. The project site is outside the dispersal range of any known or potential breeding ponds.

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Ambystoma macrodactylum croceum Santa Cruz long-toed salamander	FE / SE+CFP /—	Preferred habitats include ponderosa pine, montane hardwood-conifer, mixed conifer, montane riparian, red fir and wet meadows. Occurs in a small number of localities in Santa Cruz and Monterey Counties. Adults spend the majority of the time in underground burrows and beneath objects. Larvae prefer shallow water with clumps of vegetation.	**Unlikely** No suitable habitat in project site.
Anniella pulchra **Northern California legless lizard**	— / CSC / —	Requires moist, warm habitats with loose soil for burrowing and prostrate plant cover, often forages in leaf litter at plant bases; may be found on beaches, sandy washes, and in woodland, chaparral, and riparian areas.	**High** Suitable habitat is present within the project site. The CNDDB reports 56 occurrences of this species within the quadrangles reviewed, including multiple occurrences within two miles of the project site in all directions.
Phrynosoma blainvillii Coast horned lizard	— / CSC / —	Associated with open patches of sandy soils in washes, chaparral, scrub, and grasslands.	**High** Suitable habitat is present within the project site. The CNDDB reports five occurrences of this species within the quadrangles reviewed, the nearest located approximately 1.7 miles north of the project site. In addition, DD&A has observed this species throughout the former Fort Ord in similar habitat conditions.
Rana boylii Foothill yellow-legged frog	FE / SE / —	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats, including hardwood, pine, and riparian forests, scrub, chaparral, and wet meadows. Rarely encountered far from permanent water.	**Unlikely** No suitable habitat in project site.
Rana draytonii **California red-legged frog**	FT / CSC / —	Lowlands and foothills in or near permanent or late-season sources of deep water with dense, shrubby, or emergent riparian vegetation. During late summer or fall adults are known to utilize a variety of upland habitats with leaf litter or mammal burrows.	**Unlikely** Suitable dispersal habitat is present within the project site; however, the project site is outside of the known dispersal range of any known breeding resources.
Spea hammondii Western spadefoot	FC / CSC / —	Grasslands with shallow temporary pools are optimal habitats for the western spadefoot. Occur primarily in grassland habitats, but can be found in valley and foothill woodlands. Vernal pools are essential for breeding and egg laying.	**Unlikely** No suitable habitat in project site.
Taricha torosa Coast Range newt	— / CSC / —	Occurs mainly in valley-foothill hardwood, valley-foothill hardwood-conifer, coastal scrub, and mixed chaparral but is known to occur in grasslands and mixed conifer types. Seek cover under rocks and logs, in mammal burrows, rock fissures, or man-made structures such as wells. Breed in intermittent ponds, streams, lakes, and reservoirs.	**Unlikely** No suitable habitat in project site.

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Thamnophis hammondii Two-striped garter snake	— / CSC / —	Associated with permanent or semi-permanent bodies of water bordered by dense vegetation in a variety of habitats from sea level to 2400m elevation.	**Unlikely** No suitable habitat in project site.
FISH			
Eucyclogobius newberryi Tidewater goby	FE / CSC / —	Brackish water habitats, found in shallow lagoons and lower stream reaches. Tidewater gobies appear to be naturally absent (now and historically) from three large stretches of coastline where lagoons or estuaries are absent and steep topography or swift currents may prevent tidewater gobies from dispersing between adjacent localities. The southernmost large, natural gap occurs between the Salinas River in Monterey County and Arroyo del Oso in San Luis Obispo County.	**Not Present** No suitable obligate habitat in project site.
Oncorhynchus mykiss irideus Steelhead (south-central California coast DPS)	FT / — / —	Cold headwaters, creeks, and small to large rivers and lakes; anadromous in coastal streams.	**Not Present** No suitable obligate habitat in project site.
Spirinchus thaleichthys Longfin smelt	FC / ST+CSC / —	Euryhaline, nektonic and anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefers salinities of 15-30 PPT, but can be found in completely freshwater to almost pure seawater.	**Not Present** No suitable obligate habitat in project site.
INVERTEBRATES			
Bombus crotchii Crotch bumble bee	— / SC / —	Occurs in open grassland and scrub at relatively warm and dry sites. Requires plants that bloom and provide adequate nectar and pollen throughout the colony's life cycle, which is from early February to late October. Generally nests underground, often in abandoned mammal burrows. Within California, this species is known to occur in the Mediterranean, Pacific Coast, Western Desert, as well as Great Valley and adjacent foothill regions.	**Low** Marginally suitable habitat is present within the project site. However, the project site does not provide adequate sources of nectar for the entire life cycle of this species.
Bombus occidentalis Western bumble bee	— / SC / —	Found in a range of habitats, including mixed woodlands, farmlands, urban parks and gardens, montane meadows, and prairie grasslands. Requires plants that bloom and provide adequate nectar and pollen throughout the colony's life cycle, which is from early February to late November. Generally nests underground, often in abandoned mammal burrows. Populations are currently largely restricted to high elevation sites in the Sierra Nevada; however, the historic range includes the northern California coast.	**Unlikely** Marginally habitat is present within the project site. However, the project site does not provide adequate sources of nectar for the entire life cycle of this species and the site is outside the current range of this species.

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Branchinecta lynchi Vernal pool fairy shrimp	FT / — / —	Require ephemeral pools with no flow. Associated with vernal pool/grasslands from near Red Bluff (Shasta County), through the central valley, and into the South Coast Mountains Region. Require ephemeral pools with no flow.	**Not Present** No suitable obligate habitat in project site.
Danaus plexippus Monarch butterfly	FC / — / —	Overwinters in coastal California using colonial roosts generally found in Eucalyptus, pine and acacia trees. Overwintering habitat for this species within the Coastal Zone represents ESHA. Local ordinances often protect this species as well.	**Unlikely** No suitable habitat is present within the project site. No overwintering occurrences are known within the project site.
Euphilotes enoptes smithi **Smith's blue butterfly**	FE / — / —	Most commonly associated with coastal dunes and coastal sage scrub plant communities in Monterey and Santa Cruz Counties. Plant hosts are *Eriogonum latifolium* and *E. parvifolium*.	**Not Present** No suitable habitat in project site. The obligate host plants were not identified within the project site during 2023 or 2025 biological surveys.
Linderiella occidentalis **California linderiella (fairy shrimp)**	— / — / —	Ephemeral ponds with no flow. Generally associated with hardpans.	**Not Present** No suitable obligate habitat in project site.
PLANTS			
Agrostis lacuna-vernalis Vernal pool bent grass	— / — / 1B	Vernal pool Mima mounds at elevations of 115-145 meters. Annual herb in the Poaceae family; blooms April-May. Known only from Butterfly Valley and Machine Gun Flats of Ft. Ord National Monument.	**Not Present** No suitable obligate habitat in project site. The project site is outside the known range of this species.
Allium hickmanii Hickman's onion	— / — / 1B	Mesic areas of closed-cone coniferous forests, maritime chaparral, coastal prairie, coastal scrub, and valley and foothill grasslands at elevations of 5-200 meters. Bulbiferous perennial herb in the Alliaceae family; blooms March-May.	**Not Present** No suitable habitat in project site. Not observed during 2023 or 2025 biological surveys.
Aphyllon robbinsii Robbins' broomrape	— / — / 1B	Coastal bluff scrub and possibly coastal dunes at elevations of 0-100 meters. Achlorophyllous annual herb in the Orobanchaceae family; blooms April-July.	**Not Present** No suitable habitat in project site. Not observed during 2023 or 2025 biological surveys.
Arctostaphylos hookeri* ssp. *hookeri **Hooker's manzanita**	— / — / 1B	Closed-cone coniferous forest, chaparral, cismontane woodland, and coastal scrub on sandy soils at elevations of 85-536 meters. Evergreen shrub in the Ericaceae family; blooms January-June.	**Not Present** Not observed in project site during 2023 or 2025 biological surveys.
Arctostaphylos montereyensis **Toro manzanita**	— / — / 1B	Maritime chaparral, cismontane woodland, and coastal scrub on sandy soils at elevations of 30-730 meters. Evergreen shrub in the Ericaceae family; blooms February-March.	**Not Present** Not observed in project site during 2023 or 2025 biological surveys.
Arctostaphylos pajaroensis Pajaro manzanita	— / — / 1B	Chaparral on sandy soils at elevations of 30-760 meters. Evergreen shrub in the Ericaceae family; blooms December-March.	**Not Present** Not observed in project site during 2023 or 2025 biological surveys.

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Arctostaphylos pumila **Sandmat manzanita**	— / — / 1B	Openings of closed-cone coniferous forests, maritime chaparral, cismontane woodland, coastal dunes, and coastal scrub on sandy soils at elevations of 3-205 meters. Evergreen shrub in the Ericaceae family; blooms February-May.	**Not Present** Not observed in project site during 2023 or 2025 biological surveys.
Arenaria paludicola Marsh sandwort	FE / SE / 1B	Known from only two natural occurrences in Black Lake Canyon and at Oso Flaco Lake. Sandy openings of freshwater of brackish marshes and swamps at elevations of 3-170 meters. Stoloniferous perennial herb in the Caryophyllaceae family; blooms May-August.	**Not Present** No suitable habitat in project site. The project site is outside the known range of this species. Not observed during 2023 or 2025 biological surveys.
Astragalus tener var. *tener* Alkali milk-vetch	— / — / 1B	Playas, valley and foothill grassland on adobe clay, and vernal pools on alkaline soils at elevations of 1-60 meters. Annual herb in the Fabaceae family; blooms March-June.	**Not Present** No suitable habitat in project site. Not observed during 2023 or 2025 biological surveys.
Astragalus tener var. *titi* Coastal dunes milk-vetch	FE / SE / 1B	Sandy soils in coastal bluff scrub, coastal dunes, coastal prairie (mesic); elevation 3-164 feet. Annual herb in the Fabaceae family; blooms March-May.	**Not Present** No suitable habitat in project site. Not observed during 2023 or 2025 biological surveys.
Bryoria spiralifera Twisted horsehair lichen	— / — / 1B	California North Coast coniferous forest at elevations of 0–30 meters. Often found on conifers, including *Picea sitchensis*, *Pinus contorta* var. *contorta*, *Pseudotsuga menziesii*, *Abies grandis*, and *Tsuga heterophylla*. Fruticose lichen in the Parmeliaceae family.	**Not Present** No suitable habitat in project site. The project site is outside the known elevation range of this species. Not observed during 2023 or 2025 biological surveys.
Castilleja ambigua var. insalutata Pink Johnny-nip	— / — / 1B	Coastal prairie and coastal scrub at elevations of 0-100 meters. Annual herb in the Orobanchaceae family; blooms May-August.	**Not Present** No suitable habitat in project site. Not observed during 2023 or 2025 biological surveys.
Ceanothus rigidus **Monterey ceanothus**	— / — / —	Closed cone coniferous forest, chaparral, and coastal scrub on sandy soils at elevations of 3-550 meters. Evergreen shrub in the Rhamnaceae family, blooms February-June.	**Not Present** Not observed in project site during 2023 or 2025 biological surveys.
Centromadia parryi ssp. *congdonii* Congdon's tarplant	— / — / 1B	Valley and foothill grassland on heavy clay, saline, or alkaline soils at elevations of 0-230 meters. Annual herb in the Asteraceae family; blooms May-November.	**Not Present** No suitable habitat in project site. Not observed during 2023 or 2025 biological surveys.
Chorizanthe minutiflora Fort Ord spineflower	— / — / 1B	Sandy openings of maritime chaparral and coastal scrub at elevations of 55-150 meters. Only known occurrences on Fort Ord National Monument. Annual herb in the Polygonaceae family; blooms April-July.	**Not Present** Not observed during 2023 or 2025 biological surveys.

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Chorizanthe pungens* var. *pungens **Monterey spineflower**	FT / — / 1B	Maritime chaparral, cismontane woodland, coastal dunes, coastal scrub, and valley and foothill grassland on sandy soils at elevations of 3-450 meters. Annual herb in the Polygonaceae family; blooms April-July.	**Present** Suitable habitat is present within the project site. This species was observed in the proposed B2 reservoir yard during the 2023 biological survey. This species was not observed within the existing B1 reservoir yard during the 2025 biological survey.
Chorizanthe robusta var. *robusta* Robust spineflower	FE / — / 1B	Openings in cismontane woodland, coastal dunes, maritime chaparral, and coastal scrub on sandy or gravelly soils at elevations of 3-300 meters. Annual herb in the Polygonaceae family; blooms April-September.	**Not Present** Not observed during 2023 or 2025 biological surveys.
Clarkia jolonensis Jolon clarkia	— / — / 1B	Cismontane woodland, chaparral, riparian woodland, and coastal scrub at elevations of 20-660 meters. Annual herb in the Onagraceae family; blooms April-June.	**Not Present** Not observed during 2023 or 2025 biological surveys.
Collinsia multicolor San Francisco collinsia	— / — / 1B	Closed-cone coniferous forest and coastal scrub, sometimes on serpentinite soils, at elevations of 30-250 meters. Annual herb in the Plantaginaceae family; blooms March-May.	**Not Present** Not observed during 2023 or 2025 biological surveys.
Cordylanthus rigidus* ssp. *littoralis **Seaside bird's-beak**	— / SE / 1B	Closed-cone coniferous forests, maritime chaparral, cismontane woodlands, coastal dunes, and coastal scrub on sandy soils, often on disturbed sites, at elevations of 0-425 meters. Annual hemi-parasitic herb in the Orobanchaceae family; blooms April-October.	**Unlikely** Only marginally suitable habitat is present within the project site. Not observed during 2023 or 2025 biological surveys.
Delphinium californicum ssp. *interius* Hospital Canyon larkspur	— / — / 1B	Openings in chaparral, coastal scrub, and mesic areas of cismontane woodland at elevations of 230-1095 meters. Perennial herb in the Ranunculaceae family; blooms April-June.	**Not Present** No suitable habitat in project site. Not observed during 2023 or 2025 biological surveys.
Delphinium hutchinsoniae Hutchinson's larkspur	— / — / 1B	Broadleaved upland forest, chaparral, coastal scrub, and coastal prairie at elevations of 0-427 meters. Perennial herb in the Ranunculaceae family; blooms March-June.	**Not Present** No suitable habitat in project site. Not observed during 2023 or 2025 biological surveys.
Delphinium umbraculorum Umbrella larkspur	— / — / 1B	Cismontane woodland at elevations of 400-1600 meters. Perennial herb in the Ranunculaceae family; blooms April-June.	**Not Present** Not observed during 2023 or 2025 biological surveys.
Ericameria fasciculata **Eastwood's goldenbush**	— / — / 1B	Openings in closed-cone coniferous forest, maritime chaparral, coastal dunes, and coastal scrub on sandy soils at elevations of 30-275 meters. Evergreen shrub in the Asteraceae family; blooms July-October.	**Not Present** Not observed in project site during 2023 or 2025 biological surveys.
Eriogonum nortonii Pinnacles buckwheat	— / — / 1B	Chaparral and valley and foothill grassland on sandy soils, often on recent burns, at elevations of 300-975 meters. Annual herb in the Polygonaceae family; blooms May-September.	**Not Present** No suitable habitat in project site. Not observed during 2023 or 2025 biological surveys.

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Eryngium montereyense Fort Ord button-celery	— / — / 1B	Vernal pools, seasonally wet swales at 140 meters. Annual herb in the Apiaceae family; blooms May-July.	**Not Present** No suitable habitat in project site. The project site is outside the known elevation range of this species. Not observed during 2023 or 2025 biological surveys.
Erysimum ammophilum **Coast wallflower**	— / — / 1B	Openings in maritime chaparral, coastal dunes, and coastal scrub on sandy soils at elevations of 0-60 meters. Perennial herb in the Brassicaceae family; blooms February-June.	**Not Present** No suitable habitat in project site. Not observed during 2023 or 2025 biological surveys.
Erysimum menziesii Menzies' wallflower	FE / SE / 1B	Coastal dunes at elevations of 0-35 meters. Perennial herb in the Brassicaceae family; blooms March-September.	**Not Present** No suitable habitat in project site. Not observed during 2023 or 2025 biological surveys.
Fritillaria liliacea Fragrant fritillary	— / — / 1B	Cismontane woodland, coastal prairie, coastal scrub, and valley and foothill grassland, often serpentinite, at elevations of 3-410 meters. Bulbiferous perennial herb in the Liliaceae family; blooms February-April.	**Not Present** No suitable habitat in project site. Not observed during 2023 or 2025 biological surveys.
Gilia tenuiflora **ssp. *arenaria*** **Monterey gilia**	FE / ST / 1B	Openings in maritime chaparral, cismontane woodland, coastal dunes, and coastal scrub on sandy soils at elevations of 0-45 meters. Annual herb in the Polemoniaceae family; blooms April-June.	**Not Present** Not observed in project site during 2023 or 2025 biological surveys.
Hesperocyparis goveniana Gowen cypress	FT / — / 1B	Closed-cone coniferous forest and maritime chaparral at elevations of 30-300 meters. Evergreen tree in the Cupressaceae family. Natively occurring only at Point Lobos near Gibson Creek and the Huckleberry Hill Nature Preserve near Highway 68.	**Not Present** The project site is outside the native range of this species.
Hesperocyparis macrocarpa Monterey cypress	— / — / 1B	Closed-cone coniferous forest at elevations of 10-30 meters. Evergreen tree in the Cupressaceae family. Natively occurring only at Cypress Point in Pebble Beach and Point Lobos State Park; widely planted and naturalized elsewhere.	**Not Present** The project site is outside the native range of this species.
Holocarpha macradenia Santa Cruz tarplant	FT / SE / 1B	Coastal prairies and valley foothill grasslands, often clay or sandy soils, at elevations of 10-220 meters. Annual herb in the Asteraceae family; blooms June-October.	**Unlikely** No suitable habitat in project site.
Horkelia cuneata ssp. *sericea* Kellogg's horkelia	— / — / 1B	Openings of closed-cone coniferous forests, maritime chaparral, coastal dunes, and coastal scrub on sandy or gravelly soils at elevations of 10-200 meters. Perennial herb in the Rosaceae family; blooms April-September.	**Present Adjacent** Not observed within project site during 2023 or 2025 biological surveys; however, one individual was observed directly adjacent to the site.
Horkelia marinensis Point Reyes horkelia	— / — / 1B	Coastal dunes, coastal prairie, and coastal scrub on sandy soils at elevations of 5-350 meters. Perennial herb in the Rosaceae family; blooms May-September.	**Not Present** No suitable habitat in project site. Not observed during 2023 or 2025 biological surveys.

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Lasthenia conjugens Contra Costa goldfields	FE / — / 1B	Mesic areas of valley and foothill grassland, alkaline playas, cismontane woodland, and vernal pools at elevations of 0-470 meters. Annual herb in the Asteraceae family; blooms March-June.	**Not Present** No suitable habitat in project site. Not observed during 2023 or 2025 biological surveys.
Layia carnosa Beach layia	FE / SE / 1B	Coastal dunes and coastal scrub on sandy soils at elevations of 0-60 meters. Annual herb in the Asteraceae family; blooms March-July.	**Not Present** No suitable habitat in project site. Not observed during 2023 or 2025 biological surveys.
Legenere limosa Legenere	— / — / 1B	Vernal pools and wetlands at elevations of 1-880 meters. Annual herb in the Campanulaceae family; blooms April- June.	**Not Present** No suitable habitat in project site. Not observed during 2023 or 2025 biological surveys.
Lupinus tidestromii Tidestrom's lupine	FE / SE / 1B	Coastal dunes at elevations of 0-100 meters. Perennial rhizomatous herb in the Fabaceae family; blooms April-June.	**Not Present** No suitable habitat in project site. Not observed during 2023 or 2025 biological surveys.
Malacothamnus involucratus Carmel Valley bush-mallow	— / — / 1B	Chaparral, cismontane woodland, and coastal scrub at elevations of 30-1100 meters. Perennial deciduous shrub in the Malvaceae family; blooms May-October.	**Not Present** Not observed in project site during 2023 or 2025 biological surveys.
Malacothrix saxatilis var. *arachnoidea* Carmel Valley malacothrix	— / — / 1B	Chaparral and coastal scrub on rocky soils at elevations of 25-1036 meters. Perennial rhizomatous herb in the Asteraceae family; blooms June-December.	**Unlikely** No suitable habitat in project site.
Meconella oregana Oregon meconella	— / — / 1B	Coastal prairie and coastal scrub at elevations of 250-620 meters. Annual herb in the Papaveraceae Family; blooms March-April.	**Not Present** No suitable habitat in project site. The project site is outside the known elevation range of this species. Not observed during 2023 or 2025 biological surveys.
Microseris paludosa Marsh microseris	— / — / 1B	Mesic areas of closed-cone coniferous forest, cismontane woodland, coastal scrub, and valley and foothill grassland at elevations of 5-300 meters. Perennial herb in the Asteraceae family; blooms April-July.	**Not Present** No suitable habitat in project site. Not observed during 2023 or 2025 biological surveys.
Monardella sinuata ssp. *nigrescens* Northern curly-leaved monardella	— / — / 1B	Chaparral, coastal dunes, coastal scrub, and lower montane coniferous forest (ponderosa pine sandhills) on sandy soils at elevations of 0-300 meters. Annual herb in the Lamiaceae family; blooms April-September.	**Not Present** No suitable habitat in project site. Not observed during 2023 or 2025 biological surveys.
Monolopia gracilens Woodland woollythreads	— / — / 1B	Openings of broadleaved upland forest, chaparral, cismontane woodland, North Coast coniferous forest, and valley and foothill grassland on serpentinite soils at elevations of 100-1200 meters. Annual herb in the Asteraceae family; blooms February-July.	**Not Present** No suitable habitat in project site. Not observed during 2023 or 2025 biological surveys.
Pinus radiata Monterey pine	— / — / 1B	Closed-cone coniferous forest and cismontane woodland at elevations of 25-185 meters. Evergreen tree in the Pinaceae family. Only three native stands in CA at Ano Nuevo, Cambria, and the Monterey Peninsula; introduced in many areas.	**Not Present** The project site is outside the native range of this species.

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Piperia yadonii **Yadon's rein orchid**	FE / — / 1B	Sandy soils in coastal bluff scrub, closed-cone coniferous forest, and maritime chaparral at elevations of 10-510 meters. Annual herb in the Orchidaceae family; blooms February-August.	**Not Present** Not observed in project site during 2023 or 2025 biological surveys.
Plagiobothrys chorisianus var. *chorisianus* Choris's popcorn-flower	— / — / 1B	Mesic areas of chaparral, coastal prairie, and coastal scrub at elevations of 15-160 meters. Annual herb in the Boraginaceae family; blooms March-June.	**Not Present** No suitable habitat in project site. Not observed during 2023 or 2025 biological surveys.
Potentilla hickmanii Hickman's cinquefoil	FE / SE / 1B	Coastal bluff scrub, closed-cone coniferous forests, vernally mesic meadows and seeps, and freshwater marshes and swamps at elevations of 10-149 meters. Perennial herb in the Rosaceae family; blooms April-August.	**Not Present** No suitable habitat in project site. Not observed during 2023 or 2025 biological surveys.
Ramalina thrausta Angel's hair lichen	— / — / 2B	North coast coniferous forest on dead twigs and other lichens. Epiphytic fructose lichen in the Ramalinaceae family. In northern CA it is usually found on dead twigs, and has been found on *Alnus rubra*, *Calocedrus decurrens*, *Pseudotsuga menziesii*, *Quercus garryana*, and *Rubus spectabilis*. In Sonoma County it grows on and among dangling mats of *R. menziesii* and *Usnea* spp.	**Not Present** No suitable habitat in project site. Not observed during 2023 or 2025 biological surveys.
Rosa pinetorum Pine rose	— / — / 1B	Closed-cone coniferous forest at elevations of 2-300 meters. Perennial shrub in the Rosaceae family; blooms May-July. Possible hybrid of *R. spithamea*, *R. gymnocarpa*, or others; further study needed.	**Not Present** Not observed during 2023 or 2025 biological surveys.
Stebbinsoseris decipiens Santa Cruz microseris	— / — / 1B	Broadleaved upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, and openings in valley and foothill grassland, sometimes on serpentinite, at elevations of 10-500 meters. Annual herb in the Asteraceae family; blooms April-May.	**Not Present** Not observed in project site during 2023 or 2025 biological surveys.
Trifolium buckwestiorum Santa Cruz clover	— / — / 1B	Gravelly margins of broadleaved upland forest, cismontane woodland, and coastal prairie at elevations of 105-610 meters. Annual herb in the Fabaceae family; blooms April-October.	**Not Present** No suitable habitat in project site. Not observed during 2023 or 2025 biological surveys.
Trifolium hydrophilum Saline clover	— / — / 1B	Marshes and swamps, mesic and alkaline valley and foothill grassland, and vernal pools at elevations of 0-300 meters. Annual herb in the Fabaceae family; blooms April-June.	**Not Present** No suitable habitat in project site. Not observed during 2023 or 2025 biological surveys.
Trifolium polyodon Pacific Grove clover	— / SR / 1B	Mesic areas of closed-cone coniferous forest, coastal prairie, meadows and seeps, and valley and foothill grassland at elevations of 5-120 meters. Annual herb in the Fabaceae family; blooms April-July.	**Not Present** No suitable habitat in project site. Not observed during 2023 or 2025 biological surveys.

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Trifolium trichocalyx Monterey clover	FE / SE / 1B	Sandy openings and burned areas of closed-cone coniferous forest at elevations of 30-240 meters. Annual herb in the Fabaceae family; blooms April-June.	**Not Present** No suitable habitat in project site. Not observed during 2023 or 2025 biological surveys.

STATUS DEFINITIONS

Federal

FE = listed as Endangered under the federal Endangered Species Act
FT = listed as Threatened under the federal Endangered Species Act
FC = Candidate for listing under the federal Endangered Species Act
— = no listing

State

SE = listed as Endangered under the California Endangered Species Act
ST = listed as Threatened under the California Endangered Species Act
SC = Candidate for listing under California Endangered Species Act
SR = listed as Rare under the California Native Plant Protection Act
CFP = California Fully Protected Species
CSC = CDFW Species of Concern
— = no listing

California Native Plant Society

1B = California Rare Plant Rank 1B species; plants rare, threatened, or endangered in California and elsewhere
— = no listing

Former Fort Ord Habitat Management Plan (HMP)

Bold = Former Fort Ord HMP Species

POTENTIAL TO OCCUR

Present = known occurrence of species within the site; presence of suitable habitat conditions; or observed during field surveys
High = known occurrence of species in the vicinity from the CNDDB or other documentation; presence of suitable habitat conditions
Moderate = known occurrence of species in the vicinity from the CNDDB or other documentation; presence of marginal habitat conditions within the site
Low = species known to occur in the vicinity from the CNDDB or other documentation; lack of suitable habitat or poor quality
Unlikely = species not known to occur in the vicinity from the CNDDB or other documentation, no suitable habitat is present within the site
Not Present = species was not observed during surveys

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Marina (3612167) OR Monterey (3612158) OR Moss Landing (3612177) OR Prunedale (3612176) OR Salinas (3612166) OR Seaside (3612157) OR Spreckels (3612156))
 AND Taxonomic Group IS (Fish OR Amphibians OR Reptiles OR Birds OR Mammals OR Mollusks OR Arachnids OR Crustaceans OR Insects OR Ferns OR Gymnosperms OR Monocots OR Dicots OR Lichens OR Bryophytes OR Fungi)

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Actinemys marmorata northwestern pond turtle	ARAAD02031	Proposed Threatened	None	G2	SNR	SSC
Actinemys pallida southwestern pond turtle	ARAAD02032	Proposed Threatened	None	G2G3	SNR	SSC
Agelaius tricolor tricolored blackbird	ABPBXB0020	None	Threatened	G1G2	S2	SSC
Agrostis lacuna-vernalis vernal pool bent grass	PMPOA041N0	None	None	G1	S1	1B.1
Allium hickmanii Hickman's onion	PMLIL02140	None	None	G2	S2	1B.2
Ambystoma californiense pop. 1 California tiger salamander - central California DPS	AAAAA01181	Threatened	Threatened	G2G3T3	S3	WL
Ambystoma macrodactylum croceum Santa Cruz long-toed salamander	AAAAA01082	Endangered	Endangered	G5T1T2	S2	FP
Anniella pulchra Northern California legless lizard	ARACC01020	None	None	G3	S2S3	SSC
Aphyllon robbinsii Robbins' broomrape	PDORO040Q0	None	None	G1	S1	1B.1
Arctostaphylos hookeri ssp. hookeri Hooker's manzanita	PDERI040J1	None	None	G3T2	S2	1B.2
Arctostaphylos montereyensis Toro manzanita	PDERI040R0	None	None	G2?	S2?	1B.2
Arctostaphylos pajaroensis Pajaro manzanita	PDERI04100	None	None	G1	S1	1B.1
Arctostaphylos pumila sandmat manzanita	PDERI04180	None	None	G1	S1	1B.2
Asio flammeus short-eared owl	ABNSB13040	None	None	G5	S2	SSC
Astragalus tener var. tener alkali milk-vetch	PDFAB0F8R1	None	None	G2T1	S1	1B.2
Astragalus tener var. titi coastal dunes milk-vetch	PDFAB0F8R2	Endangered	Endangered	G2T1	S1	1B.1
Athene cunicularia burrowing owl	ABNSB10010	None	Candidate Endangered	G4	S2	SSC

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Bombus caliginosus obscure bumble bee	IIHYM24380	None	None	G2G3	S1S2	
Bombus crotchii Crotch's bumble bee	IIHYM24480	None	Candidate Endangered	G2	S2	
Bombus occidentalis western bumble bee	IIHYM24252	None	Candidate Endangered	G3	S1	
Buteo regalis ferruginous hawk	ABNKC19120	None	None	G4	S3S4	WL
Castilleja ambigua var. insalutata pink Johnny-nip	PDSCR0D403	None	None	G5T2	S2	1B.1
Centromadia parryi ssp. congdonii Congdon's tarplant	PDAST4R0P1	None	None	G3T2	S2	1B.1
Charadrius nivosus nivosus western snowy plover	ABNNB03031	Threatened	None	G3T3	S3	SSC
Chorizanthe minutiflora Fort Ord spineflower	PDPGN04100	None	None	G1	S1	1B.2
Chorizanthe pungens var. pungens Monterey spineflower	PDPGN040M2	Threatened	None	G2T2	S2	1B.2
Chorizanthe robusta var. robusta robust spineflower	PDPGN040Q2	Endangered	None	G2T1	S1	1B.1
Clarkia jolonensis Jolon clarkia	PDONA050L0	None	None	G2	S2	1B.2
Coelus globosus globose dune beetle	IICOL4A010	None	None	G1G2	S1S2	
Collinsia multicolor San Francisco collinsia	PDSCR0H0B0	None	None	G2	S2	1B.2
Cordylanthus rigidus ssp. littoralis seaside bird's-beak	PDSCR0J0P2	None	Endangered	G5T2	S2	1B.1
Corynorhinus townsendii Townsend's big-eared bat	AMACC08010	None	None	G4	S2	SSC
Coturnicops noveboracensis yellow rail	ABNME01010	None	None	G4	S2	SSC
Cypseloides niger black swift	ABNUA01010	None	None	G4	S3	SSC
Danaus plexippus plexippus pop. 1 monarch - California overwintering population	IILEPP2012	Proposed Threatened	None	G4T1T2Q	S2	
Delphinium californicum ssp. interius Hospital Canyon larkspur	PDRAN0B0A2	None	None	G3T3	S3	1B.2
Delphinium hutchinsoniae Hutchinson's larkspur	PDRAN0B0V0	None	None	G2	S2	1B.2
Delphinium umbraculorum umbrella larkspur	PDRAN0B1W0	None	None	G3	S3	1B.3

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Dipodomys heermanni goldmani Salinas kangaroo rat	AMAFD03065	None	None	G4T2T3	S2S3	
Elanus leucurus white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
Eremophila alpestris actia California horned lark	ABPAT02011	None	None	G5T4Q	S4	WL
Ericameria fasciculata Eastwood's goldenbush	PDAST3L080	None	None	G2	S2	1B.1
Eriogonum nortonii Pinnacles buckwheat	PDPGN08470	None	None	G2	S2	1B.3
Eryngium montereyense Fort Ord button-celery	PDAPI0Z150	None	None	G1	S1	1B.1
Erysimum ammophilum sand-loving wallflower	PDBRA16010	None	None	G2	S2	1B.2
Erysimum menziesii Menzies' wallflower	PDBRA160R0	Endangered	Endangered	G1	S1	1B.1
Eucyclogobius newberryi tidewater goby	AFCQN04010	Endangered	None	G3	S3	SSC
Eumetopias jubatus Steller sea lion	AMAJC03010	Delisted	None	G3	S2	
Euphilotes enoptes smithi Smith's blue butterfly	IILEPG2026	Endangered	None	G5T2	S2	
Falco mexicanus prairie falcon	ABNKD06090	None	None	G5	S4	WL
Falco peregrinus anatum American peregrine falcon	ABNKD06071	Delisted	Delisted	G4T4	S3S4	
Fritillaria liliacea fragrant fritillary	PMLIL0V0C0	None	None	G2	S2	1B.2
Gilia tenuiflora ssp. arenaria Monterey gilia	PDPLM041P2	Endangered	Threatened	G3G4T2	S2	1B.2
Hesperocyparis goveniana Gowen cypress	PGCUP04031	Threatened	None	G1	S1	1B.2
Hesperocyparis macrocarpa Monterey cypress	PGCUP04060	None	None	G1	S1	1B.2
Holocarpha macradenia Santa Cruz tarplant	PDAST4X020	Threatened	Endangered	G1	S1	1B.1
Horkelia cuneata var. sericea Kellogg's horkelia	PDROS0W043	None	None	G4T1?	S1?	1B.1
Horkelia marinensis Point Reyes horkelia	PDROS0W0B0	None	None	G2	S2	1B.2
Lasiurus cinereus hoary bat	AMACC05032	None	None	G3G4	S4	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Lasthenia conjugens Contra Costa goldfields	PDAST5L040	Endangered	None	G1	S1	1B.1
Laterallus jamaicensis coturniculus California black rail	ABNME03041	None	Threatened	G3T1	S2	FP
Lavinia exilicauda harengus Monterey hitch	AFCJB19013	None	None	G4T3	S3	SSC
Layia carnosa beach layia	PDAST5N010	Threatened	Endangered	G2	S2	1B.1
Legenere limosa legenere	PDCAM0C010	None	None	G2	S2	1B.1
Linderiella occidentalis California linderiella	ICBRA06010	None	None	G2G3	S2S3	
Lupinus tidestromii Tidestrom's lupine	PDFAB2B3Y0	Endangered	Endangered	G1	S1	1B.1
Malacothamnus involucratus Carmel Valley bushmallow	PDMAL0Q0B1	None	None	G3T2Q	S2	1B.2
Malacothrix saxatilis var. arachnoidea Carmel Valley malacothrix	PDAST660C2	None	None	G5T2	S2	1B.2
Meconella oregana Oregon meconella	PDPAP0G030	None	None	G2	S2	1B.1
Microseris paludosa marsh microseris	PDAST6E0D0	None	None	G2	S2	1B.2
Microtus californicus halophilus Monterey vole	AMAFF11036	None	None	G5T1	S2	
Monardella sinuata ssp. nigrescens northern curly-leaved monardella	PDLAM18162	None	None	G3T2	S2	1B.2
Monolopia gracilens woodland woollythreads	PDAST6G010	None	None	G3	S3	1B.2
Neotoma macrotis luciana Monterey dusky-footed woodrat	AMAFF08083	None	None	G5T3	S3	SSC
Oncorhynchus mykiss irideus pop. 9 steelhead - south-central California coast DPS	AFCHA0209H	Threatened	None	G5T2Q	S2	SSC
Pelecanus occidentalis californicus California brown pelican	ABNFC01021	Delisted	Delisted	G4T3T4	S3	
Phrynosoma blainvillii coast horned lizard	ARACF12100	None	None	G4	S4	SSC
Pinus radiata Monterey pine	PGPIN040V0	None	None	G1	S1	1B.1
Piperia yadonii Yadon's rein orchid	PMORC1X070	Endangered	None	G1	S1	1B.1
Plagiobothrys chorisianus var. chorisianus Choris' popcornflower	PDBOR0V061	None	None	G3T1Q	S1	1B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Potentilla hickmanii Hickman's cinquefoil	PDROS1B370	Endangered	Endangered	G1	S1	1B.1
Rallus obsoletus obsoletus California Ridgway's rail	ABNME05011	Endangered	Endangered	G3T1	S2	FP
Ramalina thrausta angel's hair lichen	NLLEC3S340	None	None	G5?	S2S3	2B.1
Rana boylii pop. 6 foothill yellow-legged frog - south coast DPS	AAABH01056	Endangered	Endangered	G3T1	S1	
Rana draytonii California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
Reithrodontomys megalotis distichlis Salinas harvest mouse	AMAFF02032	None	None	G5T1	S2	
Riparia riparia bank swallow	ABPAU08010	None	Threatened	G5	S3	
Rosa pinetorum pine rose	PDROS1J0W0	None	None	G1Q	S1	1B.2
Sidalcea malachroides maple-leaved checkerbloom	PDMAL110E0	None	None	G3	S3	4.2
Sorex ornatus salarius Monterey shrew	AMABA01105	None	None	G5T1T2	S1S2	SSC
Sorex vagrans paludivagus Monterey vagrant shrew	AMABA01072	None	None	G5T1	S2	
Spea hammondii western spadefoot	AAABF02020	Proposed Threatened	None	G2G3	S3S4	SSC
Spirinchus thaleichthys longfin smelt	AFCHB03010	None	Threatened	G5	S1	
Stebbinsoseris decipiens Santa Cruz microseris	PDAST6E050	None	None	G2	S2	1B.2
Sulcaria spiralifera twisted horsehair lichen	NLT0042560	None	None	G3G4	S2	1B.2
Taricha torosa Coast Range newt	AAAAF02032	None	None	G4	S4	SSC
Taxidea taxus American badger	AMAJF04010	None	None	G5	S3	SSC
Thamnophis hammondii two-striped gartersnake	ARADB36160	None	None	G4	S3S4	SSC
Trifolium buckwestiorum Santa Cruz clover	PDFAB402W0	None	None	G2	S2	1B.1
Trifolium hydrophilum saline clover	PDFAB400R5	None	None	G2	S2	1B.2
Trifolium polyodon Pacific Grove clover	PDFAB402H0	None	Rare	G1	S1	1B.1

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Trifolium trichocalyx Monterey clover	PDFAB402J0	Endangered	Endangered	G1	S1	1B.1
Tryonia imitator mimic tryonia (=California brackishwater snail)	IMGASJ7040	None	None	G2	S2	

Record Count: 103

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly a ected by activities in the project area. However, determining the likelihood and extent of e ects a project may have on trust resources typically requires gathering additional site-speci c (e.g., vegetation/species surveys) and project-speci c (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS o ce(s) with jurisdiction in the de ned project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Monterey County, California

Local office

Ventura Fish And Wildlife O ce

(805) 644-1766
(805) 644-3958
FW8VenturaSection7@FWS.Gov

2493 Portola Road, Suite B
Ventura, CA 93003-7726

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of in uence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly a ected by activities in that area (e.g., placing a dam upstream of a sh population even if that sh does not occur at the dam site, may indirectly impact the species by reducing or eliminating water ow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential e ects to species, additional site-speci c and project-speci c information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local o ce and a species list which ful lls this requirement can **only** be obtained by requesting an o cial species list from either the Regulatory Review section in IPaC (see directions below) or from the local eld o ce directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an o cial species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the sheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

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1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

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

The following species are potentially a ected by activities in this location:

Birds

NAME	STATUS
California Condor Gymnogyps californianus There is **nal** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/8193	Endangered
California Least Tern Sternula antillarum browni Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8104	Endangered
Least Bell's Vireo Vireo bellii pusillus Wherever found There is **nal** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/5945	Endangered
Marbled Murrelet Brachyramphus marmoratus There is **nal** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/4467	Threatened
Western Snowy Plover Charadrius nivosus nivosus There is **nal** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/8035	Threatened
Yellow-billed Cuckoo Coccyzus americanus There is **nal** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/3911	Threatened

Amphibians

NAME	STATUS

California Red-legged Frog Rana draytonii — Threatened
Wherever found
There is **nal** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/2891

California Tiger Salamander Ambystoma californiense — Threatened
There is **nal** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/2076

Western Spadefoot Spea hammondii — Proposed Threatened
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/5425

Fishes

NAME	STATUS

Tidewater Goby Eucyclogobius newberryi — Endangered
Wherever found
There is **nal** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/57

Insects

NAME	STATUS

Monarch Butter y Danaus plexippus — Candidate
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/9743

Smith's Blue Butter y Euphilotes enoptes smithi — Endangered
Wherever found
There is **proposed** critical habitat for this species.
https://ecos.fws.gov/ecp/species/4418

Crustaceans

NAME	STATUS

NAME	STATUS
Vernal Pool Fairy Shrimp Branchinecta lynchi Wherever found There is **nal** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/498	Threatened

Flowering Plants

NAME	STATUS
Contra Costa Gold elds Lasthenia conjugens Wherever found There is **nal** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/7058	Endangered
Marsh Sandwort Arenaria paludicola Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2229	Endangered
Monterey Gilia Gilia tenuiflora ssp. arenaria Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/856	Endangered
Monterey Spine ower Chorizanthe pungens var. pungens Wherever found There is **nal** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/396	Threatened
Yadon's Piperia Piperia yadonii Wherever found There is **nal** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/4205	Endangered

Critical habitats

Potential e ects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have e ects on all above listed species.

Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act[1] and the Migratory Bird Treaty Act[2].

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats[3], should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Speci cally, please review the "Supplemental Information on Migratory Birds and Eagles".

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/ les/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

There are likely bald eagles present in your project area. For additional information on bald eagles, refer to Bald Eagle Nesting and Sensitivity to Human Activity

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in o shore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Golden Eagle *Aquila chrysaetos* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in o shore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", speci cally the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey e ort (see below) can be used to establish a level of con dence in the presence score. One can have higher con dence in the presence score if the corresponding survey e ort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week

12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

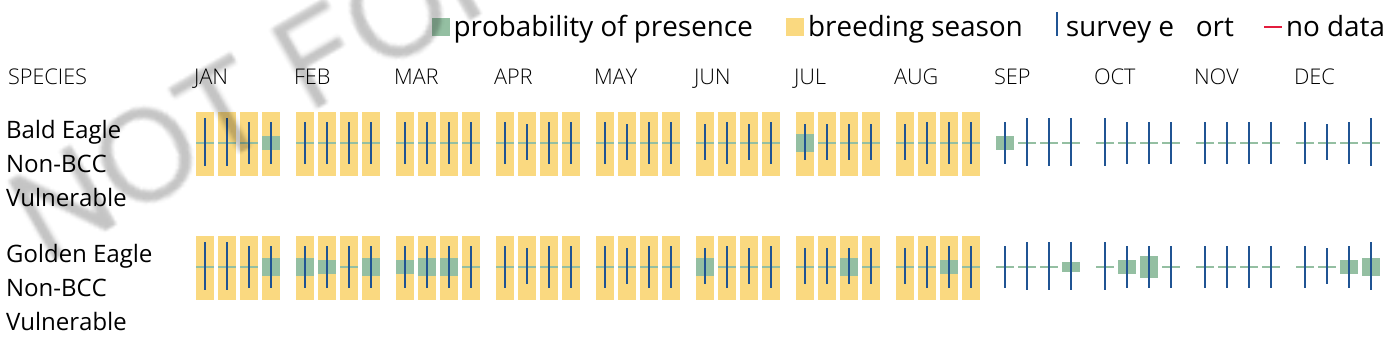
Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey e ort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas o the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



What does IPaC use to generate the potential presence of bald and golden eagles in my speci ed location?

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and ltered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identi ed as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply). To see a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats[3] should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-

golden-eagles-may-occur-project-action

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may nd in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur o the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Allen's Hummingbird Selasphorus sasin This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in o shore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Belding''s Savannah Sparrow Passerculus sandwichensis beldingi This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8	Breeds Apr 1 to Aug 15
Black Oystercatcher Haematopus bachmani This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9591	Breeds Apr 15 to Oct 31

Black Swift Cypseloides niger — Breeds Jun 15 to Sep 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8878

Black Turnstone Arenaria melanocephala — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Bullock's Oriole Icterus bullockii — Breeds Mar 21 to Jul 25
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

California Gull Larus californicus — Breeds Mar 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

California Thrasher Toxostoma redivivum — Breeds Jan 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Clark's Grebe Aechmophorus clarkii — Breeds Jun 1 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/2084

Elegant Tern Thalasseus elegans — Breeds Apr 5 to Aug 5
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/8561

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in o shore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Heermann's Gull Larus heermanni — Breeds Mar 15 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Marbled Godwit Limosa fedoa — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9481

Northern Harrier Circus hudsonius — Breeds Apr 1 to Sep 15
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/8350

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Olive-sided Flycatcher Contopus cooperi — Breeds May 20 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3914

Scripps's Murrelet Synthliboramphus scrippsi — Breeds Feb 20 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Short-billed Dowitcher Limnodromus griseus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9480

Tricolored Blackbird Agelaius tricolor — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3910

Western Grebe aechmophorus occidentalis — Breeds Jun 1 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/6743

Western Gull Larus occidentalis — Breeds Apr 21 to Aug 25
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Willet Tringa semipalmata — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Wrentit Chamaea fasciata — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specially the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the

probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

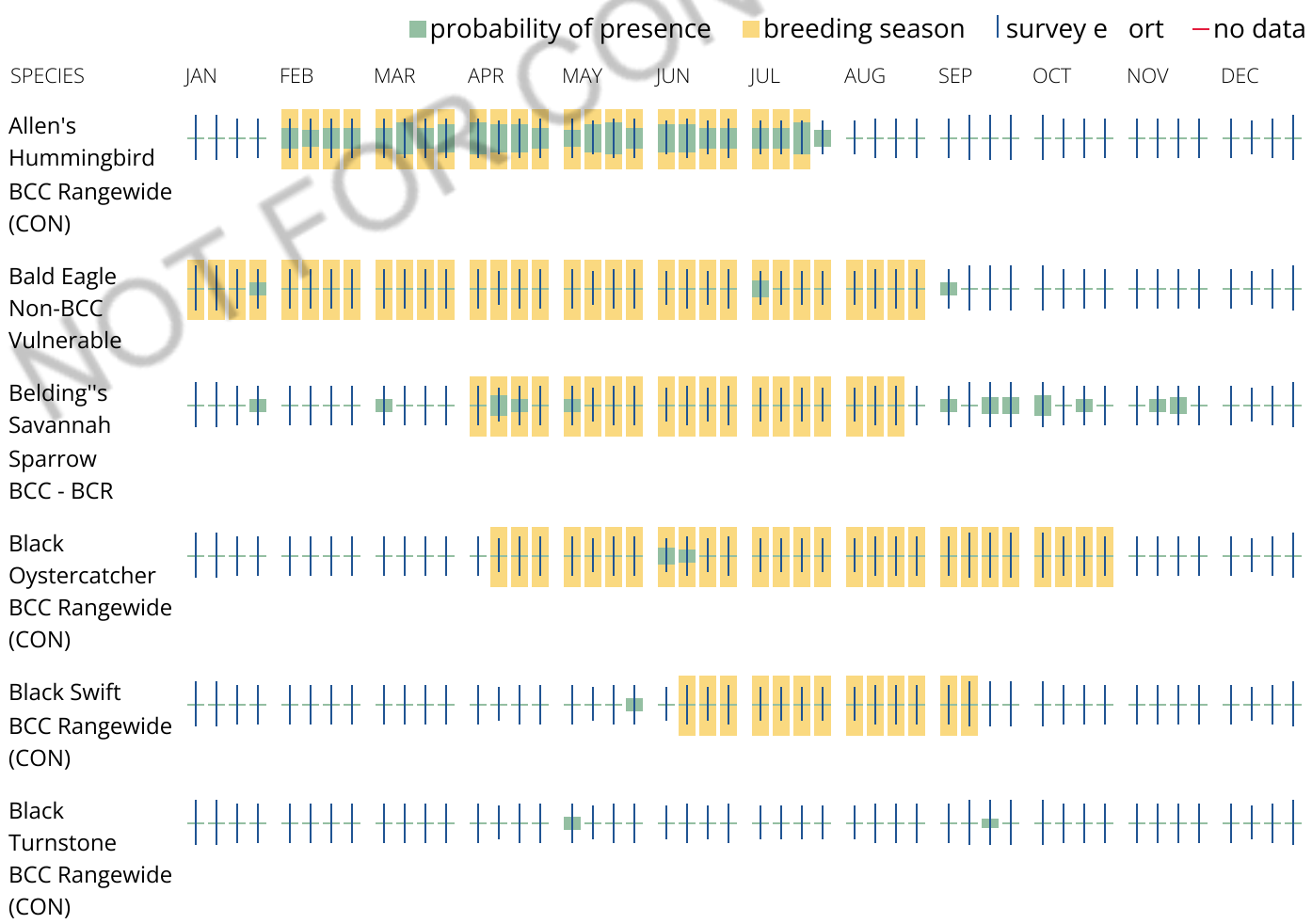
Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

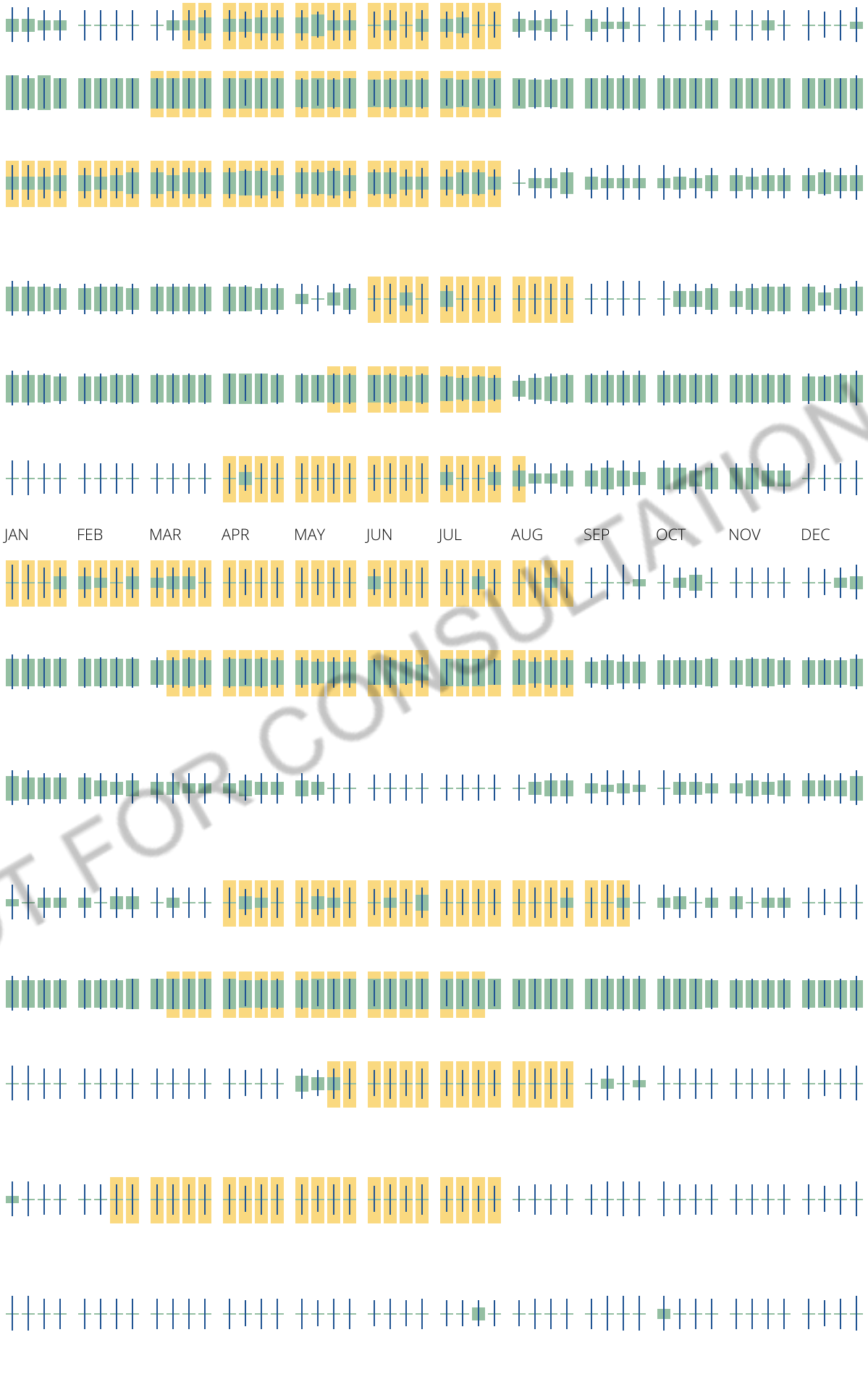
Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

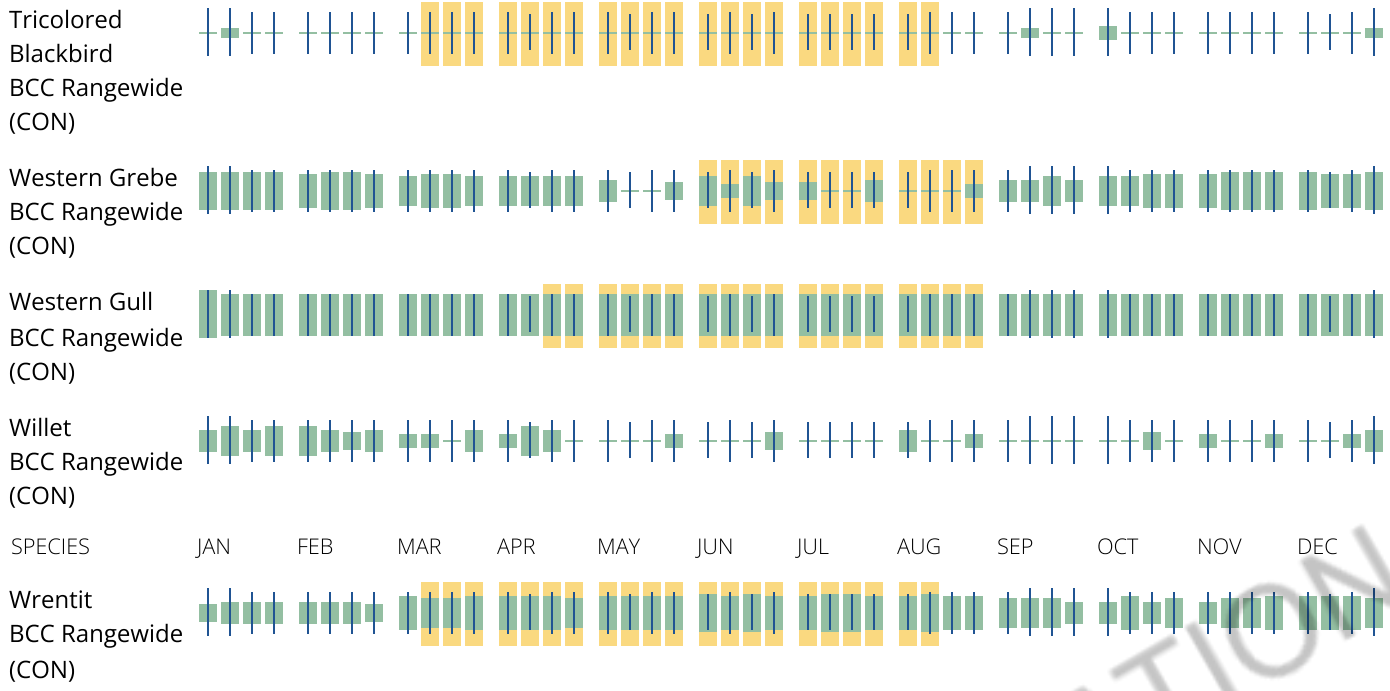
To see a bar's survey e ort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas o the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.







Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my speci ed location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and ltered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identi ed as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to o shore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my speci ed location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the pro les provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe speci ed. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Paci c Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in o shore areas from certain types of development or activities (e.g. o shore energy development or longline shing).

Although it is important to try to avoid and minimize impacts to all birds, e orts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially a ected by o shore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area o the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also o ers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results les underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my speci ed location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey e ort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey e ort is the key component. If the survey e ort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey e ort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to con rm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be con rmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no sh hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

This location did not intersect any wetlands mapped by NWI.

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identi ed based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classi cation established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth veri cation work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or eld work. There may be occasional di erences in polygon boundaries or classi cations between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuber cid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may de ne and describe wetlands in a di erent manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to de ne the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies.

Persons intending to engage in activities involving modi cations within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning speci ed agency regulatory programs and proprietary jurisdictions that may a ect such activities.

Appendix C
PHASE I CULTURAL RESOURCE INVENTORY

This report may discuss locations of specific archaeological sites and is confidential. For this reason, it is not included in this Initial Study. Qualified personnel may request a copy of the report from the Lead Agency.