Public Review Draft

MOCHO PFAS TREATMENT PLANT

Initial Study/Mitigated Negative Declaration

Prepared for
Zone 7 Water Agency

January 2026

Public Review Draft

MOCHO PFAS TREATMENT PLANT

Initial Study/Mitigated Negative Declaration

Prepared for
Zone 7 Water Agency

January 2026

2600 Capitol Avenue
Suite 200
Sacramento, CA 95816
916.564.4500
esassoc.com

Bend	Pasadena	San Francisco
Irvine	Pensacola	San Jose
Los Angeles	Petaluma	Santa Barbara
Mobile	Portland	Sarasota
Oakland	Rancho Cucamonga	Seattle
Orlando	Sacramento	Tampa
Palm Beach County	San Diego	Thousand Oaks

TABLE OF CONTENTS

Mocho PFAS Treatment Plant
Initial Study/Mitigated Negative Declaration

Page

Initial Study/Mitigated Negative Declaration **1**

Environmental Factors Potentially Affected **3**

1 Project Description **4**
- 1.1 Background 4
- 1.2 Introduction 6
- 1.3 Project Goals and Objectives 6
- 1.4 Project Location and Setting 7
- 1.5 Proposed Project 7
- 1.6 Project Construction 16
- 1.7 Construction Schedule 18
- 1.8 Project Operations and Maintenance 18

2 Environmental Checklist **19**
- 2.1 Aesthetics 19
- 2.2 Agriculture and Forestry Resources 24
- 2.3 Air Quality 26
- 2.4 Biological Resources 33
- 2.5 Cultural Resources 42
- 2.6 Energy 45
- 2.7 Geology and Soils 48
- 2.8 Greenhouse Gas Emissions 55
- 2.9 Hazards and Hazardous Materials 59
- 2.10 Hydrology and Water Quality 62
- 2.11 Land Use and Planning 66
- 2.12 Mineral Resources 69
- 2.13 Noise 70
- 2.14 Population and Housing 76
- 2.15 Public Services 78
- 2.16 Recreation 80
- 2.17 Transportation 82
- 2.18 Tribal Cultural Resources 83
- 2.19 Utilities and Service Systems 85
- 2.20 Wildfire 88
- 2.21 Mandatory Findings of Significance 90

Figures

Figure 1 Regional Location....8
Figure 2 Project Location....9
Figure 3 Mocho 3 Pipeline Connection to MGDP Facility....10
Figure 4 Buildout Treatment Site Layout....12
Figure 5a Pre-conceptual Renderings (View from Santa Rita Road)....13
Figure 5b Pre-conceptual Renderings (View from Laramie Circle Court)....14
Figure 5c Pre-conceptual Renderings (View from Stoneridge Drive)....15
Figure 6 Noise Monitoring Locations....71

Tables

Table 1 Average Daily Construction-Related Criteria Pollutant Emissions (pounds per day) Without Mitigation Measures....29
Table 2 Health Risk Impacts at the Maximum Exposed Individual Sensitive Receptors....31
Table 3 Cumulative Health Risk Impacts at the Maximum Exposed Individual Residence (MEIR) and Worker (MEIW)....32
Table 4 Greenhouse Gas Emissions During Project Construction....56
Table 5 Measured Short-term Ambient Noise Measurement Results....72
Table 6 Maximum Noise Levels from Construction Equipment....73
Table 7 Project Construction Noise Levels....74
Table 8 Operational Pump Noise Levels....75

Appendices

A. Air Quality and Greenhouse Gas Emissions Estimates
B. Special Status Species List
C. Noise Modeling Data

ENVIRONMENTAL CHECKLIST

Initial Study/Mitigated Negative Declaration

1.	**Project Title:**	Mocho PFAS Treatment Plant
2.	**Lead Agency Name and Address:**	Zone 7 Water Agency 100 North Canyons Parkway Livermore, CA 94551
3.	**Contact Person and Phone Number:**	Elke Rank, Senior Water Resource Planner (925) 454-5036
4.	**Project Location:**	Project location includes four existing Zone 7 facilities generally located at the intersection of Santa Rita Road and Stoneridge Drive in Pleasanton. Specifically: (1) Zone 7's Mocho Well 2 facility in the City of Pleasanton on the southeast side of Santa Rita Road, (2) Zone 7's Mocho Well 3 facility in the City of Pleasanton at the southwest corner of Santa Rita Road and Stoneridge Drive, and (3) Zone 7's Mocho Well 4 facility and Mocho Groundwater Demineralization Plant in the City of Pleasanton at the northwest corner of Santa Rita Road and Stoneridge Drive
5.	**Project Sponsor's Name and Address:**	Same as Lead Agency
6.	**General Plan Designation(s):**	Public Health & Safety (Wildland Overlay) and Retail/ Highway/Service Commercial Business and Professional Offices
7.	**Zoning:**	Public and Institutional and Commercial Office/ Commercial Central-Planned Unit Development

8. Description of Project:

See Section 1.5

9. Surrounding Land Uses and Setting. (Briefly describe the project's surroundings.)

See Section 1.4

10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)

The term "Responsible Agency" includes all public agencies other than the lead agency that have discretionary approval power over a project or an aspect of a project (State CEQA Guidelines § 15381). For CEQA, a "Trustee" agency has jurisdiction by law over natural resources that are held in trust for the people of the State of California (State CEQA Guidelines § 15386).

In addition to Zone 7 Water Agency as CEQA Lead Agency approving the project, other permits or approvals may be required for the Proposed Project by Trustee and Responsible Agencies; these include, but are not limited to:

STATE

- California Department of Fish and Wildlife – trustee agency for natural resources
- California Department of Water Resources – grant funding agreement
- State Water Resources Control Board/San Francisco Bay Regional Water Quality Control Board – trustee agency for natural resources
- State Water Resources Control Board Division of Drinking Water – operating permit amendment

REGIONAL AND LOCAL

- City of Pleasanton – encroachment permit; land use agreement
- Dublin San Ramon Services District – land use agreement; discharge permit amendment

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

On March 31, 2025, Zone7 sent letters to the Native American tribes with a description of the Project, a map showing the Project location, and an invitation to consult on the Project. Zone 7 received one response from Wilton Rancheria on April 9, 2025, indicating that they had no concerns with the Project. No additional responses were received.

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

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial study:

☐ 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.

Elke Rank

Signature
Elke Rank Senior Water Resources Planner

January 5, 2026

Date

1 Project Description

1.1 Background

Zone 7 Water Agency

Zone 7 Water Agency (Zone 7) is a special district established under the Alameda County Flood Control and Water Conservation District Act passed by the State Legislature in 1949. The Agency was officially established by a vote of the residents of the Livermore-Amador Valley (Tri-Valley) area in 1957, with its own independent elected board to provide local control of integrated water resources.

Zone 7 supplies treated drinking water to four retailer water suppliers (retailers) serving over a quarter million people in the Tri-Valley area including the cities of Pleasanton, Livermore, Dublin and, through special agreement with the Dublin San Ramon Services District, to the Dougherty Valley area. Additionally, the Agency supplies untreated water directly to agricultural businesses for irrigation of 3,500 acres, primarily South Livermore Valley vineyards. Zone 7 also provides regional flood protection and maintains approximately 37 miles of channel in the Tri-Valley.

As the exclusive Groundwater Sustainability Agency of the Livermore Valley Groundwater Basin, Zone 7 proactively manages the groundwater basin to ensure this valuable resource remains a sustainable source of water for future generations of the Tri-Valley. On average, approximately 20 percent of Zone 7's water supply comes from water in the groundwater basin; this can be much higher in drought years.

Livermore Valley Groundwater Basin and Mocho Wellfield

The Tri-Valley benefits from local water storage capacity in an underground basin (or aquifer), known as the Livermore Valley Groundwater Basin, that provides increased water supply reliability. Like most groundwater basins, the water levels are in constant flux due to various inputs and withdrawals.

To avoid significant depletion of groundwater storage, Zone 7 operates the basin such that groundwater in storage remains between its full volume and the historical low storage volume. As such, Zone 7 uses the basin as a local storage facility and will pump groundwater when needed and recharge the basin using its surface water supplies.

- Sources of recharge (or inputs) to the basin include rainfall recharge, applied water recharge, stream recharge, and subsurface groundwater inflow.
- Withdrawals from the basin include municipal pumping, agricultural pumping, mining use, and subsurface groundwater outflow.

A series of wellfields throughout the service area (including the Mocho wellfield in Pleasanton) can extract and deliver the water for municipal purposes.

PFAS Water Quality Regulations and Zone 7 Response

Per- and polyfluoroalkyl substances (PFAS) include thousands of manufactured fluorinated chemicals that have been widely used since the 1940s in everyday products such as food packaging, personal care items, and water-resistant clothing, as well as in products like firefighting foam. Due to the widespread

use of PFAS over the last 80 years and their resistance to biodegradation, trace amounts of many PFAS chemicals are commonly found in the air, soil, and blood of animals and humans. Two widely used PFAS compounds suspected of posing a risk to human health, perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS), were mostly phased out of production in the early 2000's. However, many PFAS chemicals remain in use. Because PFAS are ubiquitous and persistent in the environment, there are many pathways for these chemicals to enter the water supply, potentially posing a health risk. Four major sources of PFAS in drinking water are fire training and response sites; industrial sites; landfills; and wastewater treatment plants and biosolids (State Water Board 2025).

In May 2025, the U.S. Environmental Protection Agency (U.S. EPA) announced an updated plan to address PFAS in drinking water. A proposed rule is expected to be released in 2026. The current maximum contaminant levels (MCLs) for PFOA and PFOS are 4.0 parts per trillion (ppt), however, compliance deadlines for these substances will be extended to 2031. Additionally, the U.S. EPA plans to reconsider regulatory determinations for other PFAS, including perfluorohexane sulfonate (PFHxS), perfluorononanoic acid (PFNA), and GenX Chemicals, to ensure compliance with the Safe Drinking Water Act. Zone 7 has voluntarily been reporting the PFAS levels in the annual Consumer Confidence Report since 2019.

In the years preceding the U.S. EPA's 2024 rule, Zone 7 took steps to address the emerging water quality concerns with the construction of new treatment plants at key wellfield locations to meet the federal MCL. Two PFAS treatment plants have been constructed in 2023 and 2025, as shown below. These facilities use pressure vessels containing ion exchange resin to remove PFAS from well water. Treated water produced by these facilities shows no detectable level of PFAS.

- 2023: Stoneridge PFAS Treatment Plant in Pleasanton, with a treatment capacity of 6.6 million gallons per day (MGD)
- 2025: Chain of Lakes PFAS Treatment Plant in Livermore, with a treatment capacity of 10 MGD

The Mocho wellfield in Pleasanton has a capacity of approximately 16 MGD and supplies water from existing well sites to the Mocho Groundwater Demineralization Plant, which removes salts from the water consistent with the Tri-Valley groundwater basin salt management plan. PFAS have been detected in the Mocho wellfield since late 2018, requiring significant reduction in Mocho wellfield and Mocho Groundwater Demineralization Plant capacity to approximately 5 MGD in order to meet the state and federal guidelines and standards, and anticipated U.S. EPA MCL for PFAS. Further increases in PFAS concentrations in the groundwater would result in further reductions in Mocho wellfield and Mocho Groundwater Demineralization Plant production or complete shutdown of the facilities.

The proposed PFAS treatment project for the Mocho wellfield would be the agency's third PFAS treatment plant and is necessary to restore groundwater production and meet Zone 7's water supply reliability policy goals and salt management plan objectives. There is potential for PFAS to be present at other Zone 7 wells and future regulations may require removal of PFAS from Zone 7's Mocho Groundwater Demineralization Plant concentrate discharges to the San Francisco Bay. Therefore, additional PFAS treatment facilities may be needed in the future.

1.2 Introduction

Zone 7 proposes the Mocho PFAS Treatment Plant (Project) to address the PFAS compounds found in the Mocho wellfield, increase the ability to meet the objectives of Zone 7's salt management plan, and replace existing equipment that has exceeded or is approaching the end of its useful life. Zone 7 anticipates this would meet the definition of a "Project" under the California Environmental Quality Act (CEQA) and would be subject to review and evaluation under CEQA. To identify and assess potential environmental impacts for the Project, the following evaluation relies upon the Environmental Checklist Form found in Appendix G of the [2025] *CEQA Guidelines.*

Zone 7 completed a conceptual design of a facility to remove PFAS from production wells within the Mocho wellfield. Evaluations were performed for treatment technologies, equipment siting, costs, constructability, potential impacts of the evolving regulations, and identifying an implementation strategy to address these changes. Findings from this conceptual design concluded that the Mocho wells have running annual average concentrations of PFAS in excess of the U.S. EPA MCLs, and treatment is required to restore the use of Mocho wellfield production and meet Zone 7's water supply reliability policy goals. As such, Zone 7 has elected to proceed with the design of a PFAS treatment plant capable of removing PFAS from the Mocho wellfield water.

1.3 Project Goals and Objectives

The Project would enable Zone 7 to address PFAS groundwater contamination to meet regulated drinking water standards, meet the objectives of Zone 7's salt management plan, and restore the groundwater pumping capacity Zone 7 relies upon for water supply reliability. The Project would also increase reliability of drinking water production wells by replacing pumps and electrical components that are nearing the end of their useful lives. The Project could also support compliance with potential future regulations related to the removal of PFAS from discharges, such as brine waste from Zone 7's Mocho Groundwater Demineralization Plant.

Specifically, the goal of the Project is to construct and operate the Mocho PFAS Treatment Plant to remove PFAS from the groundwater such that the treated water meets the U.S. EPA's adopted MCLs. The Project would restore water production of the Mocho wellfield to support Zone 7's water supply reliability policy to meet Zone 7 treated water customer water supply needs during normal, average and drought conditions, and to provide sufficient treated water production capacity and infrastructure to meet production goals in the event of other unplanned facility outages. The Project would also restore full capacity operation of the Mocho Groundwater Demineralization Plant which serves to meet groundwater basin salt management objectives.

The Project has a secondary objective of enabling removal of PFAS from the Mocho wellfield production prior to treatment at the Mocho Groundwater Demineralization Plant, where PFAS is concentrated in the brine and is ultimately disposed of to surface waters. This could be required if future local, state, or federal regulations are adopted that require removal or reduction of PFAS from such discharges. This objective could be met if the full 16 MGD capacity Project is implemented. Alternately, if a lower-capacity treatment plant is initially constructed, this could be met by adding treatment vessels in the future.

The Project has an additional secondary objective to increase the ability to meet the objectives of Zone 7's salt management plan. This objective will be accomplished by increasing the salt removal capacity of the Mocho Groundwater Demineralization Plant within the facility.

1.4 Project Location and Setting

The Project is located at Zone 7's Mocho Wells 2, 3, and 4 facilities and Mocho Groundwater Demineralization Plant in the City of Pleasanton (City) (**Figure 1**). Mocho Well 2 is located along the southeast of Santa Rita Road. Mocho Well 3 is located at the southwest corner of Santa Rita Road and Stoneridge Drive. Mocho Well 4 and Mocho Groundwater Demineralization Plant are located at the northwest corner of Santa Rita Road and Stoneridge Drive (**Figure 2**). These facilities are accessed from Interstate Highway 580 approximately 1.15 miles to the north via Santa Rita Road.

The Mocho Well 2 property is owned by Alameda County Flood Control. The Mocho Well 3 property is owned by the City of Pleasanton, and the City granted Zone 7 a permanent easement on a portion of the property for water facilities. Dublin San Ramon Services District (DSRSD) owns a portion of the open space contiguous with the parcels owned by the City, co-located with Zone 7's existing Mocho Well 3. The Mocho Well 4 and Mocho Groundwater Demineralization Plant property is owned by DSRSD, and DSRSD granted Zone 7 a permanent easement on this property for water facilities. There is residential development immediately adjacent to the Project site to the west, with arterial roads adjacent to the Project site on the other sides. The Project location includes a City of Pleasanton owned parcel with mature trees, shrubs, and public use trails in the areas outside of the Mocho Well 3 operational area. Zone 7's Mocho Groundwater Demineralization Plant is located north of the project site on the north side of Stoneridge Drive.

1.5 Proposed Project

The Project includes construction of the Mocho PFAS Treatment Plant at an existing well site, including water treatment vessels, piping, pumps, electrical, and other appurtenances. The water treatment facility or a portion of the facilities will either be screened with a wall, or all of the facilities will be enclosed within buildings. The booster pumps will be enclosed in a building for noise attenuation. Zone 7 is continuing to evaluate the screening options. The Project would also include the installation of a new water transmission pipeline beneath Stoneridge Drive to deliver the treated groundwater into the existing transmission system (**Figure 3**) at the Mocho Groundwater Demineralization Plant (MGDP). The treated groundwater connection would be installed on the existing influent water pipeline at the Mocho Groundwater Demineralization Plant. Treated groundwater would then be conveyed into the existing transmission system.

In addition, the Project includes improvements at the Mocho Groundwater Demineralization Plant to increase demineralization treatment capacity and salt removal. The Mocho Groundwater Demineralization Plant began operating in 2009 and included space for additional reverse osmosis (RO) membrane filters. The improvements will allow the Mocho Groundwater Demineralization Plant to operate at its originally designed treatment capacity. The existing RO membrane filters have a total brine concentrate discharge of approximately 1,064 gallons per minute (gpm). With the additional RO membranes, the anticipated total concentrate would be approximately 1,310 gpm. The existing Dublin San Ramon Services District (DSRSD) Pretreatment Program Industrial Wastewater Discharge Permit, dated July 1, 2025, specifies

SOURCE: Maxar, 2024; ESRI, 2025; ESA, 2025

Mocho PFAS Treatment Plant

Figure 1
Regional Location

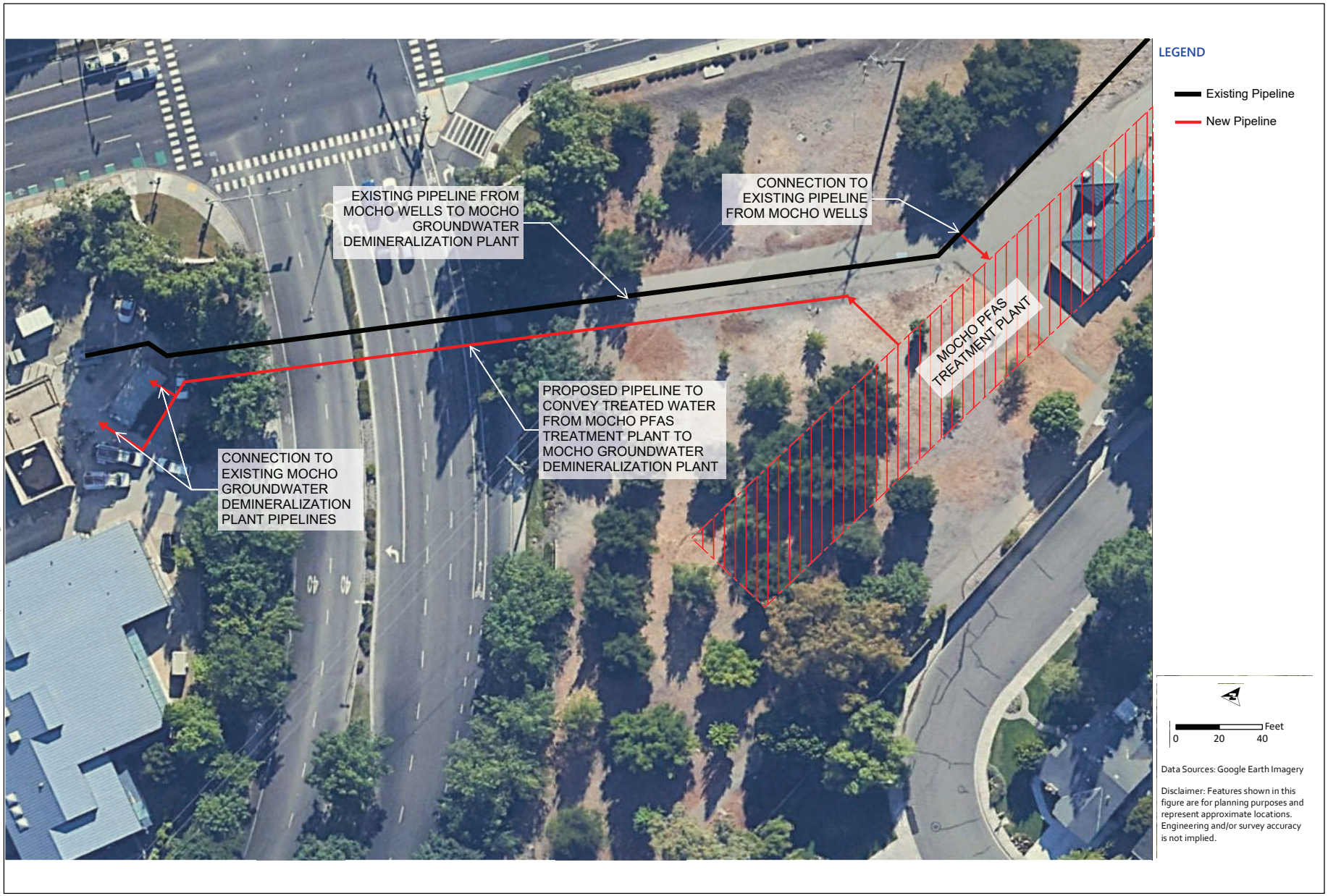
ESA

SOURCE: Maxar, 2024; ESRI, 2025; ESA, 2025

Mocho PFAS Treatment Plant

Figure 2
Project Location

ESA



2021\D2021001341 8 - Mocho Well PFAS CEQA Services\05 Graphics-GIS-Modeling-USE AZURE\Illustrator

SOURCE: Carollo Engineers, 2024

Mocho PFAS Treatment Plant

Figure 3
Mocho 3 Pipeline Connection to MGDP Facility

ESA

that the rate of discharge shall not exceed an average of 1.6 million gallons per day (MGD). It is anticipated that the additional RO membranes would increase the total rate of brine concentrate discharge to an average of 2 MGD. The final RO membrane brine concentrate discharge rate will be determined during the detailed design phase and the discharge modifications are subject to the review and approval of DSRSD and East Bay Dischargers Authority. The installation of the membranes will likely require replacement of ancillary mechanical and electrical equipment, potentially including the pumps, variable frequency drives (VFDs), motor control center (MCC), switchgear, and other appurtenances.

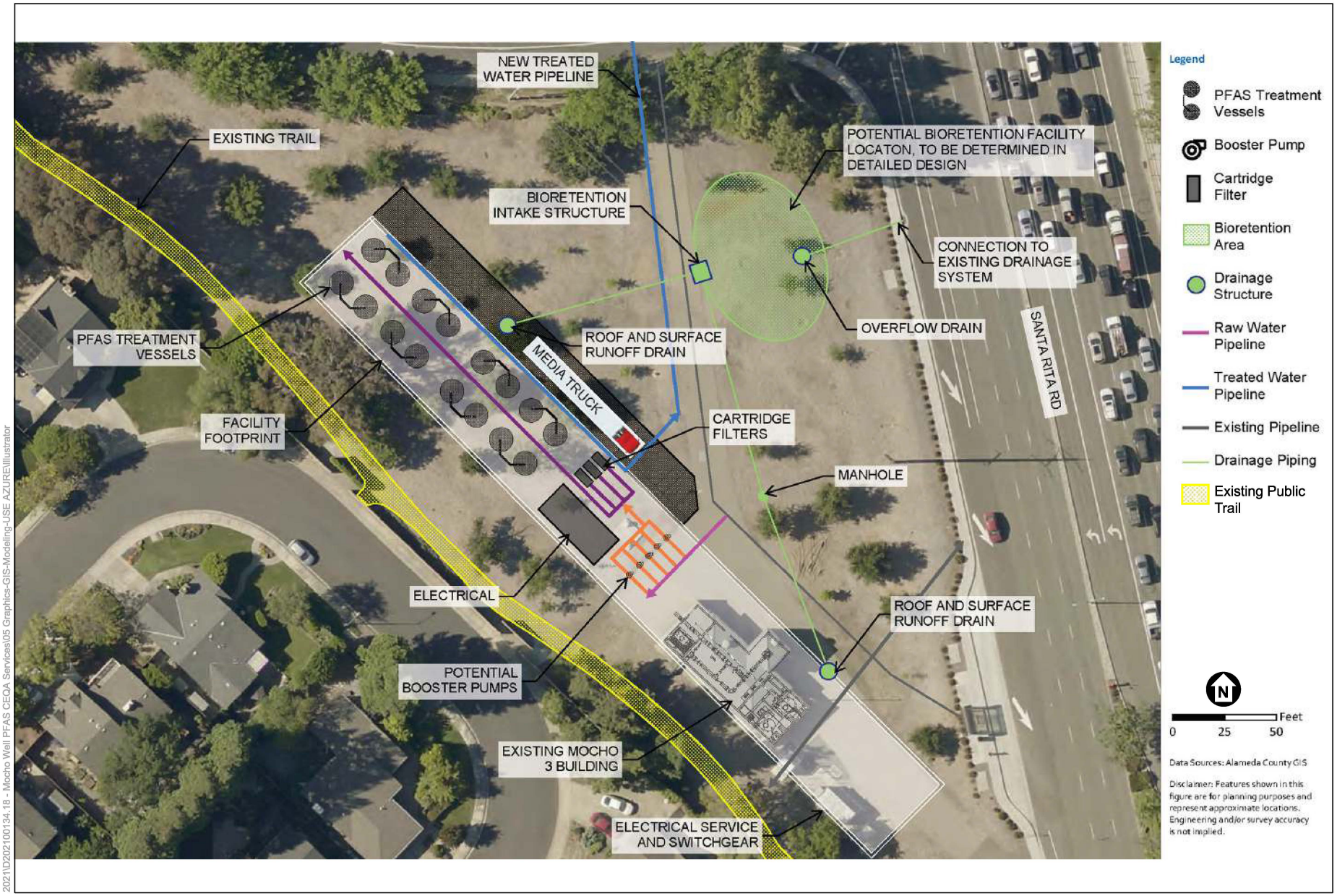
The Project also includes replacing the well pumps at Mocho Wells 2, 3, and 4 due to the pumps reaching the end of their useful lives and evaluating the use of higher pressure pumps and variable frequency drives for these pumps to meet the Mocho PFAS Treatment Plant hydraulic needs.

Furthermore, as part of the Mocho PFAS Treatment Plant project, the "Wells and Mocho Groundwater Demineralization Plant Electrical Modernization Project" subtask includes replacing the existing switchgear and ancillary electrical equipment at Mocho Wells 3 and 4 due to the equipment exceeding their useful lives and will be sized to accommodate the Project's electrical demands.

The Project could be constructed to treat the entire Mocho wellfield capacity of approximately 16 MGD. This full wellfield PFAS treatment project is evaluated herein. However, Zone 7 is also continuing to evaluate smaller capacity PFAS treatment options at this wellfield that may result in reducing the footprint of facilities that are initially installed without meeting the Project's secondary objective.

The Mocho PFAS Treatment Plant Project would consist of the following key components (also see **Figure 4** and pre-conceptual architectural renderings **Figure 5a-5c**):

- *Water transmission line* – A new water transmission pipeline beneath Stoneridge Drive to deliver treated water to the Mocho Groundwater Demineralization Plant.
- *Pipeline* – A pipeline at Mocho Well 3 to split water between the Mocho Groundwater Demineralization Plant and the new treatment plant.
- *PFAS treatment vessels* – Vessels containing ion exchange resin ("media") for removal of PFAS from the groundwater.
- *Cartridge filters* – Pre-treatment cartridge filters to remove sediment from the water before it enters the PFAS treatment vessels.
- *Booster pump station* – A booster pump station may be needed to increase water pressure needed to enable treatment. Booster pumps to be housed in a new building to attenuate noise.
- *Media truck driveway* – A driveway for trucks to remove and replace the media approximately once every two years.
- *Switchgear* – As part of the "Wells and Mocho Groundwater Demineralization Plant Electrical Modernization Project" subtask, the existing switchgear and ancillary electrical equipment at Mocho Wells 3 and 4 would be replaced due to the equipment exceeding their useful lives and would be sized to accommodate the Project's electrical demands.
- *Electrical building* – A separate building may be constructed to house electrical facilities.



2021\D2021\00134.18 - Mocho Well PFAS CEQA Services\05 Graphics-GIS-Modeling-USE AZURE\Illustrator

SOURCE: Carollo Engineers, 2024

Mocho PFAS Treatment Plant

Figure 4
Buildout Treatment Site Layout

ESA

Pre-conceptual architectural renderings were prepared to show visions of how the project could work at this site but are not the actual design. The conceptual renderings include options to house the PFAS facility within a building (top figure) or within perimeter screening walls (bottom figure).

2021\D202100134.18 - Mocho Well PFAS CEQA Services\05 Graphics-GIS-Modeling-USE AZURE\Illustrator

SOURCE: Zone 7 Water Agency

Mocho PFAS Treatment Plant

Figure 5a
Pre-conceptual Renderings (View from Santa Rita Road)

ESA

Pre-conceptual architectural renderings were prepared to show visions of how the project could work at this site but are not the actual design. The conceptual renderings include options to house the PFAS facility within a building (top figure) or within perimeter screening walls (bottom figure).

2021\D202100134.18 - Mocho Well PFAS CEQA Services\05 Graphics-GIS-Modeling-USE AZURE\Illustrator

SOURCE: Zone 7 Water Agency

Mocho PFAS Treatment Plant

Figure 5b
Pre-conceptual Renderings (View from Laramie Circle Court)

ESA

Pre-conceptual architectural renderings were prepared to show visions of how the project could work at this site but are not the actual design. The conceptual renderings include options to house the PFAS facility within a building (top figure) or within perimeter screening walls (bottom figure).

2021\D202100134.18 - Mocho Well PFAS CEQA Services\05 Graphics-GIS-Modeling-USE AZURE\Illustrator

SOURCE: Zone 7 Water Agency

Mocho PFAS Treatment Plant

Figure 5c
Pre-conceptual Renderings (View from Stoneridge Drive)

ESA

- *Well pumps* – The existing well pumps at Mocho Wells 2, 3, and 4 would be replaced due to the equipment reaching the end of their useful lives and to meet facility hydraulic needs.
- *Additional Mocho Groundwater Demineralization Plant Capacity* – Additional reverse osmosis membrane filters would be installed within existing facilities originally designed and constructed to house them in order to increase treatment capacity and salt removal. The existing membrane filters have reached the end of their useful life and would be replaced. Ancillary equipment, such as the associated pumps, electrical equipment, and other mechanical equipment, would be upgraded as needed within the existing project facilities.
- *Site lighting* – The site would be designed with lighting to facilitate safe operations and maintenance of the facilities. The lighting would be designed to minimize public impacts (e.g., motion activation switches, shields or hoods directing light downward, etc. to minimize light spillover, reduce glare, and prevent light trespass onto adjacent properties or into the night sky, in accordance with local lighting standards).
- *Site security* - The facilities would be secured within walls or a building to secure the treatment vessels, electrical equipment, piping and other mechanical equipment.
- *Site finishes* – The facilities would utilize paint colors and exterior finishes that are visually compatible with the surrounding built environment.
- Vegetative plantings (e.g., trees, shrubs) and/or other amenities for visual screening of the treatment facilities to promote integration with the surrounding area.
- *Stormwater management features* – Stormwater treatment facilities and site drainage structures to be constructed at Mocho Well 3 in accordance with the San Francisco Bay Regional Water Quality Control Board's Municipal Regional Stormwater Permit requirements. The bioretention stormwater treatment facility, consisting of a swale with native drought-tolerant shrubs and plants, is anticipated to be approximately 1,200 square feet, with its location on the Mocho Well 3 site to be determined upon further existing utilities and soils investigations.
- Trail restoration and tree replacement for any removal or damage.

1.6 Project Construction

Site Layout and Preparation

The Mocho PFAS Treatment Plant and equipment would be located along the western boundary of the Mocho Well 3 site (Figure 4). Improvements at the Mocho Groundwater Demineralization Plant and at Mocho Wells 2 and 4 would be within the existing facility footprints. The Mocho Well 3 site is relatively level and clear of obstructions and therefore would not require substantial regrading. Vegetation removal would be required within the Mocho Well 3 footprint; existing trees and vegetation on the property that do not conflict with construction, operation, renewal or replacement of the facilities would be preserved to the extent feasible. No vegetation removal would be required for the improvements at the Mocho Groundwater Demineralization Plant and at Mocho Wells 2 and 4.

Equipment

Equipment and vehicles that may be used during construction include:

- excavator
- front loader
- backhoe/skiploader
- dump truck
- crane
- pick-up or flatbed truck

Workers

During construction, approximately 5 to 15 workers would be onsite on most workdays. Workers would park nearby such as at Zone 7's Mocho Groundwater Demineralization Plant, designated on-site areas, and/or in appropriately designated on-street parking spaces.

Site Access

As mentioned above, the Project site can be accessed from I-580 via Santa Rita Road to the north. Trucks are needed to bring new materials to the worksite and to haul off old materials and waste. The Mocho Well 3 site would be accessed from the existing driveway entrances at Stoneridge Drive and Santa Rita Road. Temporary access to the site from other areas along Santa Rita Road or Stoneridge Drive may be sought and used, if permitted by the City. The Mocho Groundwater Demineralization Plant and Mocho Well 4 would be accessed from the existing driveway entrance on Stoneridge Drive. The Mocho Well 2 site would be accessed from the existing driveway entrance on Santa Rite Road.

Construction Staging

Staging of materials will be within the Project parcels and/or at an offsite property owned by Zone 7.

Stormwater Management

Stormwater treatment facilities and site drainage structures, including bioretention, drainage inlets, and stormwater pipelines, to be constructed in accordance with the requirements of paragraph C.3 of the San Francisco Bay Regional Water Quality Control Board's Municipal Regional Stormwater Permit.

Recreational Trails

The Mocho Groundwater Demineralization Plant is bordered by the East Bay Regional Parks District Iron Horse Regional Trail to the northern and eastern sides of the Project site. The trail is anticipated to continue to be in operation during the portion of work on this site.

The Mocho Well 3 site contains City of Pleasanton operated bicycle and walking trails along the southern border of the parcel. It is anticipated that the trails will be closed to public access for the duration of construction, and a pedestrian/bike detour will be in place.

Site Restoration

Following completion of construction, all heavy equipment and construction debris will be removed from the parcels. Public trails and access through these parcels will be restored and reopened.

It is expected that trees will need to be removed to accommodate the construction of the Mocho PFAS Treatment Plant. The Project includes post-construction landscaping elements including new trees. Existing trees and vegetation on the property that do not conflict with construction, operation, renewal or replacement of the facilities would be preserved to the extent feasible.

1.7 Construction Schedule

Project construction is anticipated to begin in winter 2026 and be completed approximately in summer 2028 (approximately 18 months). Project construction would occur year-round, Monday through Friday, with the exception of inclement weather conditions, holidays, or other times. Work would periodically occur on weekends, with Zone 7 approval and would comply with the City of Pleasanton's noise ordinance.

Zone 7 would continue to utilize other available water supplies, such as surface water treatment plants and other wells, to meet demands during construction of the facility.

1.8 Project Operations and Maintenance

Following construction, active aspects during operation of the facility would include treatment facility operators visiting the site daily for routine operational inspections. This facility would remain unstaffed and no additional on-site staff would be required. No new deliveries would be required, as this facility would not introduce new chemicals, though it would introduce a new shipment of media approximately once every two years, which would be delivered by semi-truck. Used media will be disposed of in accordance with all applicable regulations at the time of disposal. Maintenance would occur on an as-needed basis.

References

State Water Resources Control Board (State Water Board) 2025. PFAS: Per- and Polyfluoroalkyl Substances. Available: https://www.waterboards.ca.gov/—drinking_water/certlic/drinkingwater/pfas.html. Accessed June 3, 2025.

2 Environmental Checklist

2.1 Aesthetics

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

Environmental Setting

The following are brief definitions of terms used in the evaluation of aesthetic impacts.

- A designated scenic vista is a location from which the public can experience a unique and exemplary view. Scenic vistas are typically available from elevated vantage points that offer panoramic views of great breadth and depth. For this analysis, a designated scenic vista is one identified in Project area planning documents (i.e., general plans, zoning ordinances) or a designated public roadway or trail vista point.
- Scenic resources are features visible from a state scenic roadway, as designated by the California Scenic Highway Program maintained by the California Department of Transportation (Caltrans) or otherwise designated by Project area planning documents (i.e., general plans, zoning ordinances).
- Light is the amount of luminance emitted from an object and glare is the result of a large contrast in luminance between a bright light source and dark background within a viewer's field of vision.
- Visual quality: An area's overall visual impression or attractiveness as determined by the particular intrinsic physical properties of the landscape, including landforms, rock forms, water features, and vegetation patterns, based on professional, public, and personal values. Land uses that derive value from the quality of their settings, such as parks or scenic routes, are considered particularly sensitive to changes in visual setting conditions. Natural and built features combine to form unique perspectives with varying degrees of visual quality, which are rated in this analysis as either high, moderate, or low. A high visual quality rating is assigned to visual resources that are unique or exemplary of the region's natural or cultural scenic amenities. A moderate visual quality rating is given to visual resources typical or characteristic of the region's natural and/or cultural visual amenities. A low visual quality rating is assigned to areas generally lacking in natural or cultural visual resource amenities typical of the region.

- Viewer types: The types of people viewing the affected landscape, such as motorists traveling on nearby public roadways, users of public parks and other recreational areas, and residents and business patrons. Viewer types inform viewers' levels of sensitivity to changes in the visual landscape around them. For instance, a motorist traveling at highway speeds would not have the same visual experience as a hiker or pedestrian on a public trail who would experience a view for a longer period of time.
- Public views: Views experienced from representative publicly accessible vantage points.
- Viewer exposure: The visibility of the landscape, viewing distance, viewing angle, the extent of visibility, and the duration of the view. This analysis describes viewing distances using three general categories.
  - *Foreground* refers to views observed up to 0.5 mile from the viewer.
  - *Middle-ground* refers to views observed from 0.5 mile to 3 miles from the viewer.
  - *Background* refers to views extended outward beyond 3 miles from the viewer.

The geographic scope for the analysis of impacts on aesthetics and visual resources reflects public views of the Project components. Generally, the study area for aesthetics and scenic resources encompasses public locations from which the public typically would view a component of the Project.

U.S. Census Bureau Urban Area maps were reviewed to determine which of the Proposed Project components would be located in urbanized areas, as defined in CEQA Guidelines Section 15387. The results of this review indicate that the Project components are wholly within the Urbanized Areas of Livermore – Pleasanton – Dublin. Therefore, consistent with the CEQA Guidelines Appendix G Checklist and Criterion c, the evaluation of the Proposed Project's impacts on visual character and quality in this analysis will be based on the potential for the Proposed Project to conflict with applicable zoning and other regulations governing scenic quality.

Discussion

a) **No Impact.** A substantial adverse effect on a scenic vista would typically occur if the Project would result in permanent changes to the visual landscape. The East Bay Hills are located along the western side of the Pleasanton city limit. The East Bay Hills include open space trails that provide multiple benefits including access to vista points (City of Pleasanton, 2009). The Project is located over 3 miles from the open space trails and therefore would not be visible from scenic vistas due to the distance and intervening topography. Additionally, the Project includes construction of the Mocho PFAS Treatment Plant and associated facilities at an existing well site and would remain consistent with the existing urban visual character of the Project area. There would be no impact on scenic vistas in the Project area. Therefore, there would be no impact under this criterion.

b) **No Impact.** Interstate 680, traversing Pleasanton in a north-south direction, is an officially designated State Scenic Highway. Interstate 580, traversing Pleasanton in an east-west direction, and State Route 84, extending west of Interstate 680, are both Eligible State Scenic Highways – Not Officially Designated. These highways are located over a mile away from the Project components. The combination of the reduced visual size of the Project at long distances, potential

obstructions in the landscape, and travel speed precludes view of Project construction and components to be visible from over a mile away at highway speeds. Therefore, no impact would occur to scenic resources within a state scenic highway.

c) **Less than Significant Impact.** Scenic resources generally include scenic landscapes, scenic highways, or scenic areas, as well as historic structures, trees, or other resources that contribute to the scenic values of an area. There are no designated scenic resources in the Pleasanton General Plan, however, there are recreational trails and parks near the Project that offer scenic value (City of Pleasanton, 2009). Motorists would be affected by the visual changes observed from these scenic resources and from other roadways directly adjacent to the Project. Other affected viewer groups include recreationists and residents surrounding the Project area. Residents directly adjacent to the Project would be sensitive to changes from publicly accessible viewpoints within their neighborhoods, and recreationists would be sensitive to views within recreational facilities in the Project area.

Construction equipment and activity may temporarily introduce visually unappealing elements to the visual landscape. Visual impacts would occur from the temporary presence of construction equipment, materials, and work crews at the Project site. While these impacts would be most noticeable to nearby motorists and residents, impacts would be temporary and short-term in nature as these viewers continue to move past construction activities. Upon completion of construction, any remaining equipment would be removed and staging areas would be restored to their original condition. Therefore, impacts on scenic quality due to Project construction would be less than significant.

There are several recreational sites in the general vicinity; these include the Iron Horse Regional Trail to the northern and eastern sides of the property adjacent to the Project site, Arroyo Mocho Trail approximately 0.06 mile to the north, Sutter Gate Park approximately 0.35 mile to the west, Bicentennial Park approximately 0.3 mile to the south, and Nielsen Park approximately 0.4 mile to the east (City of Pleasanton, 2009). The Arroyo Mocho is a major waterway traversing Pleasanton that has a recreational bike/pedestrian trail that runs along it. Much riparian vegetation and wildlife exist along the Arroyo Mocho. These and other arroyos provide rich natural habitat in the City of Pleasanton. Recreationists would be the viewer groups most impacted by the visual changes observed from the Arroyo Mocho Trail. However, due to intervening topography, distance, vegetation, and existing development, the Project would not be visible from the trail. For these same reasons, the Project would not be visible from nearby parks. The Iron Horse Regional Trail connects residential and commercial areas, business parks, schools, public transportation, open space and parks. Views along the Iron Horse Regional Trail are urban in nature and views of the Project site would be obscured by existing trees and the Project is similar to existing conditions. Therefore, recreationists would not experience changes in scenic quality due to the Project.

Motorists traveling along Santa Rita Road and Stoneridge Drive would experience foreground views of the Project, which would be constructed adjacent to Zone 7's Mocho Well 3 facility. The Project includes construction of a PFAS treatment system, a water transmission line beneath Stoneridge Drive, a booster pump station, switchgear, an electrical facility, a perimeter wall enclosure or a building to house the treatment system, a media truck driveway, a bioretention

structure, and minor grading and excavation activities. In addition, the Project includes improvements at the Mocho Groundwater Demineralization Plant to increase demineralization treatment capacity and salt removal. The installation of additional RO membranes will likely require replacement of ancillary mechanical and electrical equipment, potentially including the pumps, VFDs, MCC, switchgear, and other appurtenances. The Project also includes replacing the well pumps at Mocho Wells 2, 3, and 4 due to the pumps reaching the end of their useful lives and evaluating the use of higher pressure pumps and variable frequency drives for these pumps to meet the Mocho PFAS Treatment Plant hydraulic needs. Furthermore, as part of the Mocho PFAS Treatment Plant project, the existing switchgear and ancillary electrical equipment would be replaced at Mocho Wells 3 and 4 due to the equipment exceeding their useful lives and will be sized to accommodate the Project's electrical demands. The proposed facilities would be consistent with the existing urban visual character of the area and would not degrade visual quality. In addition, existing trees and vegetation, as well as surrounding development, would provide partial screening of the Project from nearby roadways. The combination of intervening landscaping and structures, along with the speed of passing vehicles, would reduce the visibility of the Project. As a result, the Project would have a minimal impact on the visual character and quality for motorists along Santa Rita Road and Stoneridge Drive.

Residents would be the viewer group most affected by visual changes associated with the Project when viewed from public viewing locations near the Mocho Well 3 facility. Views from public vantage points along Laramie Gate Circle are largely screened by an existing approximately 7-foot-tall masonry wall that separates the roadway from the Project site. There is the potential for this wall to be replaced as part of the Project. Given the height of this wall, only the upper portions of the Project structures would likely be visible, resulting in limited views and a reduced visual impact. Additionally, the Project would include vegetative plantings (e.g., trees, shrubs) and/or other amenities for visual screening of the treatment facilities and trail restoration and tree replacement for any removal or damage. As a result, public views of the Project from Laramie Gate Circle would be limited, and the visual impact on viewers from public vantage points would be minimal.

The Mocho Wells 3 and 4 and the Mocho Groundwater Demineralization Plant are on sites designated by the City of Pleasanton as Public Health and Safety, which applies to open space intended for public health and safety purposes. It also carries a Wildlands Overlay designation, indicating open space for the preservation of natural resources. Goal 2 of the Conservation and Open Space Element in the City of Pleasanton General Plan states: Preserve and enhance the natural resources of the Planning Area including plant and wildlife habitats, heritage trees, scenic resources, and watercourses. Although vegetation removal would be required within the Mocho PFAS Treatment Plant and stormwater treatment facilities footprints; existing trees and vegetation on the property that do not conflict with construction, operation, renewal or replacement of the facilities would be preserved to the extent feasible and as stated previously, the Project would include vegetative plantings (e.g., trees, shrubs) and/or other amenities for visual screening of the treatment facilities and trail restoration and tree replacement. No tree or vegetation removal would be required for pump replacement and/or switchgear replacement at the Mocho Wells 2, 3, and 4 facilities and improvements at the Mocho Groundwater Demineralization Plant.

The visual changes resulting from the visible components of the Project would not substantially alter the existing visual character or quality of the area or its surroundings. These components would be located in areas where similar water treatment facility structures currently exist and would feature comparable design characteristics (e.g., height, placement, and construction materials). In addition, the facilities would utilize paint colors and exterior finishes that are visually compatible with the surrounding built environment. Although the Project may be visible from certain public viewpoints, the proposed facilities would be visually consistent with the existing built environment in the Project study area. Therefore, the Project would not conflict with local zoning regulations or General Plan policies related to aesthetics, such as the City of Pleasanton General Plan Goal 2, which seeks to preserve and enhance the natural resources of the Planning Area, including scenic resources. As such, the Project's impact on scenic quality with respect to local regulations would be less than significant.

d) **Less than Significant Impact.** Existing sources of light in the Project area are the residential areas to the west, as well as street lighting along Stoneridge Drive and Santa Rita Road. Existing glare is minimal from the limited reflective surfaces at the existing Mocho Well 3 facility.

The Mocho PFAS Treatment Plant site would be designed with lighting to facilitate safe operations and maintenance of the facilities. No additional lighting would be included as part of the Project work at the Mocho Groundwater Demineralization Plant and Mocho Well 4 site or the Mocho Well 2 site. As described in Section 1.5 *Project Description*, the lighting would be designed to minimize public impacts (e.g., motion activation switches, shields or hoods directing light downward, etc. to minimize light spillover, reduce glare, and prevent light trespass onto adjacent properties or into the night sky, in accordance with local lighting standards). The incremental addition of lighting specifically serving the Mocho PFAS Treatment Plant elements would not create a substantial new source of light or glare when considered with the existing condition.. Some of the permanent Mocho PFAS Treatment Plant elements may include reflective surfaces such as steel or metal; however, they would not have substantial glaring effects. Therefore, there would be no new substantial light or glare that would adversely affect views in the area. Impacts related to lighting and glare would be less than significant.

References

California Department of Transportation (Caltrans), 2018. California State Scenic Highways, 2018. Available: https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa. Accessed June 12, 2025.

City of Pleasanton, 2009. Pleasanton General Plan *Conservation and Open Space Element.* Adopted July 21, 2009. Available: https://www.cityofpleasantonca.gov/assets/our-government/community-development/7.%20Conservation-OpenSpace%20Element%20(SA).pdf. Accessed June 12, 2025.

U.S. Census Bureau, 2023. 2020 Census Urban Areas of the United States and Puerto Rico Map. Available: https://www2.census.gov/geo/maps/DC2020/UA20/UA_2020_WallMap.pdf. Accessed June 16, 2025.

2.2 Agriculture and Forestry Resources

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
II. AGRICULTURE AND FORESTRY 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 Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and 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?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Discussion

a) **No Impact.** The Project would be located on the same parcels as Zone 7's Mocho Wells 2, 3, and 4 and Mocho Groundwater Demineralization Plant in the City of Pleasanton. The Project sites are classified as Urban and Built-Up Land[1] according to the Farmland Mapping and Monitoring Program and would not sustain farmland (CDC, 2022a). The closest plot designated as farmland of importance by the CDC is located approximately 2.8 miles southeast of the Project sites and would not be affected by any Project construction activities, truck trips, water usage, operation, or maintenance of the Project. None of the Project components would occur on Prime, Unique, or Statewide Importance Farmland; therefore, no conversion of designated farmland would occur and there would be no impact.

b) **No Impact.** The Project would not be located in or near any land used or zoned for agricultural use. The Mocho PFAS Treatment Plant, Mocho Well 3 site and the Mocho Groundwater Demineralization Plant and Mocho Well 4 sites are currently designated as Public Health and Safety and Wildland Overlay (City of Pleasanton, 2009a) and zoned as Public and Institutional (P) (City of Pleasanton, 2009b). The Mocho Well 2 site is currently designated as Retail/

[1] Land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes (CDC, 2022a).

Highway/Service Commercial Business and Professional Offices. Areas adjacent to the Project are zoned as Single Family Residential (R-1-65), Planned Unit Development – High Density Residential (PID-HDR), Industrial – PUD (PUD-1), Planned Unit Development – High Density Residential (PUD-HDR), and General and Limited Industrial (City of Pleasanton, 2025). The Project is not on property that is enrolled in a Williamson Act contract (CDC, 2022b). Therefore, there would be no impact.

c, d) **No Impact.** The Project sites are not zoned as forest land or timberland, as defined by Public Resources Code §12220(g),[2] §4526,[3] or Government Code §51104(g).[4] Therefore, there would be no loss of forest land or conversion of forest land to non-forest use and no impact would occur.

e) **No Impact.** As discussed above, the Project sites and the surrounding areas are not designated or zoned for farmland or forestland. Therefore, the Project would not involve any other changes in the existing environment due to their location or nature, which could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use. Any potentially designated forested land would be located over 1 mile outside of Project activities (i.e., construction, operation, and maintenance). There would be no impact under this criterion.

References

California Department of Conservation (CDC), 2022a. California Important Farmland Finder. Available: https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed March 28, 2025.

California Department of Conservation (CDC), 2022b. California Williamson Act Enrollment Finder. Available: https://maps.conservation.ca.gov/dlrp/WilliamsonAct/. Accessed March 28, 2025.

City of Pleasanton, 2009a. Pleasanton General Plan Land Use Map 2005-2025. Available: https://www.cityofpleasantonca.gov/assets/our-government/community-development/Land%20Use%20Element%20Map%202023.06.20.pdf. Accessed March 28, 2025.

City of Pleasanton, 2009b. Pleasanton General Plan 2005-2025 *Conservation and Open Space Element.* Adopted July 21, 2009. Available: https://www.cityofpleasantonca.gov/assets/our-government/community-development/1.%20GP-Cover-Inside-TofC.pdf. Accessed March 28, 2025.

City of Pleasanton, 2025. City of Pleasanton – Zoning Lookup. Available: https://experience.arcgis.com/experience/78affb1fda3445e2bf3710a0c75796c4. Accessed March 28, 2025.

---

[2] "Forest land" is land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.

[3] "Timberland" means land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species shall be determined by the board on a district basis.

[4] "Timberland production zone" or "TPZ" means an area which has been zoned pursuant to Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, as defined in subdivision (h). With respect to the general plans of cities and counties, "timberland preserve zone" means "timberland production zone."

2.3 Air Quality

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
III. AIR QUALITY — Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

Environmental Setting

The Project sites are located in Alameda County, which is in the San Francisco Bay Area Air Basin (Bay Area Air Basin), within the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). Alameda County has a Mediterranean climate: temperatures rarely below freezing, moderate rainfall mostly in fall and winter, and warm days in the summertime with cool evenings.

Sensitive Receptors

For the purposes of this air quality analysis, sensitive receptors are defined as facilities and land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these types of uses include schools, hospitals, and daycare centers. Residential areas are also considered sensitive to poor air quality because these sensitive individuals could be present there, and people usually stay home for extended periods of time, which results in greater exposure to pollutants.

The land directly surrounding the Mocho PFAS Treatment Plant and Mocho Well 3 site includes suburban residential neighborhoods bound by Stoneridge Drive in the north and Santa Rita Road in the east. The closest residential uses are located approximately 40 feet from the Mocho Well 3 site, along Laramie Gate Circle. The nearest hospital, Stanford Tri Valley Medical Center, is 0.40 mile north of the site.

Additional residential uses are located approximately 135 feet and 175 feet from Mocho Well sites 2 and 4, respectively, along Santa Rita Road.

Air Quality Attainment Status

The existing air quality of the Bay Area Air Basin is described relative to its attainment of federal and state ambient air quality standards. The air quality attainment status is determined based on air pollutant monitoring data and judged for each air pollutant. Areas with monitored pollutant levels higher than the standards are described as non-attainment of the standard. The Bay Area Air Basin is currently designated as a non-attainment area for the national 8-hour ozone standard and 24-hour fine particulate matter

($PM_{2.5}$) standard. The Bay Area Air Basin has met the carbon monoxide (CO) standards for over a decade and is classified as an attainment area by the U.S. EPA. The U.S. EPA has deemed the area as attainment/ unclassified for all other air pollutants, which include inhalable particulate matter (PM_{10}). For state standards, which are for most pollutants lower than the federal standards, the Bay Area Air Basin is designated as a non-attainment area for the 8-hour ozone standard, 1-hour ozone standard, 24-hour PM_{10} standard, and 24-hour $PM_{2.5}$ standard.

Discussion

a) **Less than Significant Impact.** The BAAQMD 2017 Clean Air Plan (Clean Air Plan) is the applicable air quality plan for the Project area (BAAQMD, 2017). Consistency with an air quality plan is determined by whether a project would hinder implementation of control measures identified in the air quality plan or result in growth of population or employment that is not accounted for in local and regional planning.

The Project is necessary to restore groundwater production and meet Zone 7's water supply reliability policy goals and salt management plan objectives. The Project does not hinder implementation of control measures identified in the air quality plan. It is not intended to encourage population growth not accounted for in the planning guidance documents of the land use jurisdictions (i.e., municipalities) in Zone 7's service area. The Project would not result in population growth in the Zone 7 service area not already accounted for by the local jurisdictions.

The Project would not result in a cumulatively considerable net increase of any criteria pollutant under an applicable federal or state ambient air quality standard. No additional emergency generators would be required onsite. It is anticipated that the Project would be exempt from the requirements of the BAAQMD's Authority to Construct and Permit to Operate requirements. This analysis assumes that the construction of the Project would not result in a cumulatively considerable impact of criteria pollutant, ozone precursor, or toxic air contaminant (TAC) emissions during the approximately 18-month construction period. Therefore, there would be a less than significant impact.

b) **Less than Significant Impact.**

Construction

Construction activities would result in emissions of the non-attainment pollutants described above: reactive organic gases (ROG) and nitrogen oxides (NOx), which are ozone precursors, and particulate matter (PM_{10} and $PM_{2.5}$). These pollutant emissions would be generated in the form of fugitive dust (PM_{10} and $PM_{2.5}$) and in the form of exhaust by construction equipment, on-road vehicle trips of haul trucks for delivering construction material, water trucks for site dust control, and construction worker commutes to and from the project site.

Construction Dust

Activities that generate dust include excavation and equipment movement across unpaved construction sites. Dust can be an irritant causing watering eyes or irritation to the lungs, nose, and throat. Excavation, grading, and other construction activities can cause wind-blown dust that adds PM_{10} and $PM_{2.5}$ to the local atmosphere. The BAAQMD has taken a qualitative approach to

addressing fugitive dust emissions during construction, such that any project that implements the BAAQMD Basic Construction Mitigation Measures Recommended for All Projects (Best Management Practices) would not result in a significant impact with respect to fugitive dust (BAAQMD 2017b). Best Management Practices, provided below, specifies BAAQMD-recommended measures and would apply to all individual projects to address construction dust.

Zone 7 typically requires its contractors to implement these measures to minimize dust to the extent possible for workers and nearby residents.:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Construction Equipment and Vehicle Exhaust

Construction-related criteria air pollutant emissions from equipment and on-road vehicle exhaust were estimated using CalEEMod (version 2022.1.1.29); modeling output files are included in **Appendix A**. Since construction-related air pollutant emissions from equipment and on-road vehicle exhaust were estimated, additional project components were added including the replacement of equipment and addition of components at the Mocho Groundwater Demineralization Plant and the replacement of the well pump at Mocho Well 2; however, these elements are focused on replacing or adding components at existing facilities and no ground disturbance or earthwork would be required. As such, additional construction emissions from these elements are expected to be minimal. Construction is assumed to take place over an approximate 18-month period. Project specific data for construction phasing and overall schedule, and on-site equipment fleet were provided by the project applicant. The total emissions (without mitigation measures)

generated over the duration of construction from equipment and vehicle exhaust are presented in **Table 1**. As shown in the table, emissions of ROG, NOx, PM_{10}, and $PM_{2.5}$ would all be below their respective significance thresholds, which for construction have been established by BAAQMD in terms of average daily emissions. Therefore, the proposed project would not have a significant impact related to construction criteria air pollutant emissions.

TABLE 1
AVERAGE DAILY CONSTRUCTION-RELATED CRITERIA POLLUTANT EMISSIONS (POUNDS PER DAY) WITHOUT MITIGATION MEASURES

Project Average Daily Construction Emissions by Year	ROG	NO_x	Exhaust PM_{10}	Exhaust $PM_{2.5}$
2026[a]	0.04	0.28	0.01	0.01
2027	0.85	7.37	0.28	0.26
2028	1.01	1.88	0.06	0.06
BAAQMD Threshold for Significant Construction Impacts	54	54	82	54
Potential Significant Impact?	No	No	No	No

NOTE:
a. Construction would start on December 1, 2026, resulting in only one month of construction emissions in year 2026.
SOURCE: ESA (Appendix A)

c) **Less than Significant Impact.**

Construction

Construction equipment and associated heavy-duty truck traffic generate diesel exhaust, which is a carcinogenic and non-cancer, chronic toxic air contaminant (TAC). Construction exhaust emissions may pose health risks for sensitive receptors. The health risk assessment (HRA) prepared for the proposed project evaluated the potential health effects to nearby sensitive receptors from construction emissions of Diesel Particulate Matter (DPM) and $PM_{2.5}$ (see Appendix A). This assessment included dispersion modeling to predict the off-site concentrations resulting from project construction, so that lifetime cancer risks and non-cancer, chronic health effects could be evaluated. The hazard index and $PM_{2.5}$ risks are determined from exposure to non-carcinogenic concentrations.

The use of cancer potency factors to assess total cancer risk and the use of the hazard index approach for evaluating the potential for noncarcinogenic health.

Operations

Daily worker trips required for maintenance and inspections would not be a major source of TAC emissions, and there would be no other diesel equipment associated with operations of the facility. The operational health risk impact associated with the proposed project would be less than significant and were not quantitatively evaluated.

HRA Methodology

The HRA was conducted using the U.S. EPA AERMOD dispersion model (version 24142) and uses measured meteorology to predict pollutant concentrations at specific locations, including sensitive receptor locations, defined by a Cartesian coordinate system. Diesel construction equipment and trucks would be used during the trenching and well installation.

A conservative representation of the on-site construction equipment was modeled as an area source, based on the site planning diagrams (included in Appendix A). The modeling parameters are as follows:

- On-site Construction: polygon area sources dimensions with;
  - Release height of 5 meters for construction equipment exhaust;
  - Initial vertical dimension of 1.4 meters;
  - Emissions occurring only between the hours of 7 AM and 7 PM;
- Off-site vendor truck: volume line source along Santa Rita Road and Stoneridge Drive with;
  - Release height of 5 meters for haul truck exhaust;
  - Emissions occurring only between the hours of 7 AM and 7 PM
- Receptor flagpole height of 1.5 meters (ground-level receptor at breathing height); and
- Meteorological station of Livermore Municipal Airport for the years 2009 through 2017.

The sources were modeled with an emission rate of one gram per second to obtain a dispersion factor (1 $\mu g/m^3$ concentration) at each receptor location. The DPM and $PM_{2.5}$ concentrations were calculated using the dispersion factors and the DPM and $PM_{2.5}$ unmitigated emissions from Table 1 and mitigated emissions from Table 2.

The HRA was based on recommended methodology of the Office of Environmental of Health Hazard Assessment (OEHHA) and adopted by the BAAQMD (OEHHA 2015). To calculate the resident child cancer risks, the 95th percentile daily child breathing rate is recommended by the BAAQMD for children under the age of two and 80th percentile rate for age groups that are 2 years old or older (BAAQMD 2022). These breathing rates were used along with the modeled annual TAC concentrations and assuming the exposure would occur for 350 days per year at the residence, as recommended by BAAQMD. Worker exposure parameters were set for an individual between the ages of 16 and 70 and assuming the exposure would occur during a 10-hour period 250 days per year.

The maximum exposed individual resident (MEIR) is located approximately 115 feet southwest of the Mocho PFAS Treatment Plant and Mocho Well 3 site, and the maximally exposed individual worker (MEIW). is located approximately 250 feet east of the Mocho PFAS Treatment Plant and Mocho Well 3 site. The highest modeled residential cancer risks, chronic health hazard index, and the maximum annual $PM_{2.5}$ concentration is not exceeded at any location. **Table 2** below summarizes the maximum cancer risks, $PM_{2.5}$ concentrations, and chronic health hazard index for project-related unmitigated construction affecting the MEIR and the MEIW. As shown in Table 2,

the highest modeled risks from unmitigated construction emissions would not exceed the BAAQMD thresholds, and therefore this impact would be less than significant.

TABLE 2
HEALTH RISK IMPACTS AT THE MAXIMUM EXPOSED INDIVIDUAL SENSITIVE RECEPTORS

	Maximum Cancer Risk (per million)	Hazard Index	$PM_{2.5}$ concentration ($\mu g/m^3$)
Unmitigated Construction Risk			
MEIR	5.03	0.005	0.18
MEIW	0.29	0.005	0.18
BAAQMD Threshold of Significance	*10.0*	*1.0*	*0.3*
Exceeds Significance Threshold?	No	No	No

SOURCE: ESA (Appendix A)

Cumulative Impact at MEISRs

Cumulative community risk impacts were addressed through an evaluation of TAC sources located within 1,000 feet of the MEIR. These sources include busy surface streets and stationary sources identified by BAAQMD. For local roadways, BAAQMD has provided the *Mobile Source Screening Map* to assess cancer and hazard risks from existing road and rail ways. (BAAQMD, 2022b). Other nearby streets are assumed to have fewer than 10,000 vehicles per day. A review of BAAQMD's stationary source GIS map tool showed that there are no stationary sources within 1,000 feet of the Project site with the potential to affect the MEIR.

The cumulative cancer risk, chronic hazard index, and $PM_{2.5}$ concentrations would not exceed their cumulative source thresholds of greater than 100 per million, greater than 10.0, and greater than 0.8 $\mu g/m^3$, respectively as shown in **Table 3**. Thus, a less-than-significant cumulative impact from the chronic, non-cancer Hazard Index and $PM_{2.5}$ concentrations would occur during construction of the proposed project.

d) **Less than Significant Impact.** Typical odor sources of concern include wastewater treatment plants, sanitary landfills, transfer stations, composting facilities, petroleum refineries, asphalt batch plants, chemical manufacturing facilities, fiberglass manufacturing facilities, auto body shops, and rendering plants. The proposed project would not introduce significant sources of new odors in the vicinity. Therefore, odor impacts from the proposed project would be less than significant.

TABLE 3
CUMULATIVE HEALTH RISK IMPACTS AT THE MAXIMUM EXPOSED INDIVIDUAL RESIDENCE (MEIR) AND WORKER (MEIW)

	Maximum Cancer Risk (per million)	Hazard Index	$PM_{2.5}$ concentration ($\mu g/m^3$)
Unmitigated Construction MEIR			
Project Risk	5.03	<0.01	0.18
Existing Risk from Mobile Sources	15.0	0.16	0.42
Project + Existing	20.03	0.16	0.60
BAAQMD Cumulative Threshold of Significance	*100.0*	*10.0*	*0.8*
Exceeds Significance Threshold?	No	No	No
Unmitigated Construction MEIW			
Project Risk	0.29	<0.01	0.18
Existing Risk from Mobile Sources	65.0	0.16	0.42
Project + Existing	65.29	0.16	0.60
BAAQMD Cumulative Threshold of Significance	*100.0*	*10.0*	*0.8*
Exceeds Significance Threshold?	No	No	No

SOURCE: ESA (Appendix A)

References

Bay Area Air Quality Management District (BAAQMD), 2017. *Draft 2017 Clean Air Plan, Spare the Air, Cool the Climate*, Available: www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/baaqmd_2017_cap_draft_122816-pdf.pdf?utm_campaign=CAP+2017+Draft&utm_medium=email&utm_content=article3_link1. Accessed March 29, 2022.

BAAQMD, 2022a. *BAAQMD CEQA Guidelines, California Environmental Quality Act Air Quality Guidelines.* Available: https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines. Accessed April 2025.

BAAQMD, 2022b. *Mobile Source Screening Map.* Available: https://mtc.maps.arcgis.com/apps/instant/sidebar/index.html?appid=c5f9b1a40326409a89076bdc0d95e429. Accessed April 2025.

Office of Environmental Health Hazard Assessment. 2015. Air Toxics Hot Spots Program – Risk Assessment Guidelines, March 2015, Notice of Adoption of Air Toxics Hot Spots Program Guidance Manual for the Preparation of Health Risk Assessments 2015 - OEHHA (ca.gov). Accessed April 2025.

2.4 Biological Resources

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. 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 Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Environmental Setting

The Project includes three work sites – (1) new Mocho PFAS Treatment Plant and improvements to Mocho Well 3, (2) improvements at the existing Mocho Groundwater Demineralization Plant and Mocho Well 4 and (3) minor upgrades to Mocho Well 2.

The Mocho PFAS Treatment Plant and Mocho Well 3 is located at Mocho Well 3 at 2703 Santa Rita Road in the City of Pleasanton, Alameda County (Figures 1 and 2). The Project would include the construction of the PFAS treatment system, water transmission line, booster pump station, switchgear, electrical facility, enclosed building to house PFAS treatment system or perimeter wall to screen the PFAS treatment system, media truck driveway, bioretention stormwater treatment facility, and minor grading and excavation activities at Mocho Well 3. The parcel is located south of Arroyo Mocho drainage channel and at the intersection of Stoneridge Dr. and Santa Rita Rd. The present use of the parcel is as a wellhouse with surrounding lands open to public trail use. The parcel is planted with approximately 25 coast live oak trees (*Quercus agrifolia),* other oaks, as well as small trees and saplings. There was no understory vegetation, only mulch ground cover with sparse weeds. Alongside the residential neighborhood to the south/southwest of the parcel is a row of large, mature trees consisting of eucalyptus (*Corymbia citriodora*), coast redwood (*Sequoia sempervirens)* and ornamental pines (*Pinus* sp.). Ornamental shrubs are also present. Ground cover at the site consists of mulch, disturbed land (gravel),

and ornamental plantings. Wildlife seen in this area included tree squirrels (*Sciurus griseus*), American robin (*Turdus migratorius)* and black phoebe (*Sayornis nigricans).*

At the north end of the parcel was a short stair providing access to the multiuse pathway along Arroyo Mocho. The channel at this location is concrete-lined with vegetation growing on accumulated sediment within the channel. Water birds including mallards (*Anas platyrhynchos)* and great blue heron (*Ardea herodias)* were visible within the channel.

In addition, the Project includes improvements at the Mocho Groundwater Demineralization Plant to increase demineralization treatment capacity and salt removal. The installation of additional RO membranes will likely require replacement of ancillary mechanical and electrical equipment, potentially including the pumps, VFDs, MCC, switchgear, and other appurtenances. The Project also includes replacing the well pumps at Mocho Wells 2, 3, and 4 due to the pumps reaching the end of their useful lives and evaluating the use of higher pressure pumps and variable frequency drives for these pumps to meet the Mocho PFAS Treatment Plant hydraulic needs. Furthermore, as part of the Mocho PFAS Treatment Plant project, the existing switchgear and ancillary electrical equipment would be replaced at Mocho Wells 3 and 4 due to the equipment exceeding their useful lives and will be sized to accommodate the Project's electrical demands.

The fenced Zone 7 Mocho Well 4 facility and Mocho Groundwater Demineralization Plant is located at 5215 Stoneridge Drive in the City of Pleasanton. A pipeline from the Mocho PFAS Treatment Plant will connect to the demineralization facility across Santa Rita Road. The existing Mocho Well 4 switchgear and pump will be replaced in their existing locations and the membrane improvements will occur within the existing building footprint of the Mocho Groundwater Demineralization Plant. This fenced area was paved with a few ornamental trees and shrubs, and no other apparent biological resources.

The fenced Zone 7 Mocho Well 2 facility is located at 2552 Santa Rita Road in the City of Pleasanton. The Mocho Well 2 pump will be replaced in its existing location inside of the well house building. This fenced area was paved with a few ornamental trees and shrubs along the perimeter of the priority, and no other apparent biological resources.

Regulatory Framework

Federal Endangered Species Act

The Federal Endangered Species Act (FESA) (United States Code title 16, sections 1531–1544) protects listed plant, fish, and wildlife species from harm or *take*, which is broadly defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct. Take can also include habitat modification or degradation that directly results in the death or injury of a listed fish and wildlife species. An activity can be defined as take even if it is unintentional or accidental. Listed plant species are provided less protection than listed fish and wildlife species. Listed plant species are legally protected from take under the FESA only if they occur on federal lands or if the project requires a federal action, such as a section 404 permit from the U.S. Army Corps of Engineers (USACE).

USFWS has jurisdiction over wildlife and freshwater fish species that are federally listed as threatened or endangered under the FESA, while the National Marine Fisheries Service (NMFS) has jurisdiction over marine species and anadromous fish that are federally listed as threatened or endangered.

FESA section 7(a)(2) requires consultation with USFWS or NMFS if a federal agency undertakes, funds, permits, or authorizes (termed the *federal nexus*) any action that may affect endangered or threatened species or designated critical habitat. For projects that may result in the incidental take of threatened or endangered species, or critical habitat, and that lack a federal nexus, a section 10(a)(1)(b) incidental take permit can be obtained from USFWS and/or NMFS. To receive a permit, the applicant must develop a habitat conservation plan for approval by USFWS or NMFS. The issuance of an incidental take permit requires the USFWS or NMFS to go through internal section 7(a)(2) consultation.

Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) (United States Code title 16, section 703 et seq.) is the domestic law that affirms and implements a commitment by the United States to four international conventions (with Canada, Mexico, Japan, and Russia) for the protection of a shared migratory bird resource. Unless and except as permitted by regulations, the MBTA states that without a permit issued by the U.S. Department of the Interior, it is unlawful to pursue, hunt, take, capture, or kill any migratory bird. The law also applies to the intentional disturbance and removal of nests occupied (i.e., active nests) by migratory birds or their eggs during the breeding season. The removal of inactive nests that are not protected by other federal regulations (e.g., Federal Endangered Species Act, Bald and Golden Eagle Protection Act) does not constitute “take” under the MBTA and would not conflict with regulation.

On December 22, 2017, under Solicitor’s Opinion M-37050, the U.S. Department of the Interior redefined *incidental take* under the MBTA, stating that “the MBTA’s prohibition on pursuing, hunting, taking, capturing, killing, or attempting to do the same applies only to direct and affirmative purposeful actions that reduce migratory birds, their eggs, or their nests, by killing or capturing, to human control” (USDOI, 2017). Under this definition, the federal MBTA’s definition of take does not prohibit or penalize the incidental take of migratory birds that results from actions that are performed without motivation to harm birds.

On January 7, 2021, USFWS (an agency within the U.S. Department of the Interior) published a “final rule” (referred to herein as the “MBTA rule”) defining incidental take as described previously in this section. On February 5, 2021, USFWS postponed the effective date of the MBTA rule to March 8, 2021, and requested public comments to inform its review of the rule and determine whether a further extension of the effective date would be necessary (*Federal Register* volume 86, number 25, pp. 8715–8717, February 9, 2021).

On March 8, 2021, the U.S. Department of the Interior rescinded Solicitor’s Opinion M-37050 on the MBTA, and the department has yet to issue a replacement rule. However, CDFW issued an advisory in 2018 affirming that California law continues to prohibit incidental take of migratory birds (CDFW, 2018). All native bird species that occur within the project area are protected by the MBTA.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (16 U.S.C. §§668-668c) makes it illegal makes it illegal to trade in any bald eagle or golden eagle or parts thereof. The Act provides criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof." The Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." In addition to immediate impacts, this definition also covers impacts that result from

human-induced alterations initiated around a previously used nest site during a time when eagles are not present, if, upon the eagle's return, such alterations agitate or bother an eagle to a degree that interferes with or interrupts normal breeding, feeding, or sheltering habits, and causes injury, death or nest abandonment. Under the Act, inactive nests belonging to either species are protected.

Clean Water Act

Section 404 of the Clean Water Act

Waters of the United States are defined in the Code of Federal Regulations (title 33, section 328.3[a], and title 40, section 230.3[s]) as rivers, streams, mud flats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce including any such waters. These waters fall under USACE jurisdiction under section 404 of the Clean Water Act (CWA). Additionally, USACE regulates navigable waters under section 10 of the Rivers and Harbors Act. *Navigable waters* are defined as those waters that are subject to the ebb and flow of the tide or that are presently used, have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.

Clean Water Act

Section 404 of the Clean Water Act

Waters of the United States are defined in the Code of Federal Regulations (title 33, section 328.3[a], and title 40, section 230.3[s]) as rivers, streams, mud flats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce including any such waters. These waters fall under USACE jurisdiction under section 404 of the Clean Water Act (CWA). Additionally, USACE regulates navigable waters under section 10 of the Rivers and Harbors Act. *Navigable waters* are defined as those waters that are subject to the ebb and flow of the tide or that are presently used, have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.

State

California Endangered Species Act

Under the California Endangered Species Act (CESA), CDFW is responsible for maintaining a list of threatened and endangered species (California Fish and Game Code section 2070 et seq.). The department also maintains a list of *candidate species*, which are species formally under review for addition to either the list of endangered species or the list of threatened species.

The CESA prohibits the take of plant and animal species that the California Fish and Game Commission has designated as either threatened or endangered in California. In the context of this regulation, *take* means to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill a listed species (California Fish and Game Code section 86). The prohibitions against take also apply to candidates for listing under the CESA. However, CESA section 2081 allows CDFW to issue permits for the minor and incidental take of species by an individual or permitted activity listed under the act. Unlike the FESA provision, species that are candidates for state listing are granted the same protections as listed species under the CESA.

California Fish and Game Code

Section 1600

CDFW regulates streambeds, their banks, and riparian habitat under section 1600 of California Fish and Game Code. Alteration to streambeds, banks, and/or riparian habitat requires a Lake and Streambed Alteration Agreement from CDFW before the initiation of such work.

Fully Protected Species

Certain species are considered *fully protected*, meaning that the California Fish and Game Code explicitly prohibits all take of individuals of these species except take permitted for scientific research. Fully protected amphibians and reptiles, fish, birds, and mammals are listed in California Fish and Game Code sections 5050, 5515, 3511, and 4700, respectively. It is possible for a species to be protected under the California Fish and Game Code but not be fully protected. For instance, mountain lion (*Puma concolor*) is protected under section 4800 et seq. but is not a fully protected species.

Sections 3503 and 3503.5

Under section 3503 of the California Fish and Game Code, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by the code or any regulation made pursuant thereto. Section 3503.5 of the code prohibits take, possession, or destruction of any birds in the orders Falconiformes (hawks) or Strigiformes (owls), or of their nests (active and inactive) and eggs. Migratory non-game birds and their nests (active and inactive) are protected under section 3800, and other specified birds are protected under section 3505. California Fish and Game Code section 3513 adopts the federal definition of migratory bird take, defined by the Secretary of the Interior under provisions of the MBTA.

California Environmental Quality Act Guidelines Section 15380

CEQA Guidelines Section 15380(b) designates a species as endangered or rare for the purposes of CEQA if the species of plant or animal is meets either of the following criteria:

(A) Although not presently threatened with extinction, the species is existing in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or

(B) The species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered "threatened" as that term is used in the Federal Endangered Species Act.

Native Plant Protection Act

The California Native Plant Protection Act (Fish and Game Code Sections 1900-1913) requires that endangered or rare native plants be protected by state departments and agencies through the conservation of rare and endangered plants. The act prohibits the take of endangered or rare plants and mandates that CDFW is notified at least 10 days prior to a change in land use for areas that support endangered or rare plant species.

Local

City of Pleasanton Tree Ordinance (2024) protects heritage and protected trees within Pleasanton. Heritage trees consist of a list of unique and irreplaceable trees for which preservation is prioritized, and

which require City Arborist consultation when trimming. Protected trees are mature trees of a defined size, varying by species. These may be removed with a City permit and replaced 1:1 with a planted tree, typically of the same species. (Code of Ordinances Chapter 17.16).

Discussion

a) **Less than Significant with Mitigation Incorporated.** Biological resources in the vicinity of the Project area were identified through review of pertinent literature, including past surveys of Arroyo Mocho, and database queries of the sources below. Following database review, a biological reconnaissance survey of the Project area (see Figure 2) was conducted on March 5, 2025.

- California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) for Dublin and Livermore USGS 7.5-minute quads (CDFW, 2025)
- California Native Plant Society (CNPS) rare plant online inventory (CNPS, 2025)
- U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) environmental conservation online system (USFWS, 2025)

The site is located within the geographic range of several listed and special-status species (CDFW, 2025), which occur in the regional project vicinity. Species with potential to occur at the site are listed in **Appendix B**. A discussion of potential impacts to special-status wildlife and plant species is provided below.

Plants

The ivy, mulch and landscaped ground cover onsite do not provide suitable habitat for special-status plant species. Thus, no impacts are anticipated.

Reptiles and Amphibians

The California red-legged frog (*Rana draytonii*) (federally-listed threatened [FT] and California Species of Special Concern [SSC]), California tiger salamander (*Ambystoma californiense*) (FT and state-listed threatened [ST]), and northwestern pond turtle (*Actinemys marmorata*) (federal proposed threatened and SSC) occur in the regional vicinity of the site. California red-legged frog is documented upstream in Arroyo Mocho, with the nearest occurrence approximately one mile northeast (CDFW, 2025). California tiger salamander and northwestern pond turtle have been documented to both north and south, with the nearest tiger salamander occurrences 1.5 miles east in Shadow Cliffs Recreation Area. The nearest pond turtle occurrence is approximately 2 miles to the northeast in Arroyo Mocho. Pond turtle and red-legged frog have low potential to be present in Arroyo Mocho. However, the Project site has no suitable habitat for any of these species, and they are not expected to be present. No impacts are anticipated.

Birds

Smaller nesting birds may use the shrubs and trees onsite for nesting habitat and raptors have potential to nest in the larger trees along the perimeter. Two special-status birds, tricolored blackbird (*Agelaius tricolor*) (state threatened [ST], SSC) and burrowing owl (*Athene cunicularia*) (SSC) are documented from approximately one mile east and west of the site (CDFW, 2025), but habitat for these species is not present onsite. Tricolored blackbirds nest in colonies in wetlands

or open fields, often in cattails, blackberry brambles, mustard patches, or agricultural lands. Burrowing owls occur in association with ground squirrel burrows in open grasslands. Other special-status nesting birds such as white-tailed kite (*Elanus leucurus*) (fully protected [FP]), as well as common migratory birds, including mourning dove (*Zenaida macroura*), Anna's hummingbird (*Calypte anna*), western scrub jay (*Aphelocoma californica*), and house finch (*Haemorhous mexicanus*) may nest in trees and shrubs on the Project site and could be impacted by the Project.

Removal of vegetation containing nests could result in reduced nest fitness, individual mortality, or the loss of eggs or young during nesting season. Noise, light, vibration, or other disturbance during construction could disturb nesting birds and result in nest abandonment and loss. Actively nesting migratory birds are protected under the Migratory Bird Treaty Act and California Fish and Game Code (FGC) 3503, and "take" of an individual, nest, or egg would constitute a significant impact. Implementation of **Mitigation Measure BIO-1: Protection of Nesting Migratory Birds**, which requires pre-construction nesting surveys and the establishment of no-work buffers, varying by the location and species of bird, for the duration of nesting. Implementation of this mitigation measure would reduce impacts on nesting birds to a less-than-significant level.

Mammals

Terrestrial special-status mammal species, such as San Joaquin kit fox (*Vulpes macrotis mutica*), are not expected on the Project site, which is located in a developed area. However, special-status bat species recorded in the vicinity, including Townsend's big-eared bat (*Corynorhinus townsendii*), and pallid bat (*Antrozous pallidus*), may roost in cavities or bark of mature trees. Numerous mature trees are present on the Project site and may require removal. If roosting bats were present in these trees, they could be killed or injured. Harm to special-status roosting bats would be a significant impact. Implementation of **Mitigation Measure BIO-2**: **Protection of Roosting Bats** would require bat surveys in suitable habitat and would implement a bat-safe tree removal process. Implementation of Mitigation Measure BIO-2 would reduce the impact to a less-than-significant level.

Mitigation Measures

Mitigation Measure BIO-1: Protection of Nesting Birds

- Tree and vegetation removal or pruning associated with project construction shall be avoided from February 1 through August 31, the primary local bird nesting season, to the extent feasible. If tree and vegetation removal or pruning associated with project construction is proposed during the nesting period, within seven days prior to the proposed start of construction activities a qualified biologist shall conduct a nesting bird survey of all potential habitat at the construction site and within 250 feet of the perimeter of the construction site.
- If any active nests are detected during the pre-construction survey, the qualified biologist shall recommend a work-exclusion buffer zone that shall be designated around the active nest to allow for the successful fledging of the birds. Typical nest buffers are 100 feet for passerine birds, depending upon the nature of proposed activities and the sensitivity of the identified bird to disturbance, and 150 to 250 feet for raptors. Construction activities shall be avoided or modified within the buffer area until young birds have fledged, which shall be confirmed by the qualified biologist. Buffer sizes may be reduced from the

initially established distances following review by the qualified biologist and/or coordination with CDFW.

Mitigation Measure BIO-2: Protection of Roosting Bats

- Prior to project construction, a qualified bat biologist shall conduct a pre-construction survey in potential bat habitat in trees to be removed or pruned and structures to be demolished within the work area. Surveys shall be conducted within 1 month prior to construction. If no roosting bats are found, no further action is required. If active bat roosts are found, these roosts shall be flagged and avoided with a suitable buffer, determined in coordination with CDFW. Removal or trimming of trees showing evidence of bat hibernation or maternity activity shall occur during the period least likely to affect inactive wintering bats and active bat maternity roosts (i.e., avoid roost disturbance from October 15 to February 15 for winter hibernacula, and April 15 to August 15 for maternity roosts).
- If a non-maternal roost of bats is found in a tree or structure to be removed or demolished as part of project construction, the individuals shall be safely evicted, under the direction of a qualified bat biologist, by opening the roosting area to allow airflow through the cavity. Removal or demolition should occur no sooner than at least two nights after the initial minor site modification (to alter airflow). This action allows bats to leave during darkness, increasing their chance of finding new roosts with a minimum of disturbance. Departure of the bats from the construction area shall be confirmed with a follow-up survey by a qualified bat biologist prior to start of construction.

b) **No Impact.** Vegetation communities on the Project site are limited to ornamental/landscaped trees and shrubs with mulch, and unvegetated/disturbed land. No sensitive vegetation communities are present. Thus, the Project would have no impact on riparian habitat or other sensitive natural community.

c) **No Impact.** The federal government defines and regulates waters, including wetlands, in Section 404 of the Clean Water Act (CWA). Wetlands are "areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support (and do support, under normal circumstances) a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3[b] and 40 CFR 230.3). No wetlands or waters are located in the Project area; thus, there would be no impact.

d) **Less than Significant Impact.** Located in a dense residential area bounded by major roads, the Project site and pipeline alignment do not provide valuable nursery or corridor habitat for fish, amphibian, bird, or mammal species. Because of the existing barriers to terrestrial wildlife movement (Santa Rita Rd., Stoneridge Dr. and residences) the Project's impact on wildlife corridors would be less than significant.

e) **Less than Significant.** The new facility would be placed within the parcel on disturbed land and mulch ground cover. For tree removal, the Project would adhere to Pleasanton Tree Preservation Ordinance (City of Pleasanton, 2024), which requires a permit for removal of protected trees (native trees larger than 37 inches in circumference (12 inches diameter at breast height (dbh)) or any tree larger than 55 inches in circumference (17.5 inches dbh). Several of the planted coast live oaks on the parcel appear to meet the size for native protected trees. No other local policies or ordinances protect biological resources that could be affected by construction or operation of

the PFAS facility. Thus, with adherence to the City's Tree Preservation Ordinance, impacts under this criterion would be less than significant.

f) **No Impact.** The Project area is within the East Alameda County Conservation Strategy area, which is a conservation strategy that partners and eligible entities may elect to comply with in order to obtain environmental approval of covered actions (e.g., projects) under its regulatory permits.

The East Alameda County Conservation Strategy is not a Habitat Conservation Plan or Natural Community Conservation Plan. The Project area is not within an area subject to any Habitat Conservation Plan adopted pursuant to the federal Endangered Species Act, or any Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan; thus, there would be no impact.

References

California Department of Fish and Wildlife, (CDFW). 2025. California Natural Diversity Database (CNDDB) Rarefind 5. CDFW's Electronic database, Sacramento, California. Available: https://www.wildlife.ca.gov/Data/CNDDB.

California Native Plant Society, 2025. *Inventory of Rare and Endangered Plants*. Available: http://www.rareplants.cnps.org.

Mayer, K. E. and W. F. Laudenslayer, Jr., 1988. *A Guide to Wildlife Habitats of California*, 166 pp. Available: https://www.wildlife.ca.gov/Data/CWHR/Wildlife-Habitats.

Pleasanton, City of, 2024. Pleasanton Municipal Code, Chapter 17.16, Tree Preservation. Available: http://qcode.us/codes/pleasanton/.

U.S. Fish and Wildlife Service (USFWS), 2025. Species List. Information for Planning and Conservation (IPaC) Environmental Conservation Online System. Available: https://ecos.fws.gov/ipac/.

2.5 Cultural Resources

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

Environmental Setting

To determine the cultural resources sensitivity of the Project site, a records search and background research was completed at the Northwest Information Center (NWIC) of the California Historical Resources Information System on May 08, 2024 (File No. 23-1599). The purpose of the records search was to (1) determine whether known cultural resources have been recorded in the vicinity of the Project site; (2) assess the likelihood for unrecorded cultural resources to be present based on historical references and the distribution of nearby archaeological resources; and (3) develop a context for the identification and preliminary evaluation of cultural resources. The records search consisted of an examination of the following documents:

- NWIC digitized base maps (USGS Livermore 7.5-minute topographic map and USGS Dublin 7.5-minute topographic map) to identify recorded archaeological resources and studies within a 0.25-mile radius of the Project site.
- NWIC digitized base maps (USGS Livermore 7.5-minute topographic map and USGS Dublin 7.5-minute topographic map) to identify recorded historic-era resources of the built environment (building, structures, and objects) within and adjacent to the Project site.
- Resource Inventories: California Inventory of Historical Resources (California Register), California Historical Landmarks, Built Environment Resources Directory (BERD) (through March 2025).

The results of the background research indicate that no pre-contact Native American archaeological resources and no historic-era archaeological resources or architectural resources have been previously recorded in the Project site. There are pre-contact Native American archaeological resources recorded in the records search radius including large midden sites with artifacts and human burials. Considering nearby site distribution and the distance to historical waterways, which would have been amendable for pre-contact use and occupation, the archaeological sensitivity of the general area for pre-contact Native American resources is high. However, the Project site is highly disturbed, and ground disturbance associated with Project would be relatively minimal and all within areas previously disturbed.

The Mocho PFAS Treatment Plant and Mocho Well 3 site was surveyed on March 5, 2025. The Mocho PFAS Treatment Plant and Mocho Well 3 site is graded and mulched, with concrete pavement around the built structures. The perimeter area around the Mocho PFAS Treatment Plant and Mocho Well 3 site where exposed surface soil is present was closely inspected for cultural materials such as lithic fragments, midden soil, or faunal remains as well as historic-era ceramic or glass fragments. No cultural materials or other evidence of past human use or occupation was identified. However, given that the Mocho PFAS

Treatment Plant and Mocho Well 3 site is covered in artificially placed fill and gravel the negative findings were anticipated.

In addition, the Project includes improvements at the Mocho Groundwater Demineralization Plant to increase demineralization treatment capacity and salt removal. The installation of additional RO membranes will likely require replacement of ancillary mechanical and electrical equipment, potentially including the pumps, VFDs, MCC, switchgear, and other appurtenances. The Project also includes replacing the well pumps at Mocho Wells 2, 3, and 4 due to the pumps reaching the end of their useful lives and evaluating the use of higher pressure pumps and variable frequency drives for these pumps to meet the Mocho PFAS Treatment Plant hydraulic needs. Furthermore, as part of the Mocho PFAS Treatment Plant project, the existing switchgear and ancillary electrical equipment would be replaced at Mocho Wells 3 and 4 due to the equipment exceeding their useful lives and will be sized to accommodate the Project's electrical demands. However, given that the improvements at the Mocho Groundwater Demineralization Plant and Mocho Well 2 are at existing facilities no excavation or ground disturbance would occur.

Discussion

a) **No Impact.** CEQA Guidelines Section 15064.5 requires the lead agency to consider the effects of a project on historical resources. A historical resource is defined as any building, structure, site, or object listed in or determined to be eligible for listing in the California Register or determined by a lead agency to be significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, or cultural annals of California. The following discussion focuses on architectural and structural resources. Archaeological resources, including those that are potentially historical resources according to CEQA Guidelines Section 15064.5, are addressed below under issue b).

As a result of the records search and background research, there are no architectural or structural resources in the Project sites that qualify as historical resources, as defined in CEQA Guidelines Section 15064.5. As such, there are no recorded historical resources present within the Project sites and there would be no impact on recorded historical resources.

b) **Less than Significant Impact.** Archaeological resources can be considered historical resources, according to *CEQA Guidelines* Section 15064.5, as well as unique archaeological resources, as defined in Public Resources Code (PRC) Section 21083.2(g). A significant impact could occur if the Project would cause a substantial adverse change to an archaeological resource through physical demolition, destruction, relocation, or alteration of the resource.

No evidence of pre-contact or historic-era archaeological resources was identified in the Project sites through background research or a surface survey. Based on the extent and type of previously recorded archaeological resources in the nearby vicinity, including midden, artifacts, and burials, the general area has a sensitivity for Native American pre-contact archaeological resources. However, based on the disturbed context of the Project sites and the negative survey results, the potential to impact archaeological resources is lessened.

In the event that subsurface resources are identified during ground disturbing activities, Zone 7 would comply with PRC Section 21083.2(i), which requires the lead agency to make provisions

for archaeological resources accidentally discovered during construction. Zone 7 would be required to make an immediate evaluation by a qualified archaeologist, and if the find is determined to be a unique archaeological resource or a historical resource, then it must be avoided. If avoidance is not feasible, the resource must be recovered and treated accordingly. Construction would be allowed in other areas while the archaeological mitigation takes place. With compliance with existing regulations, the potential impact related to the accidental discovery of archaeological resources would be less than significant.

c) **Less than Significant Impact.** The records search and background research determined that no human remains are known to exist within the Project sites; however, several previously recorded Native American pre-contact archaeological resources are in the vicinity that have multiple human remains discoveries. Therefore, the Project sites have a heightened potential to uncover human remains during construction.

In the event that ground disturbing activities identify undiscovered human remains, Zone 7 will comply with Government Code Section 27460 et seq., which requires ground disturbing activities to halt until the County Coroner can determine whether the remains are subject to the provisions of Section 27491 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner, and cause of death; and the required recommendations concerning the treatment and disposition of the human remains have been made. Pursuant to California Health and Safety Code Section 7050.5, the coroner shall make a determination within 48 hours of notification of the discovery of the human remains. If the coroner determines that the remains are not subject to their authority and recognizes or has reason to believe that they are those of a Native American, the coroner shall contact the Native American Heritage Commission within 24 hours. With compliance with existing regulations, the potential impact related to the accidental discovery of human remains would be less than significant.

References

Northwest Information Center (NWIC), California Historical Resources Information System. File No. 23-1599. Accessed May 8, 2024.

2.6 Energy

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

Discussion

a) **Less than Significant Impact.** Both construction and operation of the Project would involve expenditure of energy.

Construction

During construction, energy use would be both direct and indirect. Direct energy use would include the consumption of fuel (typically gasoline and diesel fuel) for the operation of construction equipment and vehicles. Indirect energy use would include the energy required to make the materials and components used in construction. This includes energy used for extraction of raw materials, manufacturing, and transportation associated with manufacturing. Direct energy use represents about one-quarter of total construction-related consumption while indirect energy use typically represents the remaining three-quarters (Hannon 1978).

CEQA focusses on the efficient use of energy rather than a quantification of the actual amount of energy consumed. Construction activities at the Project sites would last approximately 18 months. Construction activities would include use of heavy-duty construction equipment and offsite material delivery vehicles.

Energy use requirements in the form of diesel fuel consumed by on-site off-road construction equipment have been estimated based on the GHG emissions estimates from the CalEEMod modeling conducted for the Air Quality and GHG analyses. GHG emissions from CalEEMod were used in conjunction with The Climate Registry's 2024 default factors for calculating CO_2 emissions from diesel fuel (TCR 2025). The analysis assumes that all off-road construction equipment would be fueled by diesel.

For on-road construction vehicles, the analysis assumes that light-duty automobiles and trucks used by commuting workers would be fueled by gasoline, and that on-road construction material delivery trucks would use diesel fuel. This analysis assumes that no electric on-road vehicles would be used during Project construction. The quantities of fuels required by on-road vehicles during construction have been calculated based on the GHG emissions associated with commuting workers and vendor and haul trips and The Climate Registry's 2024 default factors for calculating CO_2 emissions from gasoline and diesel fuels (TCR 2025). GHG emissions

associated with commuting workers and vendor trips were estimated using information provided by Zone 7 for estimated trip counts and CalEEMod default trip lengths (detailed in Appendix A).

It is estimated that over the 18-month construction period of the Project, off-road equipment and on-road vehicles would consume approximately 12,637 gallons of diesel fuel and on-road worker vehicles would consume approximately 4,957 gallons of gasoline.

Due to the small scope of the Project, as well as the limited duration of construction activities, the consumption of fuel energy during construction would be temporary, localized, and would amount to a very small fraction of the 43 million gallons of diesel and 384 million gasoline sold in Alameda County (California Energy Commission [CEC] 2025). Vehicles used for Project construction and operation would be required to comply with all federal and state efficiency standards. Additionally, there are no Project characteristics or features that would be inefficient or that would result in the use of equipment and vehicles in a manner that would be less energy efficient than similar construction projects.

Therefore, Project construction would not result in wasteful, inefficient, or unnecessary use of energy, and would result in a less-than-significant impact associated with energy consumption.

Operation

Once operational, increase in the Project's energy requirements would be primarily in the form of electricity to power new pumps at the well sites and improvements at the Mocho Groundwater Demineralization Plant. The Project would operate primarily using equipment such as pumps, motors, and standby generators, and would not include any new high-powered pieces of equipment. The total energy required to operate the Project related facilities is approximately a 70 percent increase from existing facility use. All electricity needed to operate the facilities would be sourced from PG&E. A small amount of diesel would be used for routine testing and maintenance of the backup generator. Though the Project would increase long-term energy demand, this increase is necessary to restore groundwater production and meet Zone 7's water supply reliability policy goals and salt management plan objectives.

Once operational, the Project would include treatment facility operators visiting the site daily for routine operational inspections. The Mocho PFAS Treatment Plant and Mocho Wells 2, 3 and 4 would remain unstaffed, and no additional on-site staff would be required at these sites or the expanded Mocho Groundwater Demineralization Plant. No new deliveries would be required, as this facility would not introduce new chemicals, though it would introduce a new shipment of media approximately once every two years, which would be delivered by semi-truck. Maintenance would occur on an as-needed basis. Vehicle traffic generated by operations and maintenance would result in very minimal energy use which would not be considered wasteful or inefficient. Therefore, Project operations would not result in wasteful, inefficient, or unnecessary use of energy, and would result in a less-than-significant impact associated with energy consumption.

b) **Less than Significant Impact.** As discussed above, Project construction would require the use of off-road construction equipment and on-road trucks. Construction activities would comply with state and local requirements designed to minimize idling and associated emissions, which would

also minimize the use of fuel. Specifically, pursuant to 13 CCR Sections 2485 and 2449, idling of commercial vehicles over 10,000 pounds and off-road equipment over 25 horsepower would be limited to a maximum of 5 minutes. Fuel use for Project construction would be consistent with typical construction and manufacturing practices, and energy standards such as the Energy Policy Acts of 1975 and 2005, which promote strategic planning and building standards that reduce consumption of fossil fuels, increase use of renewable resources, and enhance energy efficiency.

Once operational, the Project's energy use would be in the form of electricity used for the operation of pumps, reverse osmosis filters, ancillary equipment and switchgears at the Project sites. The Power and Water Resources Pooling Authority (PWRPA) is a Joint Powers Authority comprised of nine irrigation districts that organized in 2004 under California State law to collectively manage individual power assets and loads. The Authority serves 15 water purveyors, including Zone 7. Because it is a member of PWPRA, Zone 7 may choose to convert facilities from being served electricity by PG&E to being served by PWRPA. The conversion process is coordinated with PWRPA, approved by PG&E, and may include minor electrical construction. Once converted, the Zone 7 facility is metered by PWRPA. To date, Zone 7 has converted 5 meters to PWRPA, including Mocho Wells 3 and 4, and the Mocho Groundwater Demineralization Facility. Additionally, Zone 7 has opted into PWRPA's zero-carbon energy portfolio to reduce greenhouse gas emissions associated with purchased electricity. Signed into law by Governor Brown, SB 100 under California's Renewable Portfolio Standard (RPS) Program, increased California's RPS target to 60 percent of total electric retail sales by 2030 and requires 100 percent of electric retail sales to come from eligible renewable or carbon-free resources by 2045. Because Zone 7 is enrolled in PWRPA's zero-carbon energy portfolio, purchased electricity during construction and operations will not generate emissions. Therefore, there are no aspects of the Project that would conflict with or obstruct a state or local plan for renewable energy or energy efficiency and impacts would be less than significant.

References

California Energy Commission (CEC), 2025. 2024 California Annual Retail Fuel Outlet Report Results (CEC-A15), September 19, 2024. Available: https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.energy.ca.gov%2Fsites%2Fdefault%2Ffiles%2F2024-10%2F2010-2023_CEC-A15_Results_and_Analysis_ADA.xlsx&wdOrigin=BROWSELINK. Accessed June 2025.

Hannon et al., 1978, Energy and Labor in the Construction Sector. Article in Science Magazine. November 24, 1978.

Pacific Gas & Electricity (PG&E), 2024. PG&E Customers' Electricity 100% Greenhouse Gas-Free in 2023. April 22, 2024. Available: https://investor.pgecorp.com/news-events/press-releases/press-release-details/2024/PGE-Customers-Electricity-100-Greenhouse-Gas-Free-in-2023/default.aspx. Accessed June 2025.

The Climate Registry (TCR), 2025. 2024 Default Emission Factors, Table 2.1—U.S. Default Factors for Calculating CO_2 Emissions from Combustion of Transport Fuels. February 2025. Available: https://theclimateregistry.org/wp-content/uploads/2025/03/2025-Default-Emission-Factors-Update-3.pdf. Accessed June 2025.

2.7 Geology and Soils

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. 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.	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

Discussion

a.i) **No Impact.** The State Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) prohibits the development of structures for human occupancy across active fault traces. Under this Act, the California Geological Survey (CGS) has established "Zones of Required Investigation" on either side of Holocene-active faults that delineates areas susceptible to surface fault rupture. The zones are referred to as Earthquake Fault Zones (EFZs) and are shown on an official Earthquake Zones of Required Investigation Map (EZRIM) published by the CGS; the California Earthquake Hazards Zone Application (EQ Zapp) is the online database containing the EZRIMs. Surface rupture occurs when the ground surface is broken due to a fault movement during an earthquake; typically, these types of hazards occur within 50 feet of a Holocene-active fault (CGS, 2018).

The Project sites do not lie within any mapped EFZs according to the available data (CGS, 2025). As the Project sites would not be within a designated EFZ, the Project would not expose people or structures to potential substantial adverse effects relating to rupture of a known earthquake fault. There would be no impact related surface fault rupture.

a.ii) **Less than Significant Impact.** The Project sites are located within a historically seismically active portion of California. The 2014 Working Group on California Earthquake Probabilities concluded that there is a 72 percent probability that a magnitude (MW) 6.7 earthquake or higher could strike the San Francisco Bay Area in the next 30 years (Field et al., 2015).

Although the area can be affected by earthquakes or seismic ground shaking, there are no current data available that indicates that Holocene-active faults are present within the Project site boundaries. The nearest faults that are designated EFZs are the Pleasanton fault zone approximately 1.2 miles northwest of the Project sites, the Calaveras fault zone approximately 2.5 miles west of the Project sites, and the Verona fault zone approximately 5.2 miles south of the Project sites (CGS, 2022).

These nearby fault zones are all in proximity to Project sites and are possible sources of strong seismic groundshaking. According to the WGCEP, there is an approximately 25 percent probability that there could be an earthquake of magnitude 6.7 or greater in the next 30 years within the Calaveras fault zone (Field et al., 2015).

In the event of an earthquake in the region, strong seismic groundshaking could be experienced at the Project sites; if any of the Project components were damaged or destroyed by strong seismic groundshaking, this could result in a significant impact. However, the construction and replacement of structures associated with the Project would be subject to the standards and regulations included in the most current version of the California Building Code (CBC), consistent with state law. The CBC requires the preparation of a site-specific geotechnical report by a licensed geotechnical engineer, certified by the State of California. The report will be used to inform the specific design elements of the Project, including seismic design elements, to ensure the structures associated with the Project are suitable to withstand any potential damage due to seismic groundshaking. Compliance with the CBC would ensure impacts related to strong seismic groundshaking would be less than significant.

a.iii) **Less than Significant Impact.** Liquefaction is a phenomenon in which unconsolidated, water saturated sediments become unstable due to the effects of strong seismic groundshaking. During an earthquake, these sediments can behave like a liquid, potentially causing severe damage to overlying structures. Lateral spreading is a variety of minor landslide that occurs when unconsolidated liquefiable material breaks and spreads due to the effects of gravity, usually down gentle slopes. Liquefaction-induced lateral spreading is defined as the finite, lateral displacement of gently sloping ground as a result of pore pressure (the pressure exerted by fluids within the pore spaces of rock formations) buildup or liquefaction in a shallow underlying deposit during an earthquake. The occurrence of this phenomenon is dependent on many complex factors, including the intensity and duration of ground shaking, particle-size distribution, and density of the soil. In general, a relatively high potential for liquefaction exists in loose, sandy soils that are within 50 feet of the ground surface and are saturated (below the groundwater table).

Lateral spreading can move blocks of soil, placing strain on buried pipelines that can lead to leaks or pipe failure. According to the Earthquake Zones of Required Investigation map, the Project site is within an established mapped Liquefaction Zone (CGS, 2025). However, as discussed above,

the Project would be subject to the regulations and standards included in the CBC, which would require the preparation of a site-specific geotechnical report by a licensed geotechnical engineer, certified by the State of California. The report will be used to inform the specific design elements of the Project components to ensure the structures associated with the Project are suitable to withstand any potential damage due to liquefaction. Compliance with the CBC would ensure impacts related to liquefaction would be less than significant.

a.iv) **No Impact.** Landslides are one of the various types of downslope movements in which rock, soil, and other debris are displaced due to the effects of gravity. The potential for material to detach and move down slope depends on multiple factors including the type of material, water content, and steepness of terrain.

The Project components would be within developed, urbanized areas with relatively flat topography. Landslides and other slope failures are not anticipated at the Project sites because it is all within developed, urbanized areas with relatively flat topography. Based on Google Earth imagery, there are no signs of previous landslides within or around the project component sites. Additionally, based on a review of the EQ Zapp, there are no designated Landslide Zones or areas of mapped historical landslides in the vicinity of the Project sites (CGS, 2025). Nevertheless, slope stability studies will be included in the geotechnical investigation; if any investigation indicates there is a landslide risk, the geotechnical report would provide recommendations to address such conditions. The Project would not include any activity that would directly or indirectly cause potential substantial adverse effects (including loss. injury, or death) as a result of landslides. There would be no impact.

b) **Less than Significant Impact.** The construction activities associated with the Project would involve ground-disturbing earthwork, including earthmoving, excavation, and grading. These activities could increase the susceptibility of soils on the project component sites to erosion by wind or water and subsequently result in the loss of topsoil. If not controlled and managed, the impact of soil erosion would be significant. As the Project would create over 1.0 acre of ground disturbance, a Stormwater Pollution Prevention Plan (SWPPP) would be developed and implemented as part of the Project in accordance with a NPDES General Permit for Stormwater Discharge Associated with Construction and Land Disturbance Activities (*NPDES General Permit for Discharges of Storm Water Runoff Associated with Construction and Land Disturbance Activities* (Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ). The SWPPP would include Best Management Practices (BMPs) designed to control run-on and run-off and prevent soil erosion. The BMPs may include dewatering procedures, storm water runoff quality control measures, watering for dust control, and the construction of silt fences, as needed. During construction-related activities, soil compaction associated with bank formation would further reduce the potential for soil erosion. The implementation of these soil and erosion control measures and compliance with these independently enforceable existing requirements would ensure that the Project's potential impacts associated with soil erosion and loss of topsoil during construction are less than significant.

c) **Less than Significant Impact.** As discussed above, the majority of the Project sites are within an established Liquefaction Zone, but none are within an established Earthquake-Induced Landslide

Zone. Land subsidence is the gradual settling or sudden sinking of the earth's surface due to subsurface movement of earth materials (USGS, 1999). Subsidence in alluvial valley areas is typically associated with groundwater or petroleum withdrawal, and regional ground subsidence or settlement is typically caused by compaction of alluvial deposits, or other saturated deposits in the subsurface (USGS, 1999). As the Project would not include dewatering or other activities that could exacerbate subsidence in the area during construction.

As discussed above, the Project would be subject to the regulations and standards included in the CBC, which would require the preparation of a site-specific geotechnical report by a licensed geotechnical engineer, certified by the State of California. The report will be used to inform the specific design elements of the proposed project components to ensure the structures associated with the Project are suitable to withstand any potential damage due to unstable soils. Additionally, while the Project is not expected to result in significant impacts related to landslides and subsidence, the site-specific geotechnical investigation would include the analysis of the potential for landslides and subsidence. Compliance with the CBC would ensure impacts related to landslides and other unstable soils would be less than significant.

d) **Less than Significant Impact.** Expansive soils are soils that possess a "shrink-swell" characteristic, also referred to as linear extensibility. Shrink-swell is the cyclic change in volume (expansion and contraction) that occurs in fine-grained clay sediments from the process of wetting and drying; the volume change is reported as a percent change for the whole soil. This property is measured using the coefficient of linear extensibility (COLE) (NRCS, 2017). The Natural Resources Conservation Service (NRCS) relies on linear extensibility measurements to determine the shrink-swell potential of soils. If the linear extensibility percent is more than 3 percent (COLE=0.03), shrinking and swelling may cause damage to buildings, roads, and other structures (NRCS, 2017). Changes in soil moisture can result from rainfall, landscape irrigation, utility leakage, roof drainage, and/or perched groundwater. Expansive soils are typically very fine-grained and have a high to very high percentage of clay. Structural damage may occur incrementally over a long period of time, usually as a result of inadequate soil and foundation engineering or the placement of structures directly on expansive soils.

No ground disturbance would occur at the Mocho Groundwater Demineralization Plant or Wells 2 and 4. NRCS Web Soil Survey data indicates the soils underlying the Mocho PFAS Treatment Plant and Mocho Well 3 site have between a 2.4 and 7.5 percent linear extensibility rating, which is considered low to high linear extensibility rating (NRCS, 2025). Nonetheless, geotechnical investigations are required to address expansion potential. If site conditions differ from the Web Soil Survey data, measures will be included in the geotechnical report that would provide recommendations that will address any risk associated with soil expansion. The impacts of the Project would be less than significant.

e) **No Impact.** The Project does not include any components that would require soils adequate for the use of septic tanks or other alternative wastewater disposal system. None of the Project components include the use of septic tanks or an alternative wastewater disposal system, therefore there would be no impact under this criterion.

f) **Less than Significant Impact.** Paleontological resources are the fossilized remains of plants and animals, including vertebrates (animals with backbones; mammals, birds, fish, etc.), invertebrates (animals without backbones; starfish, clams, coral, etc.), and microscopic plants and animals (microfossils), and can include mineralized body parts, body impressions, or footprints and burrows. They are valuable, non-renewable, scientific resources used to document the existence of extinct life forms and to reconstruct the environments in which they lived. A significant impact would occur if a project would destroy a unique paleontological resource or site, or a unique geologic feature.

In its "Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources," the Society of Vertebrate Paleontology (SVP) defines four categories of paleontological potential for rock units: high, low, undetermined, and no potential: **High Potential**, rock units from which vertebrate or significant invertebrate, plant, or trace fossils have been recovered are considered to have a high potential for containing additional significant paleontological resources; **Low Potential**, rock units that are poorly represented by fossil specimens in institutional collections, or based on general scientific consensus only preserve fossils in rare circumstances and the presence of fossils is the exception not the rule; **Undetermined Potential**, rock units for which little information is available concerning their paleontological content, geologic age, and depositional environment; and **No Potential**, rock units like high-grade metamorphic rocks (such as gneisses and schists) and plutonic igneous rocks (such as granites and diorites) that will not preserve fossil resources (SVP, 2010). It is important to note that while paleontological potential as defined above can provide a rough idea of whether subsurface fossils may exist, the uniqueness or significance of a fossil locality is unknown until it is identified to a reasonably precise level (Scott and Springer, 2003). Therefore, any fossil discovery should be treated as potentially unique or significant until determined otherwise by a professional paleontologist.

Geologic mapping by Dibblee and Minch (2006) indicates Holocene-age alluvial deposits are present at the surface within a majority of the Project area. These deposits have low to-high paleontological sensitivity, increasing with depth, with older, high sensitivity alluvium present at depth. While not mapped at the surface within the Project sites, there are older Pleistocene-age alluvium deposits mapped south and southeast of the Project sites. These Pleistocene-age deposits are considered to have a high paleontological sensitivity due to the Pleistocene-age vertebrate fossil discoveries throughout California, including Alameda County (Sub Terra, 2017; UCMP, 2020). Also not mapped at the surface within the Project area, but occur in the area, are deposits known as Livermore Gravel, which are mapped approximately 1 mile south and southeast of the Project sites (Dibble & Minch, 2006). The Livermore Gravels are considered to have high paleontological sensitivity due to the presence of vertebrate fossil localities within this formation in Alameda County (UCMP, 2020).

Excavation on the Mocho PFAS Treatment Plant and Mocho Well 3 site would be limited to the bioretention stormwater facility, tying into existing pipe, to lay new pipe and electrical duct banks, and for the concrete pad that would support the vessels. Ground disturbance during construction is anticipated to be relatively shallow, but at the time of this analysis the anticipated maximum depth of excavation is unknown.

The risks of encountering and/or destroying paleontological resources increase with the amount of ground disturbance associated with a project; ground disturbing activities that would not require mass excavation of soil (i.e., post driven into the ground) would have a minimal impact on paleontological resources, as there would be little to no material to observe. Ground disturbance that includes mass open evacuation or situations where excavation spoils may be examined, has a greater impact and an increased likelihood of encountering significant paleontological resources. If ground disturbance and/or excavation associated with the Project encounters and inadvertently damages or destroys significant paleontological resources, this would be a potentially significant impact.

While the transition from Holocene-age alluvium and the older deposits is unknown at the Project sites, the planned excavation associated with the Project is relatively minimal and would be constrained within the Mocho PFAS Treatment Plant and Mocho Well 3 site boundary. Additionally, all work would be within previously disturbed sediments, although the extent of the previous disturbance at the Mocho PFAS Treatment Plant and Mocho Well 3 site is also unknown. Given that the upper layers of Holocene-age deposits have a low potential to contain significant paleontological resources, and that the Project site is within urban development and has been previously disturbed, the potential to encounter significant paleontological resources is low. While the potential to encounter significant paleontological resources cannot be ruled out, for these reasons the impacts associated with excavation during Project construction would be less than significant.

References

California Geological Survey (CGS), 2018. Special Publication 42 (Revised 2018). Earthquake Fault Zones – A Guide for Government Agencies, Property Owners/Developers, and Geoscience Practitioners for Assessing Fault Rupture Hazards in California.

CGS, 2025. Earthquake Zones of Required Investigations. Available: https://maps.conservation.ca.gov/cgs/informationwarehouse/eqzapp/. Accessed June 12, 2025

CGS, 2025. Fault Activity Map of California. Available: https://maps.conservation.ca.gov/cgs/fam/. Accessed June 13, 2025.

Dibblee, Thomas W. and John A. Minch (Dibblee & Minch), 2006. Geologic Map of the Livermore Quadrangle. Dibblee Geological Foundation. Map. Scale 1:24,000.

Field, E. H., Glenn P. Biasi, Peter Bird, Timothy E. Dawson, Karen R. Felzer, David D. Jackson, Kaj M. Johnson, Thomas H. Jordan, Christopher Madden, Andrew J. Michael, Kevin R. Milner, Morgan T. Page, Tom Parsons, Peter M. Powers, Bruce E. Shaw, Wayne R. Thatcher, Ray J. Weldon II, and Yuehua Zeng (Field et al.), 2015. Long-Term Time-Dependent Probabilities for the Third Uniform California Earthquake Rupture Forecast (UCERF3). Bulletin of the Seismological Society of America, Vol. 105, No. 2A. pp. 511-543. April 2015. doi: 10.1785/0120140093.

Natural Resources Conservation Service (NRCS), 2017. Title - National Soil Survey Handbook. Part 618 – Soil Properties and Qualities. Section 618.41, Linear Extensibility Percent.

NRCS, 2025. Web Soil Survey. Available: https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx. Accessed June 13, 2025.

Scott, Eric and Kathleen Springer (Scott & Springer), 2003. CEQA and Fossil Preservation in California. AEP 2004 Conference, AEP Spring 2004 CEQA Workshop Series. The Environmental Monitor, Fall 2003. Association of Environmental Professionals.

Society of Vertebrate Paleontology (SVP), 2010. Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. Prepared by: SVP Impact Mitigation Guidelines Revision Committee.

Sub Terra Consulting, 2017. Northwest California Integrated Resources Management Plan, Inventory of Existing Date for Paleontological Resources and Potential Fossil Yield Classification GIS Database. Prepared by Dr. Russel Shapiro.

United States Geological Survey (USGS), 1999. Land Subsidence in the United States. Circular 1182.

University of California Museum of Paleontology (UCMP), 2020. UC Museum of Paleontology Localities database. Results for Pleistocene-age vertebrate fossil localities within California.

2.8 Greenhouse Gas Emissions

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

Environmental Setting

Certain gases in the earth's atmosphere known as greenhouse gases (GHGs), are important in regulating the earth's surface temperature. As solar radiation enters the atmosphere from space, some of the radiation is absorbed by the earth's surface while the rest is emitted back toward space. However, GHGs in the atmosphere absorb this radiation, resulting in a warming of the atmosphere. Carbon dioxide (CO_2), methane (CH_4), ozone, water vapor, nitrous oxide (N_2O), and chlorofluorocarbons are the most prominent greenhouse gases. The emission of these gases in excess of natural ambient concentrations has led to an enhanced greenhouse effect and accelerated warming of the atmosphere. In California, the transportation and industrial sectors result in the largest emission of GHGs (California Air Resources Board [CARB] 2024).

GHG emissions worldwide cumulatively contribute to the significant adverse environmental impacts of global climate change. No single project could generate sufficient GHG emissions on its own to noticeably change the global average temperature. The combination of GHG emissions from past, present, and future projects in the entire state of California, across the nation, and around the world contribute cumulatively to the phenomenon of global climate change and its associated environmental impacts.

Discussion

a) **Less than Significant Impact.** GHG emissions would be generated during both construction and operational phases of the Project.

Construction

The combustion of diesel fuel to provide power for the operation of various construction equipment results in the generation of GHGs. Construction emissions associated with the Project were estimated using project-specific information provided by Zone 7, such as construction schedule and types and number of construction equipment to be used.

Emissions of CO_2, CH_4, N_2O, and carbon dioxide equivalent (CO_2e, is based on global warming potentials of CH_4 and N_2O compared to CO_2) from off-road construction equipment and construction vehicle trips were calculated using the CalEEMod model. Since construction-related air pollutant emissions from equipment and on-road vehicle exhaust were estimated, additional project components were added including the replacement of equipment and addition of

components at the Mocho Groundwater Demineralization Plant and the replacement of the well pump at Mocho Well 2; however, these elements are focused on replacing or adding components at existing facilities and no ground disturbance or earthwork would be required. As such, additional construction emissions from these elements are expected to be minimal.

Construction of the Project is anticipated to occur over a period of approximately 18 months starting in winter 2026. Estimated construction emissions by construction year are presented in **Table 4**. Appendix A contains details on the calculations and assumptions used to estimate construction GHG emissions as well as model outputs.

TABLE 4
GREENHOUSE GAS EMISSIONS DURING PROJECT CONSTRUCTION

Construction Year	CO_2e (MT per year)
2026[a]	8.7
2027	113.6
2028	52.1
Project Total	**427.7**

NOTE:
a. Construction would start on December 1, 2026, resulting in only one month of construction emissions in year 2026.
SOURCE: ESA (Appendix A)

BAAQMD does not have adopted significance thresholds for construction related GHG emissions in its 2022 CEQA Guidelines (BAAQMD 2023). However, it recommends that the Lead Agency (i.e., Zone 7) quantify and disclose construction GHG emissions and incorporate best management practices to reduce GHG emissions during construction, as applicable. GHG emissions from the construction phase of a project represent a very small portion of emissions over the project's lifetime, which for the projects such as the proposed Project would be at least 30 years. The BAAQMD's proposed thresholds are designed to address operational GHG emissions from land use development projects. The primary source of GHG emissions from construction is diesel-powered construction equipment. Improvements in statewide regulations governing construction equipment and fuel standards driven by Senate Bill (SB) 32 and other initiatives will also contribute to reduced emissions from construction activities. Therefore, GHG emissions associated with Project construction would be considered less than significant.

Operations

Once operational, the Project would include treatment facility operators visiting the Mocho PFAS Treatment Plant and Mocho Well 3 site daily for routine operational inspections. This facility would remain unstaffed, and no additional on-site staff would be required. No new deliveries would be required, as this facility would not introduce new chemicals, though it would introduce a new shipment of media approximately once every two years, which would be delivered by semi-truck. No additional on-site staff would be needed at the Mocho Groundwater Demineralization Plant and Mocho Well 4 or Mocho Well 2 sites. Maintenance would occur on an as-needed basis. Vehicle traffic generated by operations and maintenance would result in very minimal GHG

emissions. The operations of the Project may require a standby generator at the project locations. GHG emissions would be generated indirectly from the use of electricity to pump water from the well. However, based on what is known about Project operation at this stage of planning, the amount of GHG emissions potentially attributable to the Project is unknown. Given the limited scale of the Project, impacts would be in compliance with the Alameda County Community Climate Action Plan and other governing plans, policies, and regulations addressing GHG emissions. Based on this assumption, the impact regarding greenhouse gas emissions and compliance with related policies, this impact would be less than significant.

b) **Less than Significant Impact.** In response to Assembly Bill (AB) 32 GHG reduction goals, CARB adopted the Climate Change Scoping Plan (CARB, 2008), which outlined a framework for achieving the emission reduction goals set in the California Global Warming Solutions Act. The Scoping Plan was updated in 2017 (2017 Scoping Plan; CARB, 2017) to address California's 2030 GHG target and identifies how the State can reach the 2030 climate target established by SB 32 while making substantial advancements toward the 2050 climate goal established by Executive Order (EO) S-3-05 (2005). The most recent update to the scoping plan is the 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan; CARB 2022) which was adopted in response to GHG reduction and carbon neutrality targets set forth in SB 32 and AB 1279.

In response to the updated GHG reduction targets per SB 32, Pleasanton has updated its Climate Action Plan (CAP 2.0; City of Pleasanton, 2022). The previous version of the CAP (CAP 1.0) adopted in 2012 was successfully implemented, reducing Pleasanton's emissions 28 percent between 2005 and 2017 and exceeding the City's CAP 1.0 target ahead of schedule.

The Project would generate GHG emissions primarily from construction activities and electricity use during operation. The 2022 Scoping Plan identifies one action item for the construction equipment sector that commits to electrification of 25 percent of energy demand by 2030, and 75 percent by 2045. However, the Project will complete construction activities before 2030 when these requirements begin to apply. In addition, these targets are not regulatory requirements imposed directly on individual projects. Instead, they are dependent on equipment manufacturers to develop and supply electric powered construction equipment Electrical power required during construction and operation would be provided by the PWRPA, a Joint Powers Authority and publicly owned utility of which Zone 7 is a customer. Because it is a member of PWPRA, Zone 7 may choose to convert facilities from being served electricity by PG&E to being served by PWRPA. The conversion process is coordinated with PWRPA, approved by PG&E, and may include minor electrical construction. Once converted, the Zone 7 facility is metered by PWRPA. To date, Zone 7 has converted 5 meters to PWRPA, including Mocho Wells 3 and 4, and the Mocho Groundwater Demineralization Facility. Additionally, Zone 7 has opted into PWRPA's zero-carbon energy portfolio to reduce greenhouse gas emissions associated with purchased electricity. Signed into law by Governor Brown, SB 100 under California's Renewable Portfolio Standard (RPS) Program, increased California's RPS target to 60 percent of total electric retail sales by 2030 and requires 100 percent of electric retail sales to come from eligible renewable or carbon-free resources by 2045 (CPUC, 2025). Because Zone 7 is enrolled in PWRPA's zero-carbon energy portfolio, purchased electricity during construction and operations will not

generate emissions. Therefore, the Project would be consistent with all applicable plans, policies and regulations adopted for the purpose of reducing GHG emissions. This impact would be less than significant.

References

Bay Area Air Quality Management District (BAAQMD), 2023. 2022 CEQA Guidelines – Chapter 6, Project-Level Climate Impacts, November 2023. Available: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa-guidelines-2022/ceqa-guidelines-chapter-6-project-climate-impacts_final-pdf.pdf?rev=ce3ba3fe9d39448f9c15bbabd8c36c7f&sc_lang=en. Accessed June 2025.

California Air Resources Board (CARB). 2008. Climate Change Scoping Plan: A Framework for Change, December 2008. Available: https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/document/adopted_scoping_plan.pdf. Accessed June 2025.

CARB. 2017. California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target, November 2017. Available: https://ww3.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf. Accessed June 2025.

CARB, 2022. 2022 Scoping Plan for Achieving Carbon Neutrality. November 16, 2022. Available: https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp_1.pdf. Accessed June 2025.

CARB. 2024. California Greenhouse Gas Emissions for 2000–2022 – Trends of Emissions and Other Indicators, September 20, 2024. Available: https://ww2.arb.ca.gov/sites/default/files/2024-09/nc-2000_2022_ghg_inventory_trends.pdf. Accessed June 2025.

City of Pleasanton. 2022. Climate Action Plan 2.0 – Final Draft, January 2022. Available: https://cap.cityofpleasantonca.gov/CAP/CAP%202.0%202022.01.19.pdf?_t=1643052961. Accessed June 2025.

California Public Utilities Commission (CPUC), 2025. Renewable Portfolio Standard (RPS) Program. Available: https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/electric-power-procurement/rps. Accessed June 2025.

2.9 Hazards and Hazardous Materials

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. 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?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☒	☐
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	☒	☐

Discussion

a, b) **Less than Significant Impact.** Construction of the Project would involve the routine use of small quantities of hazardous materials commonly used during construction activities such as fuels, lubricants, and oil for construction equipment. Storage and use of hazardous materials at the construction site (i.e., staging areas) during routine use could result in the accidental release of small quantities of hazardous materials, which could degrade soil and/or surface water at or near the Project site. If the Project results in an accidental release of hazardous materials during construction, this could be a potentially significant impact.

Project construction would require implementation of BMPs to minimize the risk of a hazardous materials release during construction activities, further discussed under Section 2.10, *Hydrology and Water Quality.* The use, storage, transport, and disposal of hazardous materials during construction and operation of the Project would be carried out in accordance with federal, state, and county regulations. These requirements would ensure that hazardous materials used for construction would be stored in appropriate containers, with secondary containment to prevent a potential release. Additionally, Project-related spills of hazardous materials would be required to be reported to appropriate regulatory entities, including but not limited to the City of Pleasanton,

U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and the San Francisco Bay Regional Water Quality Control Board (RWQCB). Hazardous materials spills would be cleaned up immediately, and contaminated soils would be excavated and transported to approved disposal areas, consistent with State and local requirements. Therefore, impacts associated with the potential to create a significant hazard to the public or the environment would be less than significant. Project operation and maintenance would use negligible amounts of hazardous materials contained in mobile equipment and stored onsite in accordance with applicable regulations any such materials would not be stored and disposed of within the Project sites. The impact would be less than significant.

c) **No Impact.** The Project sites are not within one-quarter mile of an existing or proposed school. The nearest school is Fairlands Elementary School, approximately 0.30-mile northeast of the Project sites. The Project would not generate hazardous emissions or handle hazardous materials within one-quarter mile of an existing or proposed school. There would be no impact.

d) **No Impact.** The Project sites are not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (referred to as the "Cortese List") (DTSC, 2025). Therefore, the Project would not create a significant hazard to the public or the environment; there would be no impact under this criterion.

e) **Less than Significant Impact.** The Livermore Municipal Airport is approximately 2.5 miles northeast of Project sites. According to the Airport Layout Plan and Narrative Report for Livermore Municipal Airport, the Project sites are within the delineated Airport Influence Area (AIA). However, none of the Project components are located within an approach or departure zone for the airport (City of Livermore, 2014).

The Project would not involve any activities that would pose a safety hazard or excessive noise for people working or residing in the area (see Section XIII, Noise, for detailed analysis of noise-related impacts). The Project would not result in a safety hazard or excessive noise for people residing or working in the Project area. The impact would be less than significant.

f) **Less than Significant Impact.** The City of Pleasanton has adopted Emergency Operations Plans (EOPs) (City of Pleasanton, 2018), but it does not specify any designated evacuation routes. However, Annex B of the City of Pleasanton's Comprehensive Emergency Management Plan does include specific evacuation routes (City of Pleasanton, undated). The document explains that the City of Pleasanton has divided the city into four quadrants to better manage evacuation procedures—the Project sites are within Quadrant 1 – Northwest City. Stoneridge Drive is not identified as an emergency or evacuation route.

Santa Rita Road is within Quadrant 1 and is considered a major arterial roadway and would be utilized as an emergency evacuation route in the event of an emergency (City of Pleasanton, undated). While Santa Rita Road is considered an emergency evacuation route, this analysis assumes that evacuation routes would be determined as needed on a case-by-case basis by emergency response agencies. The Project would include the installation of pipelines underneath Santa Rita Road, utilizing jack-and-bore method, and road closures within Santa Rita Road would not be necessary.

This Project does not include construction within roadways. It is not anticipated that the nature of Project-related construction traffic would introduce a substantial number of increased vehicle trips or vehicles that would use Santa Rita Road in such a way as to impede emergency access. As the Project construction would not require road closures or obstruct any nearby roadways, the Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. There would be a less than significant impact.

g) **Less than Significant Impact.** According to the California Department of Forestry and Fire Protection (CAL FIRE), Fire Resource Assessment Program (FRAP) maps for Alameda County, the Project sites are not mapped within a delineated Very High Fire Hazard Severity Zone (VHFHSZ) (CAL FIRE, 2008). The use of construction equipment and the possible temporary on-site storage of fuels and/or other flammable construction chemicals could pose an increased fire risk resulting in injury to workers or the public during construction. However, contractors would be required to comply with hazardous materials storage and fire protection regulations, which would minimize potential for fire creation, and ensure that the risk of wildland fires during construction would be less than significant.

References

California Department of Forestry and Fire Protection (CAL FIRE), 2025. Fire Hazard Severity Zone Viewer. Available: https://experience.arcgis.com/experience/6a9cb66bb1824cd98756812af41292a0. Accessed June 13, 2025.

City of Pleasanton, undated. *Pleasanton Comprehensive Emergency Management Plan*, Annex B.

City of Pleasanton, 2018. *City of Pleasanton Emergency Operations Plan*. January 2018.

Department of Toxic Substances Control (DTSC), 2022. EnviroStor database. Records of hazardous materials sites in Pleasanton, CA. Available: envirostor.dtsc.ca.gov. Accessed June 12, 2025.

2.10 Hydrology and Water Quality

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

Discussion

a) **Less than Significant Impact.** The purpose of the Project is to improve water quality by treating the per- and polyfluoroalkyl substances (PFAS) in the groundwater. As such it would not violate water quality standards.

The Project would include the construction of the PFAS treatment system, water transmission line, booster pump station, switchgear, electrical facility, enclosed building to house PFAS treatment system or perimeter wall to screen the PFAS treatment system, media truck driveway, bioretention stormwater treatment facility, and minor grading and excavation activities at Mocho Well 3. In addition, the Project includes improvements at the Mocho Groundwater Demineralization Plant to increase demineralization treatment capacity and salt removal. The installation of additional RO membranes will likely require replacement of ancillary mechanical and electrical equipment, potentially including the pumps, VFDs, MCC, switchgear, and other appurtenances. The Project also includes replacing the well pumps at Mocho Wells 2, 3, and 4 due to the pumps reaching the end of their useful lives and evaluating the use of higher pressure pumps and variable frequency drives for these pumps to meet the Mocho PFAS Treatment Plant hydraulic needs. Furthermore, as part of the Mocho PFAS Treatment Plant project, the existing switchgear and ancillary

electrical equipment would be replaced at Mocho Wells 3 and 4 due to the equipment exceeding their useful lives and will be sized to accommodate the Project's electrical demands. The Project site at Mocho Well 3 contains numerous trees and would result in removal depending on the configuration of the Project. These activities would constitute a small increase the potential for erosion and sedimentation at the Mocho PFAS Treatment Plant and Mocho Well 3 site. Increased sedimentation could potentially discharge sediments and other construction related pollutants.

As discussed in Section VII, *Geology and Soils*, the Construction General Permit would include development and implementation of a SWPPP. The objectives of a SWPPP are to identify pollutant sources that may be delivered off-site (in the form of runoff) and affect the quality of storm water discharge; to implement site controls and practices to reduce stormwater pollution; and to protect water quality of receiving waters. The SWPPP would include site-specific BMPs such as strategically placed silt fences and straw wattles to minimize erosion on site and reduce or otherwise prevent conditions of erosion and storm water runoff during construction.

With implementation of a SWPPP and accompanying BMPs, Project construction would not violate water quality standards or waste discharge requirements or release sediment and/or pollutants into surface or groundwater. Therefore, the impact would be less than significant.

b) **Less than Significant Impact.** The Project would include the modification and/or creation of less than 1.0 acre of land into impervious surface. The bioretention stormwater treatment facility would receive the additional runoff created from the Project improvements at the Mocho PFAS Treatment Plant and Mocho Well 3 site, the volume of additional impervious surface would be negligible as it relates to interfering with groundwater recharge. In addition, the Project includes improvements at the Mocho Groundwater Demineralization Plant to increase demineralization treatment capacity and salt removal. The installation of additional RO membranes will likely require replacement of ancillary mechanical and electrical equipment, potentially including the pumps, VFDs, MCC, switchgear, and other appurtenances. The Project also includes replacing the well pumps at Mocho Wells 2, 3, and 4 due to the pumps reaching the end of their useful lives and evaluating the use of higher pressure pumps and variable frequency drives for these pumps to meet the Mocho PFAS Treatment Plant hydraulic needs. Furthermore, as part of the Mocho PFAS Treatment Plant project, the existing switchgear and ancillary electrical equipment would be replaced at Mocho Wells 3 and 4 due to the equipment exceeding their useful lives and will be sized to accommodate the Project's electrical demands; however, these components would be installed within existing facilities and would not create additional impervious surfaces. As such, the Project would not interfere with groundwater recharge or impede a sustainable groundwater management plan. During operations, the Project would not change the volume of groundwater and thus would not affect groundwater supplies. Therefore, the impact would be less than significant.

c.i) **Less than Significant Impact.** As discussed above, the Project would include the construction of the PFAS treatment system, water transmission line, booster pump station, switchgear, electrical facility, enclosed building or perimeter wall to screen the PFAS treatment system, media truck driveway, bioretention stormwater treatment facility, and minor grading and excavation activities within the Mocho PFAS Treatment Plant and Mocho Well 3 site. These activities would increase the erosion and sedimentation at the Mocho PFAS Treatment Plant and Mocho Well 3 and disturb

soil onsite. These activities could increase the susceptibility of soils at the Mocho PFAS Treatment Plant and Mocho Well 3 to erosion by wind or water and subsequently result in the loss of topsoil. In addition, the Project includes improvements at the Mocho Groundwater Demineralization Plant to increase demineralization treatment capacity and salt removal. The installation of additional RO membranes will likely require replacement of ancillary mechanical and electrical equipment, potentially including the pumps, VFDs, MCC, switchgear, and other appurtenances. The Project also includes replacing the well pumps at Mocho Wells 2, 3, and 4 due to the pumps reaching the end of their useful lives and evaluating the use of higher pressure pumps and variable frequency drives for these pumps to meet the Mocho PFAS Treatment Plant hydraulic needs. Furthermore, as part of the Mocho PFAS Treatment Plant project, the existing switchgear and ancillary electrical equipment would be replaced at Mocho Wells 3 and 4 due to the equipment exceeding their useful lives and will be sized to accommodate the Project's electrical demands; however, these components would be installed within existing facilities and would not require ground disturbance or excavation and would not result in erosion or the loss of topsoil.

As discussed in Section VIII, *Geology and Soils*, a SWPPP would be developed and implemented as part of the proposed project in accordance with the NPDES General Permit for Stormwater Discharge Associated with Construction and Land Disturbance Activities (Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ). The SWPPP would include BMPs designed to control and reduce soil erosion. The BMPs may include dewatering procedures, storm water runoff quality control measures, watering for dust control, and the construction of silt fences, as needed.

The implementation of these soil and erosion control measures and compliance with these independently enforceable existing requirements would ensure that the Project's potential impacts associated with soil erosion and loss of topsoil during construction are less than significant.

c.ii) **Less than Significant Impact.** As discussed above, the Project would convert less than 1.0 acre into impervious surface. The additional impervious surface would be negligible when considered in the context of increased surface runoff resulting in on- or offsite flooding. The Mocho PFAS Treatment Plant and Mocho Well 3 site would partially be in a developed area and the additional area of impervious surface would not change the conditions of the area such that it results on or off-site flooding. Project components at the Mocho Groundwater Demineralization Plant, Mocho Well 4 and Mocho Well 2 sites would be at existing facilities and would not create additional impervious surfaces. In addition, the constructed bioretention stormwater treatment facility would collect stormwater at the Mocho PFAS Treatment Plant and Mocho Well 3 site.

The Project would be required to adhere to post-construction drainage control requirements in accordance with the SWPPP that would also include measures to control runoff volumes directly related to the Project's construction. As the Project would convert a negligible amount of land into an impervious surface, and it would be required to prepare a SWPPP and implement the required BMPs to control runoff and flood potential, there would be a less than significant impact.

c.iii) **Less than Significant Impact.** As discussed above, the Project would convert less than 1.0 acre into impervious surface. The additional impervious surface would be negligible when considered in the context of exceeding the capacity of a stormwater drainage system or providing additional sources of polluted runoff. In addition, the Project would include the construction of a bioretention stormwater treatment facility to collect stormwater at the Mocho PFAS Treatment Plant and Mocho Well 3 site.

Additionally, because the Project would involve over 1.0 acre of ground disturbance, compliance with the NPDES Construction General Permit would be required. The NPDES Construction General Permit requires the preparation and implementation of a SWPPP. The SWPPP would include BMPs designed to control and reduce soil erosion and reduce polluted runoff. The BMPs may include dewatering procedures, storm water runoff quality control measures, watering for dust control, and the construction of silt fences, as needed.

Because of the relatively small amount of additional impervious surface that is proposed as part of the Project, that the Project would be required to comply with the NPDES Construction General Permit (including the associated SWPPP and BMPs), and the construction of a bioretention stormwater treatment facility to collect onsite stormwater, the Project would have a less than significant impact as it relates to exceeding the capacity of a stormwater drainage system and provided additional sources of polluted runoff.

c.iv) **Less than Significant Impact.** According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), the Project sites fall within an X flood hazard zone (FEMA 2025), indicating a zone with minimal to moderate flood hazards. While the Project would include the addition of less than 1.0 acre of impervious surface, the amount would be negligible as it relates to impeding or redirecting flood flows. The Project would have less than significant impact as it relates to impeding or redirecting flood flows as a result of the addition of impervious surfaces.

d) **Less than Significant Impact.** According to the California Department of Conservation, the Project would not be constructed within a tsunami zone, as it is upland and approximately 16 miles east of the Pacific Ocean. The Project does fall within a flood hazard zone as mapped by the Federal Emergency Management Agency (FEMA). As the Project would include the addition of less than 1.0 acre of impervious surface and would not result in a cumulatively considerable net increase of any criteria pollutant. Seiches are large waves on an enclosed or semi-enclosed body of water that can be caused by seismic activity. There are no mapped seiche zones in Alameda County. Given the lack of these hydrologic hazard zones and negligible effect to the flood zone, there would be a less than significant impact related to pollutant release due to inundation from a flood, seiche, or tsunami.

e) **No Impact.** The Project is necessary to restore groundwater production and meet Zone 7's water supply reliability policy goals and salt management plan objectives. It is assumed that Zone 7 would adhere to its commitments under existing or future water quality control or groundwater management plans. There would be no impact under this criterion.

References

Federal Emergency Management Agency (FEMA). 2025. FEMA's National Flood Hazard Layer (NFHL) Viewer. Available: https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd. Accessed June 17, 2025

2.11 Land Use and Planning

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XI. LAND USE AND PLANNING — Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

Discussion

a) **No Impact.** The Project would be constructed adjacent to Zone 7's Mocho Well 3 facility and within the existing Mocho Wells 2, 3, and 4, and Mocho Groundwater Demineralization Plant facilities. The Project includes the construction of the PFAS treatment system, water transmission line beneath Stoneridge Drive, booster pump station, switchgear, electrical building, enclosed building to house PFAS treatment system or perimeter wall to screen the PFAS treatment system, media truck driveway, bioretention stormwater treatment facility, and minor grading and excavation activities at Mocho Well 3. In addition, the Project includes improvements at the Mocho Groundwater Demineralization Plant to increase demineralization treatment capacity and salt removal. The installation of additional RO membranes will likely require replacement of ancillary mechanical and electrical equipment, potentially including the pumps, VFDs, MCC, switchgear, and other appurtenances. The Project also includes replacing the well pumps at Mocho Wells 2, 3, and 4 due to the pumps reaching the end of their useful lives and evaluating the use of higher pressure pumps and variable frequency drives for these pumps to meet the Mocho PFAS Treatment Plant hydraulic needs. Furthermore, as part of the Mocho PFAS Treatment Plant project, the existing switchgear and ancillary electrical equipment would be replaced at Mocho Wells 3 and 4 due to the equipment exceeding their useful lives and will be sized to accommodate the Project's electrical demands. The Project would not include any components that would result in a division of the existing residential communities. There would be no impact under this criterion.

b) **No Impact.** The Mocho PFAS Treatment Plant and Mocho Well 3 site and the Mocho Groundwater Demineralization Plant and Mocho Well 4 site are designated as Public Health and Safety and Wildland Overlay (City of Pleasanton, 2009) and zoned as Public and Institutional (P) (City of Pleasanton, 2023). The Mocho Well 2 site is designated as Commercial Office/ Commercial Central-Planned Unit Development; however, the Project would replace the existing well pump at Mocho Well 2 and would not change the existing land use. Therefore, the Project's new water transmission pipeline and the PFAS Treatment Facility, associated improvements, improvements at the Mocho Groundwater Demineralization Plant and replacement of the well pumps at Mocho Well 2, 3, and 4 would not interfere with the current land use. The Public and Institutional zoning designation conditional uses include public utility and public service facilities which must be found by the planning commission to be necessary for the public health, safety, or welfare. As mentioned in Section 1.3, the Project would further expand Zone 7's ability to address PFAS contamination, enhance water quality, and restore the groundwater pumping capacity

Zone 7 relies upon for water supply reliability when imported water is scarce in times of drought. Therefore, the Project would be consistent with the conditional uses and would not conflict with the current land use or zoning designation set forth by the City of Pleasanton. There would be no impact under this criterion.

References

City of Pleasanton, 2009. Pleasanton General Plan Land Use Map 2005-2025. Adopted July 21, 2009. Available: https://www.cityofpleasantonca.gov/assets/our-government/community-development/Land%20Use%20Element%20Map%202023.06.20.pdf. Accessed March 28, 2025.

City of Pleasanton, 2023. Pleasanton General Plan 2005-2025 *Land Use Element.* Adopted July 21, 2009. Amended January 6, 2023. Available: https://www.cityofpleasantonca.gov/assets/our-government/community-development/1.%20GP-Cover-Inside-TofC.pdf. Accessed March 28, 2025.

2.12 Mineral Resources

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XII. 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?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

Discussion

a, b) **No Impact.** The Project sites are not located within an area classified as a mineral resource by the State Geologist (City of Pleasanton, 2025; USGS, 2024). Given that the Project is neither located in or near a mineral resource recovery site, nor is it located in an area of regional significance, there would be no loss of availability of a known mineral resource. There would be no impact under this criterion.

References

City of Pleasanton, 2009. Pleasanton General Plan 2005-2025 *Conservation and Open Space Element.* Adopted July 21, 2009. Available: https://www.cityofpleasantonca.gov/assets/our-government/community-development/1.%20GP-Cover-Inside-TofC.pdf. Accessed March 28, 2025.

United States Geological Survey (USGS), 2024. *Mineral Resources On-Line Spatial Data Interactive Map*. Available: https://mrdata.usgs.gov/mrds/map-graded.html#home. Accessed March 30, 2025.

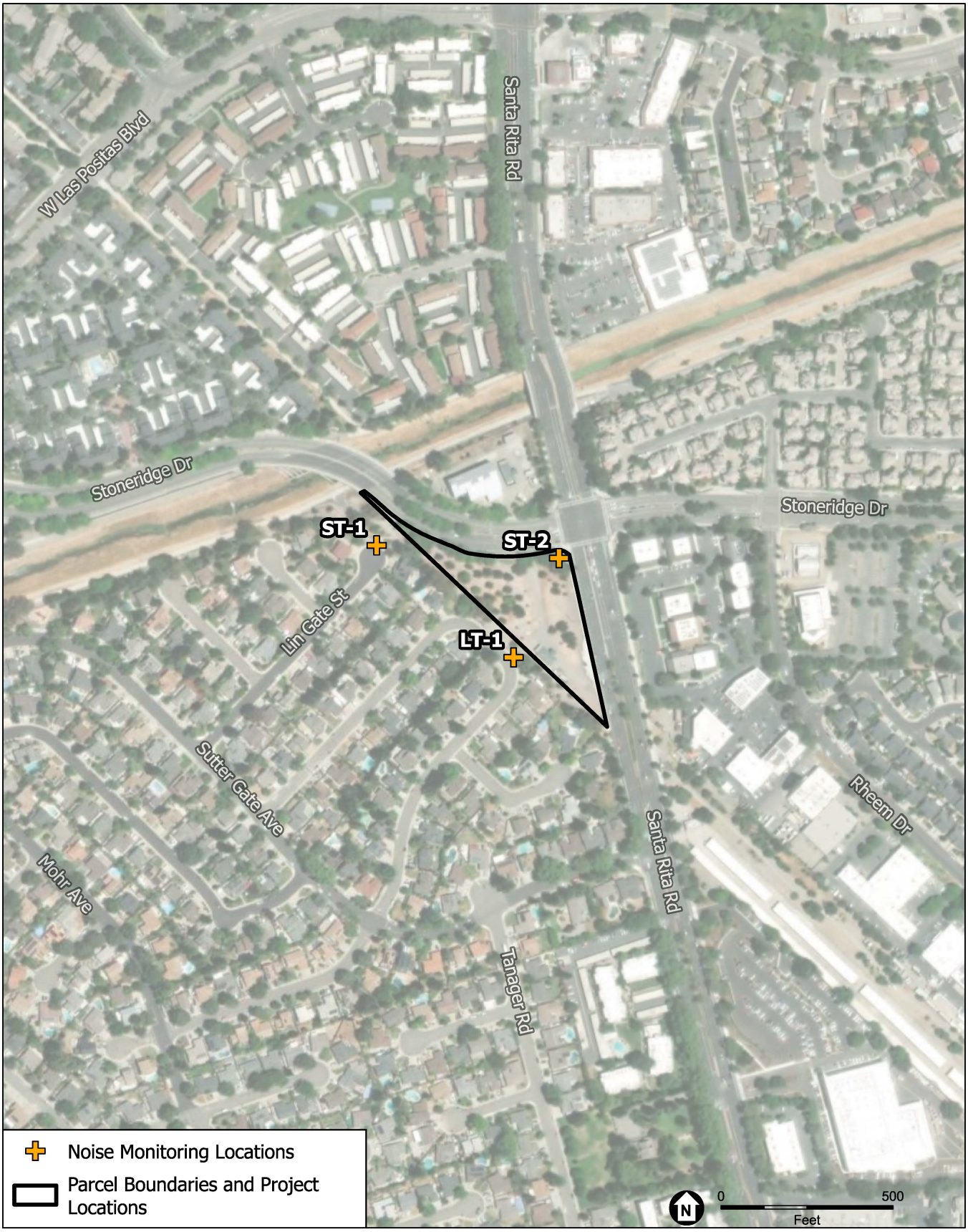
2.13 Noise

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. 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?	☐	☐	☒	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Existing Conditions

The Project is located within the City of Pleasanton, with residential uses located to the southwest and at the northeast across Stoneridge Drive and Santa Rita Road. Residential land uses are noise-sensitive uses that could be affected by short-term construction and long-term operational activities. The closest residential uses are located approximately 40 feet from the Mocho Well 3 site, along Laramie Gate Circle. The Fountain Church is located about 230 feet east of the Mocho Well 3 site, across Santa Rita Road. Additional residential uses are located approximately 135 feet and 175 feet from Mocho Well sites 2 and 4, respectively, along Santa Rita Road.

The primary noise sources in the vicinity of the Project components include traffic on Stoneridge Drive and Santa Rita roadways, recreationalists on the adjacent trails, and activities at nearby residences. To characterize the existing ambient noise environment in the Project vicinity, two short-term (15-minute) and one long-term (24-hour) ambient noise level measurements were collected at locations adjacent to Mocho Well 3, where majority of outdoor construction activities is set to occur. These locations were chosen to best represent the ambient noise environments at the closest noise-sensitive uses to the Project site and are shown in **Figure 6**. The short-term measurements are characterized in terms of the equivalent sound level (L_{eq}) to describe noise over the measurement period, in terms of a single numerical value that is the constant sound level which would contain the same acoustic energy as the varying sound level, during the same time period (i.e., the average noise exposure level for the given time period, in this case 15 minutes); as well as the L_{max} and L_{min}, which represent the instantaneous maximum and minimum noise levels, respectively, measured during the 15-minute measurement periods. In addition to short-term measurements, two long-term (24-hour) measurements were collected to characterize the day-night noise level (L_{dn}), which is the energy average of the sound levels occurring during a 24-hour period and which accounts for the greater sensitivity of most people to nighttime noise by weighting noise levels at night ("penalizing" nighttime noises) between 10:00 p.m. and 7:00 a.m. by adding 10 dBA to consider the greater annoyance of nighttime noises. The long-term measurements are also used to characterize the daytime and nighttime L_{eq} levels.



SOURCE: Maxar, 2024; ESRI, 2025; ESA, 2025

Mocho PFAS Treatment Plant

Figure 6
Noise Monitoring Locations

ESA

Table 5 shows the results of the noise monitoring survey. Average L_{eq} levels during the daytime and nighttime were 55 dBA and 50 dB, respectively at the long-term measurement location which is representative of the ambient noise environment at the nearest receptor. The L_{dn} was estimated to be 56 dBA accounting for a 10 dBA penalty during the nighttime hours. Due to traffic on Santa Rita Road and Stoneridge Drive, the L_{eq} at ST-2 was higher than at ST-1.

TABLE 5
MEASURED SHORT-TERM AMBIENT NOISE MEASUREMENT RESULTS

No.	Location Description	Time Period	Noise Level (dBA)		
			L_{eq}	L_{max}	L_{min}
ST-1[a]	At the cul-de-sac at the end of Lin Gate Street adjacent to the Project site	10:21 a.m.–10:36 a.m.	58.6	77.4	42.5
ST-2[a]	On eastern boundary of Project parcel adjacent to Santa Rita Road and Stoneridge Drive intersection	9:57 a.m. –10:12 a.m.	68.5	81.6	57.0

No.	Location Description	Time Period	Noise Level (dBA)		
			L_{dn}	Daytime[b] L_{eq}	Nighttime[c] L_{eq}
LT-1	Adjacent to the Project site boundary along Laramte Gate Circle	4/15/2025 10:00 a.m. – 4/16/2025 10:00 a.m.	56	55	50

NOTES: dBA = A-weighted decibels; L_{eq} = equivalent sound level; L_{max} = maximum sound level; L_{min} = minimum sound level; L_{dn} = day-night noise level; ST = short term; LT = long term

a. Measurements at ST-1 and ST-2 were collected on Tuesday, April 15, 2025.
b. Daytime refers to the hours of 8 a.m. to 8 p.m.
c. Nighttime refers to the hours of 8 p.m. to 8 a.m.

SOURCE: ESA, 2025.

Discussion

a) **Less than Significant.**

Construction

Construction of the Project would occur over a period of approximately 18 months starting in winter 2026. Project construction would occur year-round, Monday through Friday, except for holidays. Work would periodically occur on weekends.

The City of Pleasanton Municipal Code Section 9.04.100, regulates construction noise by allowing construction work that generates noise to occur between the hours 8:00 a.m. and 8:00 p.m. daily, except Sunday and holidays, when the exemption applies between 10:00 a.m. and 6:00 p.m., as long as the associated noise levels meet at least one of the following noise limitations (City of Pleasanton, 2025):

- No individual piece of equipment can produce a noise level exceeding 83 dBA at 25 feet; or
- The noise level at any point outside of the property plane of the project should not exceed 86 dBA.

As indicated in Section 1.7, *Construction Schedule* of the *Project Description*, the Project's construction activities would adhere to the City's construction work hours. The City's construction noise level limitation of 86 dBA is used here to assess whether daytime L_{eq} construction-related noise levels would cause a substantial temporary or periodic increase in ambient noise levels at sensitive receptor locations.

Project construction would result in temporary increases in ambient noise levels. Onsite construction activities would require the use of heavy construction equipment (e.g., excavator, loader, crane) that would generate varying noise levels. **Table 6** presents noise levels associated with construction equipment that may be used during Project construction.

TABLE 6
MAXIMUM NOISE LEVELS FROM CONSTRUCTION EQUIPMENT

Construction Equipment	Noise Level at 50 Feet (dBA, L_{max})	Usage Factor (%)
Air Compressor	77.7	40
Backhoe	77.6	40
Crane	80.6	16
Dump Truck	76.5	40
Excavator	80.7	40
Front End Loader	79.1	40
Flat Bed Truck	74.3	40
Paver	77.2	50
Pickup Truck	75.0	40
Roller	80.0	20

SOURCES: FHWA, 2006; FTA, 2018

The operation of each piece of equipment would not be constant throughout the day, as equipment would be turned off when not in use. Over a typical workday, the equipment would be operated at different locations and all the equipment would not operate concurrently at the same location on the Project site. Construction noise levels have been estimated using typical equipment source noise levels suggested in the Federal Highway Administration's (FHWA) Roadway Construction Noise Model (RCNM) and based on the type of construction equipment that are proposed to be used. To quantify construction-related noise exposure that would occur at the nearest sensitive receptor, it was assumed that the two loudest pieces of construction equipment would operate concurrently at the closest location of the Project sites to the nearest sensitive receptor locations.

The estimated L_{max} and L_{eq} for each of the two loudest pieces of equipment that would be used for Project construction, and the combined L_{eq} noise level for the two loudest pieces of construction equipment at the closest sensitive receptor locations (40 feet) are presented in **Table 7**. Individual equipment L_{eq} levels would be below 83 dBA at 25 feet and the combined L_{eq} at the nearest

receptors 40 feet away would be less than 86 dBA. Other Project components such as improvements to the Mocho Groundwater Demineralization Plant and Mocho Wells 2 and 4, would be located farther away from sensitive receptors than Well 3 and not involve ground disturbance or excavation activities, resulting in lower noise levels than reported for Well 3 in Table 9. Therefore, Project construction would not result in noise levels from construction equipment that would exceed standards in the City of Pleasanton Municipal Code.

In addition to on-site construction equipment, the Project would also result in short-term increases in local daytime traffic volumes. The Project would add a maximum of 30 one-way construction-related vehicle trips per day and a minimal number of construction materials delivery trips to area roadways over the construction period. The associated increase in short-term construction vehicular noise levels would not be expected to perceptibly increase noise levels in the vicinity of existing sensitive receptors.

TABLE 7
PROJECT CONSTRUCTION NOISE LEVELS

Type of Equipment	Distance to Closest Sensitive Receptor	Equipment L_{max} at 40 feet (dBA)/Usage (%)	Equipment L_{eq} at 25 feet (dBA)	Combined L_{eq} at Sensitive Receptor (dBA)
Excavator	40 feet (Residences)	80.7/40	82.8	80.1
Crane		80.6/16	78.6	

NOTES: L_{max} = maximum instantaneous noise level; L_{eq} = the equivalent sound level; dBA = A-weighted decibels

SOURCE: Table compiled by ESA in 2025 based on Federal Highway Administration, 2008. FHWA Roadway Construction Noise Model, Version 1.1, December 2008.

Therefore, the Project's construction noise impact would be less than significant.

Operation

The primary source of noise during Project operation would be the onsite booster pump serving the PFAS treatment system, desanders, cartridge filter, media pressure vessels, well pumps, and other ancillary equipment. The new booster pump would be installed in the eastern portion of the Mocho Well 3 facility enclosed within a building. Noise monitoring of two large capacity (200 hp) submersible pumps while operational without the attenuation of an enclosure indicates a combined steady-state operational noise level of 62 dBA at a distance of 5 feet. (ESA, 2019). This noise generation corresponds to a noise level of 48 dBA at 25 feet. The booster pump building would provide attenuation of up to 15 dBA to residential receptors to the south.

The City of Pleasanton Noise Ordinance, Section 9.04.060, regulates operational noise levels from public property in residential areas. Per Section 9.04.060, noise levels caused by mechanical equipment on public property in residential areas should not result in noise levels in excess of 60 dBA at a distance of 25 feet or more from the noise source (City of Pleasanton, 2016). According to the City of Pleasanton land-use compatibility guidelines identified in the 2005 Pleasanton Plan 2025, the City's goal for maximum outdoor noise levels in residential areas is 60 L_{dn} (City of Pleasanton, 2025). In addition, Caltrans considers a 5 dBA increase in ambient

noise levels to be readily perceptible (Caltrans, 2013). Therefore, impacts would be considered significant if Project operational noise increases ambient noise level at receptors by 5 dBA.

The 60 dBA L_{eq} at 25 feet, 60 dBA L_{dn} at the closest sensitive receptor locations, and a 5 dBA L_{dn} increase over ambient noise at the closest sensitive receptor locations are used here to assess whether operational noise levels would cause a substantial permanent increase in ambient noise levels. As shown in **Table 8**, pump noise L_{eq} at 25 feet, L_{dn} at the closest sensitive receptor, and L_{dn} increase relative to baseline noise levels would not exceed the significance thresholds. Therefore, the Project's operational noise impact would be less than significant.

The Project would not result in 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. This impact would be less than significant.

TABLE 8
OPERATIONAL PUMP NOISE LEVELS

Type of Equipment	Ambient L_{dn} at Closest Sensitive Receptor (dBA)	Pump L_{eq} at 25 feet (dBA)	Resultant L_{dn} at Closest Sensitive Receptor (dBA)[a]	Increase in Ambient L_{dn} (dBA)
PFAS	52.8 (Residences)	48	52.8 (at 40 feet)	0
Significance Threshold	--	60.0	60.0	+5.0
Significant Impact?	--	No	No	No

NOTES: L_{eq} = the equivalent sound level; L_{dn} = day-night noise level.
a. L_{dn} values were calculated under the conservative assumption that the pumps would operate continuously, 24 hours per day.
SOURCE: ESA, 2025.

b) **Less than Significant Impact.** Vibration can be interpreted as energy transmitted as waves through the ground. These energy waves generally dissipate with distance from the vibration source. Since energy is lost during the transfer of energy from one particle to another, vibration attenuates rapidly with distance. Operations and maintenance of the Project would not include any sources of vibration that would be considered excessive. Groundborne vibration and noise associated with some construction activities, including the use of pile drivers, blasting, and vibratory rollers can cause excessive vibration. The Project would not include any such activities. In addition, as there are no structures located within 25 feet of Project construction activities, groundborne vibration and noise levels generated by the types of equipment required to construct the Project would not cause human annoyance or structure damage in excess of FTA thresholds (FTA, 2018). No existing historic structures that would be potentially vulnerable to vibration are located in the immediate vicinity of the Project site or alignments such that any damage related to groundborne vibration from construction activities would occur. This impact would be less than significant.

c) **No Impact.** The Project is located approximately 2.5 miles west of the Livermore Municipal Airport and is not located within the 60 dBA L_{dn} noise contours for the Livermore Municipal

Airport (City of Pleasanton, 2013). The Project would not involve the development of noise-sensitive land uses that would be exposed to excessive aircraft noise. Workers that would construct the Project may be exposed to periodic short-term aircraft overflight noise associated with this airport; however, the average construction activity noise levels that the workers would be exposed to would be greater than the average overflight noise levels that they would be exposed to. Therefore, there would be no impact.

References

California Department of Transportation (Caltrans), 2013. *Technical Noise Supplement (TeNS)*. September 2013. Available: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tens-sep2013-a11y.pdf. Accessed June 2025.

City of Pleasanton, 2013. 2005 Pleasanton Plan 2025, Chapter 11, Noise Element. Amended February 5, 2013. Available: https://www.cityofpleasantonca.gov/assets/our-government/community-development/11.%20Noise.pdf. Accessed June 2025.

City of Pleasanton, 2025. Pleasanton Municipal Code, Title 9 Health and Safety, Chapter 9.04 Noise Regulations. March 18, 2025. Available: https://ecode360.com/43027672#43027672. Accessed June 2025.

Environmental Science Associates (ESA), 2019 Assessment of Potential Noise Impacts from the Proposed Fowler Pump Station Upgrade in San Jose, California, March 2019.

ESA, 2025. Noise Monitoring Data and Project Analysis Collected/Conducted by Environmental Science Associates, monitoring data collected April 15 and 16, 2025.

Federal Highway Administration (FHWA), 2008. FHWA Roadway Construction Noise Model, Version 1.1. December 8, 2008. Available: https://www.fhwa.dot.gov/environment/noise/construction_noise/rcnm/. Accessed June 2025.

Federal Transit Administration (FTA). 2018. Transit Noise and Vibration Impact Assessment Manual. September 2018. Available: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf. Accessed June 2025.

2.14 Population and Housing

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

Discussion

a) **No Impact.** The Project would not include any new residential development or other infrastructure that would either directly or indirectly induce substantial unplanned population growth in the Project area. The Project includes the construction of the PFAS treatment system, water transmission line beneath Stoneridge Drive, booster pump station, switchgear, electrical building, enclosed building to house PFAS treatment system or perimeter wall to screen the PFAS treatment system, media truck driveway, bioretention stormwater treatment facility, and minor grading and excavation activities at Mocho Well 3. In addition, the Project includes improvements at the Mocho Groundwater Demineralization Plant to increase demineralization treatment capacity and salt removal. The installation of additional RO membranes will likely require replacement of ancillary mechanical and electrical equipment, potentially including the pumps, VFDs, MCC, switchgear, and other appurtenances. The Project also includes replacing the well pumps at Mocho Wells 2, 3, and 4 due to the pumps reaching the end of their useful lives and evaluating the use of higher pressure pumps and variable frequency drives for these pumps to meet the Mocho PFAS Treatment Plant hydraulic needs. Furthermore, as part of the Mocho PFAS Treatment Plant project, the existing switchgear and ancillary electrical equipment would be replaced at Mocho Wells 3 and 4 due to the equipment exceeding their useful lives and will be sized to accommodate the Project's electrical demands. The intent of the Project is to support the construction and implementation of the Mocho PFAS Treatment Plant in order to meet Zone 7's water supply reliability policy goals and salt management plan objectives. The Project would not remove any existing barriers to growth that has not been accounted for in the City of Pleasanton's General Plan or other regional planning and forecasting documents. Therefore, the Project would not induce population growth and there would be no impact under this criterion.

b) **No Impact.** The Project does not involve demolition of existing housing or require the construction of housing elsewhere. Furthermore, the Project site is not an area that is currently developed that would cause physical displacement of existing population and housing. The Project would not cause a significant environmental impact due to unplanned or induced population growth and/or displaced population and housing. Therefore, the Project would not necessitate construction of replacement housing elsewhere and there would be no impact.

2.15 Public Services

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

Discussion

a.i, ii) **Less than Significant Impact.** The Project sites receive fire protection from Livermore-Pleasanton Fire Department and police protection from Pleasanton Police Department (City of Pleasanton, 2009). As stated in the Population and Housing Section, the Project would include the construction of a new water transmission pipeline and the installation of an PFAS Treatment Facility and would not remove any existing barriers to growth. As noted in Section 1.6, *Project Construction*, construction would require up to 15 temporary workers. Workers would likely come from within Alameda County or adjacent counties and would not result in an increase in the local population such that new or physically altered fire and/or police facilities would be required to maintain service. Incidents could occur during construction requiring law enforcement, fire protection, or emergency medical services. However, this analysis presumes that any incremental increase in demand for these services during construction would be temporary, could be accommodated by existing services, and would not require construction of new or physically altered facilities to maintain service. Additionally, operation and maintenance of the Project would not require additional on-site staff and would therefore not increase the need for fire or police services. Therefore, the impact would be less than significant.

a.iii, iv, v) **Less than Significant Impact**. Because the Project would not increase population or directly impact any schools, there would be no need for construction of new schools or alteration of existing schools. Refer to Section XVI, *Recreation*, for more information about impacts related to parks and recreational facilities. As described above, no additional on-site staff would be required to conduct operations and maintenance. For these reasons, the Project would not require construction of new or alterations to existing schools, parks, other public services, and the impact would be less than significant.

References

City of Pleasanton, 2009. Pleasanton General Plan 2005-2025 *Public Facilities and Community Programs Element.* Adopted July 21, 2009. Available: https://www.cityofpleasantonca.gov/assets/our-government/community-development/1.%20GP-Cover-Inside-TofC.pdf. Accessed March 28, 2025.

2.16 Recreation

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

Discussion

a) **No Impact.** As stated in the *Population and Housing Section*, the Project would include the construction of the PFAS treatment system, water transmission line beneath Stoneridge Drive, booster pump station, electrical building, enclosed building to house PFAS treatment system, media truck driveway, bioretention stormwater treatment facility, and minor grading and excavation activities within the Mocho PFAS Treatment Plant and Mocho Well 3 site. In addition, the Project includes improvements at the Mocho Groundwater Demineralization Plant to increase demineralization treatment capacity and salt removal. The installation of additional RO membranes will likely require replacement of ancillary mechanical and electrical equipment, potentially including the pumps, VFDs, MCC, switchgear, and other appurtenances. The Project also includes replacing the well pumps at Mocho Wells 2, 3, and 4 due to the pumps reaching the end of their useful lives and evaluating the use of higher pressure pumps and variable frequency drives for these pumps to meet the Mocho PFAS Treatment Plant hydraulic needs. Furthermore, as part of the Mocho PFAS Treatment Plant project, the existing switchgear and ancillary electrical equipment would be replaced at Mocho Wells 3 and 4 due to the equipment exceeding their useful lives and will be sized to accommodate the Project's electrical demands. The Project would not remove any existing barriers to growth. As noted in Section 1.6, *Project Construction*, construction would require up to 15 temporary workers. Workers would likely come from within Alameda County or adjacent counties and would not result in the substantial increased use of existing parks or other recreational facilities.

There are several recreational sites in the general vicinity; these include the Iron Horse Regional Trail to the northern and eastern sides of the property adjacent to the Mocho PFAS Treatment Plant and Mocho Well 3 site, the Arroyo Mocho Trail approximately 0.06 miles to the north, Sutter Gate Park approximately 0.35 mile to the west, Bicentennial Park approximately 0.3 mile to the south, and Nielsen Park approximately 0.4 mile to the east (City of Pleasanton, 2009). The Mocho PFAS Treatment Plant and Mocho Well 3 site contains City of Pleasanton operated bicycle and walking trails along the southern border of the parcel. It is anticipated that the trails will be closed to public access for the duration of construction; however, a pedestrian/bike detour would be in place. The Project would not result in substantial population growth and would not increase the use of any existing neighborhoods or regional parks or cause the need for expansion of recreational facilities. Therefore, no impact would occur.

b) **No Impact**. The Project would not include the construction of new or expansion of existing recreational facilities. Because the Project would not require the construction or expansion of additional recreational facilities, under this criterion there would be no impact.

References

City of Pleasanton, 2009. Pleasanton General Plan 2005-2025 *Public Facilities and Community Programs Element.* Adopted July 21, 2009. Available: https://www.cityofpleasantonca.gov/assets/our-government/community-development/1.%20GP-Cover-Inside-TofC.pdf. Accessed March 28, 2025.

2.17 Transportation

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

Discussion

a) **Less than Significant Impact.** The Mocho PFAS Treatment Plant falls within the City of Pleasanton and therefore within the sphere of influence of the *City of Pleasanton General Plan 2005-2025*. The Circulation Element contains goals, policies, and programs to support adequate traffic circulation, as well as maintain and promote alternative modes of transportation such as bicycle routes and pedestrian trails. The Mocho PFAS Treatment Plant and Mocho Well 3 site contains City of Pleasanton operated bicycle and walking trails along the southern border of the parcel. It is anticipated that the trails will be closed to public access for the duration of construction; however, a pedestrian/bike detour would be in place. Access to the Mocho PFAS Treatment Plant and Mocho Well 3 site and the Mocho Well 2 site would be along Santa Rita Road, which has been identified for a future complete streets study. However, the roadway would not be affected by the Project. There would be no onsite employees which would utilize active transportation facilities. Therefore, impacts to plans, ordinances, or policies addressing the circulation system would be less than significant.

b) **No Impact.** Senate Bill (SB) 743 established a change in the metric to be applied for determining traffic impacts associated with development projects. Rather than the delay-based criteria associated with a Level of Service (LOS) analysis, the increase in Vehicle Miles Traveled (VMT) as a result of a project will be the basis for determining impacts. While many jurisdictions still maintain policies stating that a minimum LOS is desired, a CEQA analysis cannot be based on an operational service level deficiency that conflicts with a local agency's policy. No LOS analysis was included as part of the analysis.

Because the construction of the Mocho PFAS Treatment Facility does not fall within the typical parameters for transportation impact analyses, guidance provided by the California Governor's Office of Land Use and Climate Innovation in the publication Transportation Impacts (SB 743) CEQA Guidelines Update and Technical Advisory (2018) was used for this evaluation. With implementation of the Project, there would be no change to the capacity or operational characteristics of the roadway network within the Project area.

The Project construction staging areas are located off-street and would have no impacts related to VMT. Project construction is anticipated to occur between fall 2026 and summer 2028 and would involve a maximum of 15 workers on the Project sites at any one time. The standards set forth in the Technical Advisory addresses a project's additional permanent automobile trips or vehicle miles traveled in lieu of an existing model or method. Because Project construction would be temporary, construction activities do not necessitate analysis under CEQA Guidelines Section 15064.3(b).

Operational VMT impacts would be consistent with existing conditions onsite. Treatment facility operators would travel to the site daily to ensure it is functioning correctly. The facility would remain unstaffed, and no additional onsite staff would be required. No new deliveries would be required, and maintenance would occur on an as-needed basis. There would be no impact related to VMT.

c) **No Impact.** The Project does not include construction within roadways; therefore, it would not create any hazardous or unsafe geometric design features or incompatible uses. Santa Rita Road approximately 1.15 miles south of Interstate Highway 580 would be used for Project construction access. However, it is not anticipated that the nature of Project-related construction traffic would introduce a substantial number of increased vehicle trips or vehicles that would use the surrounding roadways. There would therefore be no impact related to hazardous roadway features or uses attributable to the Project.

d) **No Impact.** The Project does not include construction within roadways and the Project sites are not located along a roadway commonly used for emergency access or is designated as an emergency or evacuation route. It is not anticipated that the nature of Project-related construction traffic would introduce a substantial number of increased vehicle trips or vehicles that would use Santa Rita Road in such a way as to impede emergency access. Therefore, there would be no impact related to emergency access attributable to the Project.

References

City of Pleasanton, 2009. *City of Pleasanton General Plan 2005-2025.* July 21.

City of Pleasanton, 2018. *Bicycle & Pedestrian Master Plan.*

2.18 Tribal Cultural Resources

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XVIII. TRIBAL CULTURAL RESOURCES —				
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources. Code Section 5020.1(k), or	☐	☐	☒	☐
ii) 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.	☐	☐	☒	☐

A context for cultural, archaeological, and historical resources is discussed above in Section V. *Cultural Resources*.

Discussion

a.i) **Less than Significant Impact.** Tribal cultural resources are: (1) sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are listed, or determined to be eligible for listing, in the California Register, or local register of historical resources, as defined in PRC Section 5020.1(k); or (2) a resource determined by the CEQA lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in PRC Section 5024.1(c). For a cultural landscape to be considered a tribal cultural resource, it must be geographically defined in terms of the size and scope of the landscape (PRC Section 21074[b]). A historical resource, as defined in PRC Section 21084.1, unique archaeological resource, as defined in PRC Section 21083.2(g), or non-unique archaeological resource, as defined in PRC Section 21083.2(h), may also be a tribal cultural resource.

Through background research at the Northwest Information Center of the California Historical Resources Information System, no known archaeological resources that could be considered tribal cultural resources, are listed or determined eligible for listing in the California Register, or included in a local register of historical resources as defined in PRC Section 5020.1(k), pursuant to PRC Section 21074(a)(1), would be impacted by the Project.

On February 26, 2025, ESA sent a request to the Native American Heritage Commission (NAHC) for a search of sacred lands file and a list of Native American tribes in the vicinity. The NAHC responded on February 27, 2025, indicating there were no sacred lands on file and provided a list

of 17 tribal contacts. On March 31, 2025, Zone7 sent letters to the Native American tribes with a description of the Project, a map showing the Project location, and an invitation to consult on the Project. Zone 7 received one response from Wilton Rancheria on April 9, 2025, indicating that they had no concerns with the Project. No additional responses were received.

Zone 7 did not identify any tribal cultural resources listed or eligible for listing in the California Register, nor did they determine any resources to be significant pursuant to criteria set forth in Subdivision (c) of PRC Section 5024.1.

In the event that subsurface resources are identified during ground disturbing activities, Zone 7 would comply with PRC Section 21083.2(i), which requires the lead agency to make provisions for archaeological resources accidentally discovered during construction. Zone 7 would be required to make an immediate evaluation by a qualified archaeologist, and if the find is determined to be a unique archaeological resource or a historical resource, then it must be avoided. If avoidance is not feasible, the resource must be recovered and treated accordingly. Construction would be allowed in other areas while the archaeological mitigation takes place. With compliance with existing regulations, the potential impact related to the accidental discovery of tribal resources would be less than significant.

In the event that ground disturbing activities identify undiscovered human remains, Zone 7 will comply with Government Code Section 27460 et seq., which requires ground disturbing activities to halt until the County Coroner can determine whether the remains are subject to the provisions of Section 27491 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner, and cause of death; and the required recommendations concerning the treatment and disposition of the human remains have been made. Pursuant to California Health and Safety Code Section 7050.5, the coroner shall make a determination within 48 hours of notification of the discovery of the human remains. If the coroner determines that the remains are not subject to their authority and recognizes or has reason to believe that they are those of a Native American, the coroner shall contact the Native American Heritage Commission within 24 hours. With compliance with existing regulations, the potential impact related to the accidental discovery of human remains would be less than significant.

a.ii) **Less than Significant Impact.** For the same reasons stated in the analysis of potential impacts on tribal cultural resources above for issue a.i, impacts would be potentially significant; however, compliance with the Public Resources Code as discussed above would reduce impacts to less than significant.

2.19 Utilities and Service Systems

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIX. 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?	☐	☐	☐	☒
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☐	☒
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☒

Discussion

a) **No Impact.** The Project consists of updating existing water treatment facilities and adding new water treatment facilities for PFAS currently found in groundwater sources and stormwater treatment facilities and are the subject of this IS. The Project is necessary to restore groundwater production and meet Zone 7's water supply reliability policy goals and salt management plan objectives to its retail water supply agencies – including the cities of Pleasanton, Livermore, and Dublin, as well as the Dublin San Ramon Service District. The environmental effects of the current and planned future commitments (i.e., future development activities) of these jurisdictions, as well as the infrastructure needed to meet these commitments, have presumably been contemplated in the CEQA analyses performed on the jurisdictions' General Plans and individual development applications consistent with those General Plans. Additionally, as previously discussed, the Project would not contribute to population growth resulting in the need for expanded utilities. Based on this relationship with development planning in the study area, the Project would create no impact due to unplanned or induced need for new or expanded water and wastewater infrastructure services.

b) **Less than Significant Impact.** As stated above, the Project would not require or result in the relocation or construction of any new or additional sources of water. As indicated in Section 1.6, *Project Construction,* construction water for dust suppression and other activities onsite would be provided through a Zone 7 hydrant and would use approximately 4,000 gallons per day. Construction of the Project is anticipated to take approximately 18 months and due to the temporary nature and amount of water use, would not significantly deplete water supplies during normal, dry, or multiple dry years. Operation and maintenance activities would occur on an as-needed basis and would not include any water use. For these reasons, the impact would be less than significant.

c) **No Impact.** Construction, operation, and maintenance of the Project would not result in an increase in population and would not require temporary or permanent wastewater treatment. Portable toilets would be provided onsite for Project construction workers for approximately 18 months. The Project would therefore not affect the wastewater treatment provider's (the City of Pleasanton) capacity to serve the Project area, and there would be no impact.

d, e) **No Impact.** As discussed in Section 1.6, *Project Construction*, the Project would require 1,240 cubic yards of material to be exported. Additionally, solid waste generated during construction (assumed to be approximately 100 cubic yards of green waste from clearing and grubbing) would be hauled to a local landfill such as the Pleasanton Garbage Service Recycling Center, which is active and permitted solid waste facility. Pleasanton Garbage Service Recycling Center is a direct transfer facility that has a maximum permitted throughput and a maximum permit capacity of 720 tons per day (CalRecycle, 2025). The transfer facility has sufficient capacity to accept the waste that the Project would generate, and the Project would not generate solid waste in excess of State or local standards or impair the attainment of solid waste reduction goals. The Project would also comply with applicable regulations related to solid waste. No waste is anticipated to be generated or disposed of during operation and maintenance of the Project. Under this criterion, there would be no impact.

References

CalRecycle, 2025. SWIS Facility/Site Activity Details, Pleasanton Garbage Service SW TS (01-AA-0003) Available: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/2?siteID=2. Accessed April 4, 2025.

2.20 Wildfire

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XX. 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?	☐	☐	☒	☐
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?	☐	☐	☐	☒
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

Discussion

a) **Less than Significant Impact.** The Livermore-Pleasanton Fire Department is responsible for fire protection and suppression for all areas within the Pleasanton city limits (City of Pleasanton, 2013). The City of Pleasanton Emergency Operations Plan is designed as a reference and guidance document and is the foundation for disaster response and recovery operations for the City of Pleasanton (City of Pleasanton, 2018). The Project would not include any facilities for occupancy and, therefore, would not interfere or impair any emergency response plan enforced by Livermore-Pleasanton Fire Department. In addition, although Santa Rita Road is considered an emergency evacuation route, this analysis assumes that evacuation routes would be determined as needed on a case-by-case basis by emergency response agencies. The Project would include the installation of pipelines underneath Santa Rita Road, utilizing jack-and-bore method, and road closures within Santa Rita Road would not be necessary. It is not anticipated that Project-related construction traffic would introduce a substantial number of increased vehicle trips or impede vehicles that would use Santa Rita Road as to impede emergency access. Under this criterion, there would be no impact.

b) **No Impact.** According to the Fire Hazard Severity Zone Viewer map published by California Department of Forestry and Fire Protection, the Project would not be within land mapped as a Very High, High, or Moderate Fire Hazard Severity Zone (CAL FIRE, 2024). The Project is located within a Local Responsibility Area. Due to these factors, the Project would not exacerbate wildfire risks and there would be no impact under this criterion.

c) **No Impact.** The Project would not result or require the installation or maintenance of any new access roads, fuel breaks, emergency water sources, power lines, or other utilities that would exacerbate fire risk or result in temporary ongoing impacts to the environment. Therefore, there would be no impact under this criterion.

d) **No Impact.** As discussed above in Question b, the Project does not support factors that would contribute to a significant wildfire risk, such as steep vegetated slopes, changes in drainage patterns, etc. Therefore, the likelihood of the Project to expose surrounding 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 would not occur. Therefore, there would be no impact under this criterion.

References

California Department of Forestry and Fire Protection (CAL FIRE). 2024. Fire Hazard Severity Zone Viewer. Map updated April 1, 2024. Available: https://experience.arcgis.com/experience/6a9cb66bb1824cd98756812af41292a0?print_preview=true. Accessed March 31, 2025.

City of Pleasanton, 2013. 2005 Pleasanton Plan 2025 Public Safety Element. Amended February 5, 2013. Available: https://www.cityofpleasantonca.gov/assets/our-government/community-development/5.%20Public%20Safety.pdf. Accessed March 31, 2025.

City of Pleasanton, 2018. City of Pleasanton Emergency Operation Plan. March 2018. Available: https://www.lpfire.org/home/showpublisheddocument/4417/637208810769900000. Accessed April 4, 2025.

2.21 Mandatory Findings of Significance

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XXI. MANDATORY FINDINGS OF SIGNIFICANCE —				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have 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)?	☐	☒	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Discussion

a) **Less than Significant with Mitigation Incorporated.** As described in the preceding impact discussions, the impacts related to the potential of the Project to substantially degrade the environment would be less than significant with incorporated mitigation measures. As described in this initial study, the Project has the potential for impacts related to aesthetics, air quality and biological resources. However, these impacts would be avoided or reduced to a less-than-significant level with the incorporation of avoidance and mitigation measures discussed in each section.

b) **Less than Significant with Mitigation Incorporated.** This section provides a description of other actions in the area and a discussion of the cumulative impacts of those projects, in combination with the previously identified effects of the Project. State CEQA Guidelines Section 15355 states that "cumulative impacts refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts":

(a) The individual effects may be changes resulting from a single project or a number of separate projects.

(b) The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

The past, present, and reasonably foreseeable future conditions of the Project site and vicinity were considered for the cumulative analysis.

Aesthetics. Completion of the Project would result in some permanent visual changes to the Mocho Well 3 site from the construction and operation of the Mocho PFAS Treatment Plant;

however, the visual changes resulting from the visible components of the Project would not substantially alter the existing visual character or quality of the area or its surroundings. These components would be located in areas where similar water treatment facility structures currently exist and would feature comparable design characteristics (e.g., height, placement, and construction materials). Although the Project may be visible from certain public viewpoints, the proposed facilities would be visually consistent with the existing built environment in the Project study area. Additionally, the project includes visual screening of the treatment facilities to promote integration with the surrounding area. Therefore, cumulative impacts on aesthetics would be less than significant.

Agriculture and Forestry Resources. The Project would have no impact on agriculture and forestry resources; therefore, it would not contribute to cumulative agriculture and forestry resources issues.

Air Quality and Greenhouse Gas Emissions. A number of individual projects in the vicinity of the Project may be under construction simultaneously with the Project. Depending on construction schedules and actual implementation of projects in and around Alameda County, generation of fugitive dust and pollutant emissions during construction may result in short-term air pollutants, which would contribute to short-term cumulative impacts on air quality. However, each individual project would be subject to BAAQMD rules, regulations, and other mitigation requirements during construction. For cumulative impacts on air quality and greenhouse gas emissions, see Section 2.3, Air Quality, and Section 2.8, Greenhouse Gas Emissions. The thresholds used consider the contributions of other projects in the air basin. Additionally, greenhouse gas emissions are considered cumulative in nature because it is unlikely that a single project would contribute significantly to climate change.

Biological Resources, Cultural Resources, Tribal Cultural Resources, Geology and Soils, and Hazards and Hazardous Materials. The Project's impacts for these environmental issues would be limited to the Project sites, and any significant impacts would be reduced to a less-than-significant level by implementing proposed mitigation measures. Thus, the Project would not contribute to cumulative impacts for these topics.

Energy. Construction of the Project would result in fuel consumption from the use of construction tools and equipment, truck trips to haul materials, and vehicle trips by construction workers commuting to and from the Project sites. This impact would be temporary and localized. Operational energy impacts are not anticipated. Construction-related fuel consumption by the Project would not result in inefficient, wasteful, or unnecessary energy use compared with other construction sites in the region. Therefore, cumulative impacts would be less than significant.

Hydrology and Water Quality. Implementing the Project would result in the use of heavy equipment during activities such as earthmoving, excavation, filling and stockpiling and grading. Construction activities have the potential to increase rates of erosion, which could increase turbidity in downstream receiving waters. In addition, the use of heavy machinery during construction would have the potential to result in an accidental release of fuels, oils, solvents, hydraulic fluid, and other construction-related fluids to the environment, thereby degrading water quality. With implementation of a SWPPP and accompanying BMPs, Project construction would

not violate water quality standards or waste discharge requirements or release sediment and/or pollutants into surface or groundwater and any potential impacts would be reduced to less than significant levels. Construction contractors would be required to acquire coverage under the National Pollutant Discharge Elimination System General Stormwater Permit, which requires the preparation and implementation of a storm water pollution prevention plan (SWPPP) for construction activities for projects with over 1 acre of ground disturbance. The SWPPP would list the hazardous materials (including petroleum products) proposed for use during construction; describe spill prevention measures, equipment inspections, and equipment and fuel storage; describe protocols for responding immediately to spills; and describe best management practices for controlling site run-on and runoff. Therefore, cumulative impacts would be less than significant.

Land Use and Land Use Planning. The Project would have no impact on land use and land use planning; therefore, it would not contribute to cumulative land use issues.

Mineral Resources. The Project would have no impact on mineral resources and thus would not contribute to cumulative impacts.

Noise. The Project's noise impacts are anticipated to be minor and the Project would comply with the noise standards in the City of Pleasanton Municipal Code and the City of Pleasanton Noise Ordinance. The Project is not expected to result in any permanent substantial noise increases relative to existing conditions, nor would noise levels generated by Project maintenance activities exceed The City of Pleasanton's exterior noise standards at the nearest sensitive receptor. Thus, cumulative noise impacts would be less than significant.

Population and Housing. The Project would have no impact on population and housing resources and thus would not contribute to cumulative impacts.

Public Services. No commercial or residential development is proposed as part of the Project; therefore, the Project would not increase demands on fire protection or police services, nor would it affect the response time of these services. Therefore, cumulative public services impacts would be less than significant.

Recreation. The Project would have no impact on recreation and thus would not contribute to cumulative impacts.

Transportation. The Project does not include construction within roadways. Also, operations of the facility would not increase the use of local roadways. Therefore, cumulative impacts to transportation would be less than significant.

Utilities and Service Systems. The Proposed Project would have no impact on utilities and service systems and thus would not contribute to cumulative impacts.

c) **Less than Significant with Mitigation Incorporated.** The Project would not result in any substantial adverse effects on human beings, either directly or indirectly, because each potentially significant impact can be reduced to a less-than-significant level with the implementation of the mitigation measures provided in this document. No other substantial adverse effects on human

beings are anticipated as a result of the Project, resulting in a less-than-significant impact with mitigation incorporated.

This page intentionally left blank

Appendix A

Air Quality and Greenhouse Gas Emissions Estimates

Mocho PFAS Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

1.2. Land Use Types

1.3. User-Selected Emission Reduction Measures by Emissions Sector

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

2.2. Construction Emissions by Year, Unmitigated

2.4. Operations Emissions Compared Against Thresholds

2.5. Operations Emissions by Sector, Unmitigated

3. Construction Emissions Details

3.1. Site Preparation (2026) - Unmitigated

3.3. Site Preparation (2027) - Unmitigated

3.5. PFAS facility (2027) - Unmitigated

3.7. PFAS facility (2028) - Unmitigated

3.9. Paving (2028) - Unmitigated

3.11. Architectural Coating (2028) - Unmitigated

3.13. Water transmission line (2027) - Unmitigated

3.15. Bypass line (2027) - Unmitigated

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

4.3. Area Emissions by Source

4.3.1. Unmitigated

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.9. Operational Mobile Sources

5.9.1. Unmitigated

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Mocho PFAS
Construction Start Date	12/1/2026
Operational Year	2029
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.00
Precipitation (days)	14.8
Location	37.687493550821515, -121.87858957032574
County	Alameda
City	Pleasanton
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1681
EDFZ	1
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	27.5	1000sqft	0.63	27,544	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	14.6	14.6	12.7	14.6	0.02	0.49	0.28	0.74	0.45	0.07	0.51	—	2,631	2,631	0.10	0.04	1.14	2,643
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.76	1.48	12.7	14.5	0.02	0.49	0.45	0.74	0.45	0.08	0.51	—	2,613	2,613	0.10	0.04	0.03	2,624
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.99	0.96	6.11	7.86	0.01	0.23	0.19	0.42	0.21	0.04	0.26	—	1,508	1,508	0.06	0.02	0.31	1,517
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.18	0.18	1.12	1.43	< 0.005	0.04	0.03	0.08	0.04	0.01	0.05	—	250	250	0.01	< 0.005	0.05	251

2.2. Construction Emissions by Year, Unmitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	1.76	1.48	12.7	14.6	0.02	0.49	0.28	0.74	0.45	0.07	0.51	—	2,631	2,631	0.10	0.04	1.14	2,643

2028	14.6	14.6	4.49	7.92	0.01	0.15	0.28	0.43	0.14	0.07	0.21	—	1,663	1,663	0.06	0.03	1.03	1,675
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.69	0.58	4.66	8.00	0.01	0.21	0.45	0.66	0.19	0.08	0.27	—	1,340	1,340	0.05	0.02	0.02	1,347
2027	1.76	1.48	12.7	14.5	0.02	0.49	0.45	0.74	0.45	0.08	0.51	—	2,613	2,613	0.10	0.04	0.03	2,624
2028	0.65	0.54	4.51	7.81	0.01	0.15	0.28	0.43	0.14	0.07	0.21	—	1,646	1,646	0.06	0.04	0.03	1,659
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.04	0.04	0.28	0.48	< 0.005	0.01	0.03	0.04	0.01	< 0.005	0.02	—	81.4	81.4	< 0.005	< 0.005	0.02	81.8
2027	0.85	0.72	6.11	7.86	0.01	0.23	0.19	0.42	0.21	0.04	0.26	—	1,508	1,508	0.06	0.02	0.31	1,517
2028	0.99	0.96	1.37	2.26	< 0.005	0.05	0.09	0.14	0.04	0.02	0.07	—	446	446	0.02	0.01	0.14	450
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.01	0.01	0.05	0.09	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	13.5	13.5	< 0.005	< 0.005	< 0.005	13.5
2027	0.16	0.13	1.12	1.43	< 0.005	0.04	0.03	0.08	0.04	0.01	0.05	—	250	250	0.01	< 0.005	0.05	251
2028	0.18	0.18	0.25	0.41	< 0.005	0.01	0.02	0.03	0.01	< 0.005	0.01	—	73.9	73.9	< 0.005	< 0.005	0.02	74.4

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.92	0.89	0.34	1.51	< 0.005	0.03	0.01	0.04	0.03	< 0.005	0.03	30.6	594	625	3.16	0.03	0.03	714
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.71	0.69	0.33	0.31	< 0.005	0.02	0.01	0.04	0.02	< 0.005	0.03	30.6	588	619	3.16	0.03	< 0.005	708
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	0.81	0.79	0.33	0.90	< 0.005	0.03	0.01	0.04	0.03	< 0.005	0.03	30.6	591	621	3.16	0.03	0.01	711
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.15	0.14	0.06	0.16	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	0.01	5.07	97.8	103	0.52	0.01	< 0.005	118

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.01	0.01	< 0.005	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	11.5	11.5	< 0.005	< 0.005	0.03	11.7
Area	0.88	0.86	0.01	1.20	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.93	4.93	< 0.005	< 0.005	—	4.94
Energy	0.04	0.02	0.32	0.27	< 0.005	0.02	—	0.02	0.02	—	0.02	—	554	554	0.06	< 0.005	—	557
Water	—	—	—	—	—	—	—	—	—	—	—	12.2	23.1	35.3	1.26	0.03	—	75.6
Waste	—	—	—	—	—	—	—	—	—	—	—	18.4	0.00	18.4	1.84	0.00	—	64.4
Total	0.92	0.89	0.34	1.51	< 0.005	0.03	0.01	0.04	0.03	< 0.005	0.03	30.6	594	625	3.16	0.03	0.03	714
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.01	0.01	< 0.005	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	10.8	10.8	< 0.005	< 0.005	< 0.005	11.0
Area	0.67	0.67	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.04	0.02	0.32	0.27	< 0.005	0.02	—	0.02	0.02	—	0.02	—	554	554	0.06	< 0.005	—	557
Water	—	—	—	—	—	—	—	—	—	—	—	12.2	23.1	35.3	1.26	0.03	—	75.6
Waste	—	—	—	—	—	—	—	—	—	—	—	18.4	0.00	18.4	1.84	0.00	—	64.4
Total	0.71	0.69	0.33	0.31	< 0.005	0.02	0.01	0.04	0.02	< 0.005	0.03	30.6	588	619	3.16	0.03	< 0.005	708
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.01	0.01	< 0.005	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	10.9	10.9	< 0.005	< 0.005	0.01	11.1
Area	0.77	0.77	< 0.005	0.59	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.43	2.43	< 0.005	< 0.005	—	2.44

Energy	0.04	0.02	0.32	0.27	< 0.005	0.02	—	0.02	0.02	—	0.02	—	554	554	0.06	< 0.005	—	557
Water	—	—	—	—	—	—	—	—	—	—	—	12.2	23.1	35.3	1.26	0.03	—	75.6
Waste	—	—	—	—	—	—	—	—	—	—	—	18.4	0.00	18.4	1.84	0.00	—	64.4
Total	0.81	0.79	0.33	0.90	< 0.005	0.03	0.01	0.04	0.03	< 0.005	0.03	30.6	591	621	3.16	0.03	0.01	711
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.80	1.80	< 0.005	< 0.005	< 0.005	1.83
Area	0.14	0.14	< 0.005	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.40	0.40	< 0.005	< 0.005	—	0.40
Energy	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	91.8	91.8	0.01	< 0.005	—	92.3
Water	—	—	—	—	—	—	—	—	—	—	—	2.02	3.82	5.84	0.21	< 0.005	—	12.5
Waste	—	—	—	—	—	—	—	—	—	—	—	3.05	0.00	3.05	0.30	0.00	—	10.7
Total	0.15	0.14	0.06	0.16	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	0.01	5.07	97.8	103	0.52	0.01	< 0.005	118

3. Construction Emissions Details

3.1. Site Preparation (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.50	4.58	7.05	0.01	0.21	—	0.21	0.19	—	0.19	—	1,103	1,103	0.04	0.01	—	1,107
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.02	0.02	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.28	0.43	< 0.005	0.01	—	0.01	0.01	—	0.01	—	66.9	66.9	< 0.005	< 0.005	—	67.2
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.1	11.1	< 0.005	< 0.005	—	11.1
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.08	0.95	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	236	236	0.01	0.01	0.02	240
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.4	14.4	< 0.005	< 0.005	0.02	14.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.39	2.39	< 0.005	< 0.005	< 0.005	2.43
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Site Preparation (2027) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.56	0.47	4.25	7.06	0.01	0.19	—	0.19	0.17	—	0.17	—	1,104	1,104	0.04	0.01	—	1,108
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	< 0.005	< 0.005	0.02	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.48	6.48	< 0.005	< 0.005	—	6.50
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.07	1.07	< 0.005	< 0.005	—	1.08
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.08	0.90	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	232	232	0.01	0.01	0.02	235
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.37	1.37	< 0.005	< 0.005	< 0.005	1.39
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.23	0.23	< 0.005	< 0.005	< 0.005	0.23
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. PFAS facility (2027) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.57	0.48	4.56	6.90	0.01	0.17	—	0.17	0.15	—	0.15	—	1,304	1,304	0.05	0.01	—	1,309
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.57	0.48	4.56	6.90	0.01	0.17	—	0.17	0.15	—	0.15	—	1,304	1,304	0.05	0.01	—	1,309
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.17	1.67	2.52	< 0.005	0.06	—	0.06	0.06	—	0.06	—	477	477	0.02	< 0.005	—	479
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.30	0.46	< 0.005	0.01	—	0.01	0.01	—	0.01	—	79.0	79.0	< 0.005	< 0.005	—	79.3
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.06	1.01	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	250	250	< 0.005	0.01	0.85	254
Vendor	0.01	< 0.005	0.14	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	116	116	< 0.005	0.02	0.29	121
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.08	0.90	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	232	232	0.01	0.01	0.02	235
Vendor	0.01	< 0.005	0.14	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	116	116	< 0.005	0.02	0.01	121
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.32	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	85.5	85.5	< 0.005	< 0.005	0.13	86.7
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	42.4	42.4	< 0.005	0.01	0.05	44.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.06	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	14.2	14.2	< 0.005	< 0.005	0.02	14.4
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.02	7.02	< 0.005	< 0.005	0.01	7.35
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. PFAS facility (2028) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.55	0.46	4.30	6.91	0.01	0.15	—	0.15	0.14	—	0.14	—	1,305	1,305	0.05	0.01	—	1,309
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.55	0.46	4.30	6.91	0.01	0.15	—	0.15	0.14	—	0.14	—	1,305	1,305	0.05	0.01	—	1,309
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.08	0.77	1.24	< 0.005	0.03	—	0.03	0.02	—	0.02	—	235	235	0.01	< 0.005	—	236
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.14	0.23	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	38.9	38.9	< 0.005	< 0.005	—	39.0
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.06	0.96	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	246	246	< 0.005	< 0.005	0.76	247
Vendor	0.01	< 0.005	0.13	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	113	113	< 0.005	0.02	0.27	118
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.07	0.84	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	228	228	0.01	0.01	0.02	231
Vendor	0.01	< 0.005	0.14	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	113	113	< 0.005	0.02	0.01	118
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.01	0.15	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	41.3	41.3	< 0.005	< 0.005	0.06	41.9
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	20.4	20.4	< 0.005	< 0.005	0.02	21.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.84	6.84	< 0.005	< 0.005	0.01	6.94
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.37	3.37	< 0.005	< 0.005	< 0.005	3.53
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Paving (2028) - Unmitigated

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

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

Off-Road	0.56	0.47	4.05	5.31	0.01	0.15	—	0.15	0.14	—	0.14	—	823	823	0.03	0.01	—	826
Paving	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	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.50	0.65	< 0.005	0.02	—	0.02	0.02	—	0.02	—	101	101	< 0.005	< 0.005	—	102
Paving	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	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.09	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.8	16.8	< 0.005	< 0.005	—	16.9
Paving	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	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.06	0.96	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	246	246	< 0.005	< 0.005	0.76	247
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	28.3	28.3	< 0.005	< 0.005	0.04	28.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.68	4.68	< 0.005	< 0.005	0.01	4.75
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Architectural Coating (2028) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.81	1.12	< 0.005	0.02	—	0.02	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	14.4	14.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	0.01	0.01	0.04	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.32	7.32	< 0.005	< 0.005	—	7.34
Architectural Coatings	0.79	0.79	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.21	1.21	< 0.005	< 0.005	—	1.22
Architectural Coatings	0.14	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.06	0.96	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	246	246	< 0.005	< 0.005	0.76	247
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.6	12.6	< 0.005	< 0.005	0.02	12.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.08	2.08	< 0.005	< 0.005	< 0.005	2.11
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Water transmission line (2027) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.67	1.40	12.6	13.6	0.02	0.49	—	0.49	0.45	—	0.45	—	2,381	2,381	0.10	0.02	—	2,389
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.17	1.56	1.67	< 0.005	0.06	—	0.06	0.06	—	0.06	—	294	294	0.01	< 0.005	—	295
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.28	0.31	< 0.005	0.01	—	0.01	0.01	—	0.01	—	48.6	48.6	< 0.005	< 0.005	—	48.8

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.08	0.90	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	232	232	0.01	0.01	0.02	235
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	28.8	28.8	< 0.005	< 0.005	0.05	29.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.77	4.77	< 0.005	< 0.005	0.01	4.84
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Bypass line (2027) - Unmitigated

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

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

Off-Road Equipment	1.67	1.40	12.6	13.6	0.02	0.49	—	0.49	0.45	—	0.45	—	2,381	2,381	0.10	0.02	—	2,389
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.67	1.40	12.6	13.6	0.02	0.49	—	0.49	0.45	—	0.45	—	2,381	2,381	0.10	0.02	—	2,389
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	0.31	2.76	2.98	0.01	0.11	—	0.11	0.10	—	0.10	—	522	522	0.02	< 0.005	—	524
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.50	0.54	< 0.005	0.02	—	0.02	0.02	—	0.02	—	86.4	86.4	< 0.005	< 0.005	—	86.7
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.06	1.01	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	250	250	< 0.005	0.01	0.85	254
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.08	0.90	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	232	232	0.01	0.01	0.02	235
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.19	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	51.2	51.2	< 0.005	< 0.005	0.08	52.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.48	8.48	< 0.005	< 0.005	0.01	8.60
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.01	0.01	< 0.005	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	11.5	11.5	< 0.005	< 0.005	0.03	11.7

Total	0.01	0.01	< 0.005	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	11.5	11.5	< 0.005	< 0.005	0.03	11.7
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.01	0.01	< 0.005	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	10.8	10.8	< 0.005	< 0.005	< 0.005	11.0
Total	0.01	0.01	< 0.005	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	10.8	10.8	< 0.005	< 0.005	< 0.005	11.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.80	1.80	< 0.005	< 0.005	< 0.005	1.83
Total	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.80	1.80	< 0.005	< 0.005	< 0.005	1.83

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	168	168	0.03	< 0.005	—	170
Total	—	—	—	—	—	—	—	—	—	—	—	—	168	168	0.03	< 0.005	—	170
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	168	168	0.03	< 0.005	—	170
Total	—	—	—	—	—	—	—	—	—	—	—	—	168	168	0.03	< 0.005	—	170

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	27.8	27.8	< 0.005	< 0.005	—	28.1
Total	—	—	—	—	—	—	—	—	—	—	—	—	27.8	27.8	< 0.005	< 0.005	—	28.1

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.04	0.02	0.32	0.27	< 0.005	0.02	—	0.02	0.02	—	0.02	—	387	387	0.03	< 0.005	—	388
Total	0.04	0.02	0.32	0.27	< 0.005	0.02	—	0.02	0.02	—	0.02	—	387	387	0.03	< 0.005	—	388
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.04	0.02	0.32	0.27	< 0.005	0.02	—	0.02	0.02	—	0.02	—	387	387	0.03	< 0.005	—	388
Total	0.04	0.02	0.32	0.27	< 0.005	0.02	—	0.02	0.02	—	0.02	—	387	387	0.03	< 0.005	—	388
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	64.0	64.0	0.01	< 0.005	—	64.2
Total	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	64.0	64.0	0.01	< 0.005	—	64.2

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.59	0.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.08	0.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.21	0.20	0.01	1.20	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.93	4.93	< 0.005	< 0.005	—	4.94
Total	0.88	0.86	0.01	1.20	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.93	4.93	< 0.005	< 0.005	—	4.94
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.59	0.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.08	0.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.67	0.67	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.11	0.11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural Coating	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.02	0.02	< 0.005	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.40	0.40	< 0.005	< 0.005	—	0.40
Total	0.14	0.14	< 0.005	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.40	0.40	< 0.005	< 0.005	—	0.40

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	12.2	23.1	35.3	1.26	0.03	—	75.6
Total	—	—	—	—	—	—	—	—	—	—	—	12.2	23.1	35.3	1.26	0.03	—	75.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	12.2	23.1	35.3	1.26	0.03	—	75.6
Total	—	—	—	—	—	—	—	—	—	—	—	12.2	23.1	35.3	1.26	0.03	—	75.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	2.02	3.82	5.84	0.21	< 0.005	—	12.5
Total	—	—	—	—	—	—	—	—	—	—	—	2.02	3.82	5.84	0.21	< 0.005	—	12.5

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	18.4	0.00	18.4	1.84	0.00	—	64.4
Total	—	—	—	—	—	—	—	—	—	—	—	18.4	0.00	18.4	1.84	0.00	—	64.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	18.4	0.00	18.4	1.84	0.00	—	64.4
Total	—	—	—	—	—	—	—	—	—	—	—	18.4	0.00	18.4	1.84	0.00	—	64.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	3.05	0.00	3.05	0.30	0.00	—	10.7
Total	—	—	—	—	—	—	—	—	—	—	—	3.05	0.00	3.05	0.30	0.00	—	10.7

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

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

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

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	12/1/2026	1/3/2027	5.00	24.0	—
PFAS facility	Building Construction	6/28/2027	4/1/2028	5.00	200	—
Paving	Paving	4/2/2028	6/4/2028	5.00	45.0	—
Architectural Coating	Architectural Coating	6/5/2028	7/1/2028	5.00	20.0	—
Water transmission line	Trenching	1/4/2027	3/5/2027	5.00	45.0	—
Bypass line	Trenching	3/6/2027	6/27/2027	5.00	80.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Site Preparation	Skid Steer Loaders	Diesel	Average	1.00	8.00	71.0	0.37
PFAS facility	Cranes	Diesel	Average	1.00	4.00	367	0.29
PFAS facility	Forklifts	Diesel	Average	2.00	6.00	82.0	0.20

PFAS facility	Tractors/Loaders/Back	Diesel	Average	2.00	8.00	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	4.00	6.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	7.00	81.0	0.42
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Paving	Tractors/Loaders/Back hoes	Diesel	Average	1.00	7.00	84.0	0.37
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Water transmission line	Plate Compactors	Diesel	Average	4.00	8.00	8.00	0.43
Water transmission line	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Water transmission line	Tractors/Loaders/Back hoes	Diesel	Average	2.00	8.00	84.0	0.37
Water transmission line	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Bypass line	Plate Compactors	Diesel	Average	4.00	8.00	8.00	0.43
Bypass line	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Bypass line	Tractors/Loaders/Back hoes	Diesel	Average	2.00	8.00	84.0	0.37
Bypass line	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	30.0	11.7	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.40	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT

Bypass line	—	—	—	—
Bypass line	Worker	30.0	11.7	LDA,LDT1,LDT2
Bypass line	Vendor	—	8.40	HHDT,MHDT
Bypass line	Hauling	0.00	20.0	HHDT
Bypass line	Onsite truck	—	—	HHDT
Water transmission line	—	—	—	—
Water transmission line	Worker	30.0	11.7	LDA,LDT1,LDT2
Water transmission line	Vendor	—	8.40	HHDT,MHDT
Water transmission line	Hauling	0.00	20.0	HHDT
Water transmission line	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	30.0	11.7	LDA,LDT1,LDT2
Paving	Vendor	—	8.40	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	30.0	11.7	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.40	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
PFAS facility	—	—	—	—
PFAS facility	Worker	30.0	11.7	LDA,LDT1,LDT2
PFAS facility	Vendor	4.51	8.40	HHDT,MHDT
PFAS facility	Hauling	0.00	20.0	HHDT
PFAS facility	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%

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)
Architectural Coating	0.00	0.00	41,316	13,772	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	12.0	0.00	—
Paving	0.00	0.00	0.00	0.00	0.00

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

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
2026	0.00	204	0.03	< 0.005
2027	0.00	204	0.03	< 0.005
2028	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	15.2	15.2	15.2	5,549

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

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	41,316	13,772	—

5.10.3. Landscape Equipment

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

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Light Industry	300,509	204	0.0330	0.0040	1,206,127

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Light Industry	6,369,550	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Light Industry	34.2	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

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

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

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

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

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

5.16.2. Process Boilers

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

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

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)

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	17.9	annual days of extreme heat
Extreme Precipitation	5.65	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	23.4	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	2	0	0	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	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	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	2	1	1	3
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

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	26.7

AQ-PM	22.0
AQ-DPM	42.1
Drinking Water	44.8
Lead Risk Housing	10.2
Pesticides	0.00
Toxic Releases	33.2
Traffic	61.1
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	83.2
Haz Waste Facilities/Generators	66.1
Impaired Water Bodies	23.9
Solid Waste	0.00
Sensitive Population	—
Asthma	16.7
Cardio-vascular	14.2
Low Birth Weights	13.7
Socioeconomic Factor Indicators	—
Education	4.21
Housing	6.10
Linguistic	43.3
Poverty	6.28
Unemployment	22.6

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	89.13127165
Employed	78.49351983
Median HI	94.21275504
Education	—
Bachelor's or higher	88.31002181
High school enrollment	100
Preschool enrollment	49.04401386
Transportation	—
Auto Access	58.83485179
Active commuting	73.95098165
Social	—
2-parent households	86.01308867
Voting	85.69228795
Neighborhood	—
Alcohol availability	68.86949827
Park access	81.35506224
Retail density	42.29436674
Supermarket access	86.09008084
Tree canopy	68.24072886
Housing	—
Homeownership	78.96830489
Housing habitability	90.3118183
Low-inc homeowner severe housing cost burden	91.74900552
Low-inc renter severe housing cost burden	78.7501604
Uncrowded housing	90.74810728
Health Outcomes	—
Insured adults	91.7875016
Arthritis	25.8

Asthma ER Admissions	83.2
High Blood Pressure	63.5
Cancer (excluding skin)	12.2
Asthma	72.9
Coronary Heart Disease	54.4
Chronic Obstructive Pulmonary Disease	71.2
Diagnosed Diabetes	80.8
Life Expectancy at Birth	91.0
Cognitively Disabled	82.5
Physically Disabled	76.0
Heart Attack ER Admissions	68.6
Mental Health Not Good	87.0
Chronic Kidney Disease	64.9
Obesity	79.9
Pedestrian Injuries	19.6
Physical Health Not Good	82.3
Stroke	75.8
Health Risk Behaviors	—
Binge Drinking	41.7
Current Smoker	88.4
No Leisure Time for Physical Activity	89.8
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	62.5
Elderly	28.2
English Speaking	67.9
Foreign-born	35.9

Outdoor Workers	86.6
Climate Change Adaptive Capacity	—
Impervious Surface Cover	58.5
Traffic Density	33.0
Traffic Access	60.8
Other Indices	—
Hardship	10.8
Other Decision Support	—
2016 Voting	87.3

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	5.00
Healthy Places Index Score for Project Location (b)	94.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Project schedule assumptions
Construction: Off-Road Equipment	Project specific equipment
Construction: Trips and VMT	Maximum 15 workers onsite
Operations: Refrigerants	No AC/heating
Operations: Vehicle Data	2 trips per day for facility check in

Mocho PFAS with Mitigation Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

1.2. Land Use Types

1.3. User-Selected Emission Reduction Measures by Emissions Sector

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

2.2. Construction Emissions by Year, Unmitigated

2.3. Construction Emissions by Year, Mitigated

2.4. Operations Emissions Compared Against Thresholds

2.5. Operations Emissions by Sector, Unmitigated

2.6. Operations Emissions by Sector, Mitigated

3. Construction Emissions Details

3.1. Site Preparation (2026) - Unmitigated

3.2. Site Preparation (2026) - Mitigated

3.3. Site Preparation (2027) - Unmitigated

3.4. Site Preparation (2027) - Mitigated

3.5. PFAS facility (2027) - Unmitigated

3.6. PFAS facility (2027) - Mitigated

3.7. PFAS facility (2028) - Unmitigated

3.8. PFAS facility (2028) - Mitigated

3.9. Paving (2028) - Unmitigated

3.10. Paving (2028) - Mitigated

3.11. Architectural Coating (2028) - Unmitigated

3.12. Architectural Coating (2028) - Mitigated

3.13. Water transmission line (2027) - Unmitigated

3.14. Water transmission line (2027) - Mitigated

3.15. Bypass line (2027) - Unmitigated

3.16. Bypass line (2027) - Mitigated

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

4.1.2. Mitigated

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

4.2.2. Electricity Emissions By Land Use - Mitigated

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

4.2.4. Natural Gas Emissions By Land Use - Mitigated

4.3. Area Emissions by Source

4.3.1. Unmitigated

4.3.2. Mitigated

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

4.4.2. Mitigated

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

4.5.2. Mitigated

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

4.6.2. Mitigated

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

4.7.2. Mitigated

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

4.8.2. Mitigated

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

4.9.2. Mitigated

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.2.2. Mitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.3.2. Mitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.9. Operational Mobile Sources

5.9.1. Unmitigated

5.9.2. Mitigated

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.10.4. Landscape Equipment - Mitigated

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.11.2. Mitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.12.2. Mitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.13.2. Mitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.14.2. Mitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.15.2. Mitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

5.18.2.2. Mitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Mocho PFAS with Mitigation
Construction Start Date	12/1/2026
Operational Year	2029
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.00
Precipitation (days)	14.8
Location	37.687493550821515, -121.87858957032574
County	Alameda
City	Pleasanton
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1681
EDFZ	1
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	27.5	1000sqft	0.63	27,544	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	14.6	14.6	12.7	14.6	0.02	0.49	0.28	0.74	0.45	0.07	0.51	—	2,631	2,631	0.10	0.04	1.14	2,643
Mit.	14.5	14.5	3.35	14.6	0.02	0.08	0.28	0.33	0.08	0.07	0.14	—	2,631	2,631	0.10	0.04	1.14	2,643
% Reduced	1%	1%	74%	> -0.5%	—	84%	—	56%	83%	—	73%	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.76	1.48	12.7	14.5	0.02	0.49	0.45	0.74	0.45	0.08	0.51	—	2,613	2,613	0.10	0.04	0.03	2,624
Mit.	0.48	0.44	3.37	14.5	0.02	0.08	0.45	0.48	0.08	0.08	0.14	—	2,613	2,613	0.10	0.04	0.03	2,624
% Reduced	73%	70%	73%	> -0.5%	—	84%	—	36%	83%	—	73%	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.99	0.96	6.11	7.86	0.01	0.23	0.19	0.42	0.21	0.04	0.26	—	1,508	1,508	0.06	0.02	0.31	1,517
Mit.	0.88	0.87	1.47	8.31	0.01	0.04	0.19	0.23	0.04	0.04	0.08	—	1,508	1,508	0.06	0.02	0.31	1,517
% Reduced	12%	10%	76%	-6%	—	84%	—	46%	83%	—	69%	—	—	—	—	—	—	—

Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.18	0.18	1.12	1.43	< 0.005	0.04	0.03	0.08	0.04	0.01	0.05	—	250	250	0.01	< 0.005	0.05	251
Mit.	0.16	0.16	0.27	1.52	< 0.005	0.01	0.03	0.04	0.01	0.01	0.01	—	250	250	0.01	< 0.005	0.05	251
% Reduced	12%	10%	76%	-6%	—	84%	—	46%	83%	—	69%	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	1.76	1.48	12.7	14.6	0.02	0.49	0.28	0.74	0.45	0.07	0.51	—	2,631	2,631	0.10	0.04	1.14	2,643
2028	14.6	14.6	4.49	7.92	0.01	0.15	0.28	0.43	0.14	0.07	0.21	—	1,663	1,663	0.06	0.03	1.03	1,675
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.69	0.58	4.66	8.00	0.01	0.21	0.45	0.66	0.19	0.08	0.27	—	1,340	1,340	0.05	0.02	0.02	1,347
2027	1.76	1.48	12.7	14.5	0.02	0.49	0.45	0.74	0.45	0.08	0.51	—	2,613	2,613	0.10	0.04	0.03	2,624
2028	0.65	0.54	4.51	7.81	0.01	0.15	0.28	0.43	0.14	0.07	0.21	—	1,646	1,646	0.06	0.04	0.03	1,659
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.04	0.04	0.28	0.48	< 0.005	0.01	0.03	0.04	0.01	< 0.005	0.02	—	81.4	81.4	< 0.005	< 0.005	0.02	81.8
2027	0.85	0.72	6.11	7.86	0.01	0.23	0.19	0.42	0.21	0.04	0.26	—	1,508	1,508	0.06	0.02	0.31	1,517
2028	0.99	0.96	1.37	2.26	< 0.005	0.05	0.09	0.14	0.04	0.02	0.07	—	446	446	0.02	0.01	0.14	450
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.01	0.01	0.05	0.09	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	13.5	13.5	< 0.005	< 0.005	< 0.005	13.5
2027	0.16	0.13	1.12	1.43	< 0.005	0.04	0.03	0.08	0.04	0.01	0.05	—	250	250	0.01	< 0.005	0.05	251
2028	0.18	0.18	0.25	0.41	< 0.005	0.01	0.02	0.03	0.01	< 0.005	0.01	—	73.9	73.9	< 0.005	< 0.005	0.02	74.4

2.3. Construction Emissions by Year, Mitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.48	0.45	3.35	14.6	0.02	0.08	0.28	0.33	0.08	0.07	0.14	—	2,631	2,631	0.10	0.04	1.14	2,643
2028	14.5	14.5	2.14	9.12	0.01	0.06	0.28	0.31	0.06	0.07	0.11	—	1,663	1,663	0.06	0.03	1.03	1,675
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.22	0.21	1.77	8.66	0.01	0.02	0.45	0.48	0.02	0.08	0.10	—	1,340	1,340	0.05	0.02	0.02	1,347
2027	0.48	0.44	3.37	14.5	0.02	0.08	0.45	0.48	0.08	0.08	0.14	—	2,613	2,613	0.10	0.04	0.03	2,624
2028	0.22	0.21	0.85	9.00	0.01	0.03	0.28	0.31	0.03	0.07	0.09	—	1,646	1,646	0.06	0.04	0.03	1,659
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.01	0.01	0.11	0.52	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	0.01	—	81.4	81.4	< 0.005	< 0.005	0.02	81.8
2027	0.25	0.23	1.47	8.31	0.01	0.04	0.19	0.23	0.04	0.04	0.08	—	1,508	1,508	0.06	0.02	0.31	1,517
2028	0.88	0.87	0.46	2.50	< 0.005	0.01	0.09	0.11	0.01	0.02	0.03	—	446	446	0.02	0.01	0.14	450
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	< 0.005	< 0.005	0.02	0.10	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	13.5	13.5	< 0.005	< 0.005	< 0.005	13.5
2027	0.05	0.04	0.27	1.52	< 0.005	0.01	0.03	0.04	0.01	0.01	0.01	—	250	250	0.01	< 0.005	0.05	251
2028	0.16	0.16	0.08	0.46	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	73.9	73.9	< 0.005	< 0.005	0.02	74.4

2.4. Operations Emissions Compared Against Thresholds

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

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

Unmit.	0.92	0.89	0.34	1.51	< 0.005	0.03	0.01	0.04	0.03	< 0.005	0.03	30.6	594	625	3.16	0.03	0.03	714
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.71	0.69	0.33	0.31	< 0.005	0.02	0.01	0.04	0.02	< 0.005	0.03	30.6	588	619	3.16	0.03	< 0.005	708
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.81	0.79	0.33	0.90	< 0.005	0.03	0.01	0.04	0.03	< 0.005	0.03	30.6	591	621	3.16	0.03	0.01	711
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.15	0.14	0.06	0.16	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	0.01	5.07	97.8	103	0.52	0.01	< 0.005	118

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.01	0.01	< 0.005	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	11.5	11.5	< 0.005	< 0.005	0.03	11.7
Area	0.88	0.86	0.01	1.20	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.93	4.93	< 0.005	< 0.005	—	4.94
Energy	0.04	0.02	0.32	0.27	< 0.005	0.02	—	0.02	0.02	—	0.02	—	554	554	0.06	< 0.005	—	557
Water	—	—	—	—	—	—	—	—	—	—	—	12.2	23.1	35.3	1.26	0.03	—	75.6
Waste	—	—	—	—	—	—	—	—	—	—	—	18.4	0.00	18.4	1.84	0.00	—	64.4
Total	0.92	0.89	0.34	1.51	< 0.005	0.03	0.01	0.04	0.03	< 0.005	0.03	30.6	594	625	3.16	0.03	0.03	714
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.01	0.01	< 0.005	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	10.8	10.8	< 0.005	< 0.005	< 0.005	11.0
Area	0.67	0.67	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.04	0.02	0.32	0.27	< 0.005	0.02	—	0.02	0.02	—	0.02	—	554	554	0.06	< 0.005	—	557

Water	—	—	—	—	—	—	—	—	—	—	—	12.2	23.1	35.3	1.26	0.03	—	75.6
Waste	—	—	—	—	—	—	—	—	—	—	—	18.4	0.00	18.4	1.84	0.00	—	64.4
Total	0.71	0.69	0.33	0.31	< 0.005	0.02	0.01	0.04	0.02	< 0.005	0.03	30.6	588	619	3.16	0.03	< 0.005	708
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.01	0.01	< 0.005	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	10.9	10.9	< 0.005	< 0.005	0.01	11.1
Area	0.77	0.77	< 0.005	0.59	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.43	2.43	< 0.005	< 0.005	—	2.44
Energy	0.04	0.02	0.32	0.27	< 0.005	0.02	—	0.02	0.02	—	0.02	—	554	554	0.06	< 0.005	—	557
Water	—	—	—	—	—	—	—	—	—	—	—	12.2	23.1	35.3	1.26	0.03	—	75.6
Waste	—	—	—	—	—	—	—	—	—	—	—	18.4	0.00	18.4	1.84	0.00	—	64.4
Total	0.81	0.79	0.33	0.90	< 0.005	0.03	0.01	0.04	0.03	< 0.005	0.03	30.6	591	621	3.16	0.03	0.01	711
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.80	1.80	< 0.005	< 0.005	< 0.005	1.83
Area	0.14	0.14	< 0.005	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.40	0.40	< 0.005	< 0.005	—	0.40
Energy	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	91.8	91.8	0.01	< 0.005	—	92.3
Water	—	—	—	—	—	—	—	—	—	—	—	2.02	3.82	5.84	0.21	< 0.005	—	12.5
Waste	—	—	—	—	—	—	—	—	—	—	—	3.05	0.00	3.05	0.30	0.00	—	10.7
Total	0.15	0.14	0.06	0.16	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	0.01	5.07	97.8	103	0.52	0.01	< 0.005	118

2.6. Operations Emissions by Sector, Mitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.01	0.01	< 0.005	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	11.5	11.5	< 0.005	< 0.005	0.03	11.7
Area	0.88	0.86	0.01	1.20	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.93	4.93	< 0.005	< 0.005	—	4.94
Energy	0.04	0.02	0.32	0.27	< 0.005	0.02	—	0.02	0.02	—	0.02	—	554	554	0.06	< 0.005	—	557
Water	—	—	—	—	—	—	—	—	—	—	—	12.2	23.1	35.3	1.26	0.03	—	75.6

Waste	—	—	—	—	—	—	—	—	—	—	—	18.4	0.00	18.4	1.84	0.00	—	64.4
Total	0.92	0.89	0.34	1.51	< 0.005	0.03	0.01	0.04	0.03	< 0.005	0.03	30.6	594	625	3.16	0.03	0.03	714
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.01	0.01	< 0.005	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	10.8	10.8	< 0.005	< 0.005	< 0.005	11.0
Area	0.67	0.67	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.04	0.02	0.32	0.27	< 0.005	0.02	—	0.02	0.02	—	0.02	—	554	554	0.06	< 0.005	—	557
Water	—	—	—	—	—	—	—	—	—	—	—	12.2	23.1	35.3	1.26	0.03	—	75.6
Waste	—	—	—	—	—	—	—	—	—	—	—	18.4	0.00	18.4	1.84	0.00	—	64.4
Total	0.71	0.69	0.33	0.31	< 0.005	0.02	0.01	0.04	0.02	< 0.005	0.03	30.6	588	619	3.16	0.03	< 0.005	708
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.01	0.01	< 0.005	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	10.9	10.9	< 0.005	< 0.005	0.01	11.1
Area	0.77	0.77	< 0.005	0.59	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.43	2.43	< 0.005	< 0.005	—	2.44
Energy	0.04	0.02	0.32	0.27	< 0.005	0.02	—	0.02	0.02	—	0.02	—	554	554	0.06	< 0.005	—	557
Water	—	—	—	—	—	—	—	—	—	—	—	12.2	23.1	35.3	1.26	0.03	—	75.6
Waste	—	—	—	—	—	—	—	—	—	—	—	18.4	0.00	18.4	1.84	0.00	—	64.4
Total	0.81	0.79	0.33	0.90	< 0.005	0.03	0.01	0.04	0.03	< 0.005	0.03	30.6	591	621	3.16	0.03	0.01	711
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.80	1.80	< 0.005	< 0.005	< 0.005	1.83
Area	0.14	0.14	< 0.005	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.40	0.40	< 0.005	< 0.005	—	0.40
Energy	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	91.8	91.8	0.01	< 0.005	—	92.3
Water	—	—	—	—	—	—	—	—	—	—	—	2.02	3.82	5.84	0.21	< 0.005	—	12.5
Waste	—	—	—	—	—	—	—	—	—	—	—	3.05	0.00	3.05	0.30	0.00	—	10.7
Total	0.15	0.14	0.06	0.16	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	0.01	5.07	97.8	103	0.52	0.01	< 0.005	118

3. Construction Emissions Details

3.1. Site Preparation (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.50	4.58	7.05	0.01	0.21	—	0.21	0.19	—	0.19	—	1,103	1,103	0.04	0.01	—	1,107
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.28	0.43	< 0.005	0.01	—	0.01	0.01	—	0.01	—	66.9	66.9	< 0.005	< 0.005	—	67.2
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.01	0.01	0.05	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.1	11.1	< 0.005	< 0.005	—	11.1
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.08	0.95	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	236	236	0.01	0.01	0.02	240
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.4	14.4	< 0.005	< 0.005	0.02	14.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.39	2.39	< 0.005	< 0.005	< 0.005	2.43
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.2. Site Preparation (2026) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.12	1.69	7.70	0.01	0.02	—	0.02	0.02	—	0.02	—	1,103	1,103	0.04	0.01	—	1,107
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.47	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	66.9	66.9	< 0.005	< 0.005	—	67.2
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.1	11.1	< 0.005	< 0.005	—	11.1

Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.08	0.95	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	236	236	0.01	0.01	0.02	240
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.4	14.4	< 0.005	< 0.005	0.02	14.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.39	2.39	< 0.005	< 0.005	< 0.005	2.43
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Site Preparation (2027) - Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.56	0.47	4.25	7.06	0.01	0.19	—	0.19	0.17	—	0.17	—	1,104	1,104	0.04	0.01	—	1,108
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.48	6.48	< 0.005	< 0.005	—	6.50
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.07	1.07	< 0.005	< 0.005	—	1.08
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.08	0.90	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	232	232	0.01	0.01	0.02	235
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.37	1.37	< 0.005	< 0.005	< 0.005	1.39
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.23	0.23	< 0.005	< 0.005	< 0.005	0.23
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Site Preparation (2027) - Mitigated

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

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

Off-Road Equipment	0.12	0.12	1.69	7.70	0.01	0.02	—	0.02	0.02	—	0.02	—	1,104	1,104	0.04	0.01	—	1,108
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.48	6.48	< 0.005	< 0.005	—	6.50
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.07	1.07	< 0.005	< 0.005	—	1.08
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.08	0.90	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	232	232	0.01	0.01	0.02	235
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.37	1.37	< 0.005	< 0.005	< 0.005	1.39
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.23	0.23	< 0.005	< 0.005	< 0.005	0.23
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. PFAS facility (2027) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.57	0.48	4.56	6.90	0.01	0.17	—	0.17	0.15	—	0.15	—	1,304	1,304	0.05	0.01	—	1,309
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.57	0.48	4.56	6.90	0.01	0.17	—	0.17	0.15	—	0.15	—	1,304	1,304	0.05	0.01	—	1,309
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.17	1.67	2.52	< 0.005	0.06	—	0.06	0.06	—	0.06	—	477	477	0.02	< 0.005	—	479
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.30	0.46	< 0.005	0.01	—	0.01	0.01	—	0.01	—	79.0	79.0	< 0.005	< 0.005	—	79.3
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.06	1.01	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	250	250	< 0.005	0.01	0.85	254
Vendor	0.01	< 0.005	0.14	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	116	116	< 0.005	0.02	0.29	121
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.08	0.90	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	232	232	0.01	0.01	0.02	235
Vendor	0.01	< 0.005	0.14	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	116	116	< 0.005	0.02	0.01	121
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.03	0.03	0.02	0.32	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	85.5	85.5	< 0.005	< 0.005	0.13	86.7
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	42.4	42.4	< 0.005	0.01	0.05	44.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.06	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	14.2	14.2	< 0.005	< 0.005	0.02	14.4
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.02	7.02	< 0.005	< 0.005	0.01	7.35
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.6. PFAS facility (2027) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.12	0.64	8.10	0.01	0.02	—	0.02	0.02	—	0.02	—	1,304	1,304	0.05	0.01	—	1,309
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.12	0.64	8.10	0.01	0.02	—	0.02	0.02	—	0.02	—	1,304	1,304	0.05	0.01	—	1,309
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	0.05	0.05	0.23	2.96	< 0.005	0.01	—	0.01	0.01	—	0.01	—	477	477	0.02	< 0.005	—	479
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.04	0.54	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	79.0	79.0	< 0.005	< 0.005	—	79.3
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.06	1.01	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	250	250	< 0.005	0.01	0.85	254
Vendor	0.01	< 0.005	0.14	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	116	116	< 0.005	0.02	0.29	121
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.08	0.90	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	232	232	0.01	0.01	0.02	235
Vendor	0.01	< 0.005	0.14	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	116	116	< 0.005	0.02	0.01	121
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.32	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	85.5	85.5	< 0.005	< 0.005	0.13	86.7
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	42.4	42.4	< 0.005	0.01	0.05	44.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.06	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	14.2	14.2	< 0.005	< 0.005	0.02	14.4
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.02	7.02	< 0.005	< 0.005	0.01	7.35

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. PFAS facility (2028) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.55	0.46	4.30	6.91	0.01	0.15	—	0.15	0.14	—	0.14	—	1,305	1,305	0.05	0.01	—	1,309
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.55	0.46	4.30	6.91	0.01	0.15	—	0.15	0.14	—	0.14	—	1,305	1,305	0.05	0.01	—	1,309
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.08	0.77	1.24	< 0.005	0.03	—	0.03	0.02	—	0.02	—	235	235	0.01	< 0.005	—	236
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	0.02	0.02	0.14	0.23	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	38.9	38.9	< 0.005	< 0.005	—	39.0
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.06	0.96	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	246	246	< 0.005	< 0.005	0.76	247
Vendor	0.01	< 0.005	0.13	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	113	113	< 0.005	0.02	0.27	118
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.07	0.84	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	228	228	0.01	0.01	0.02	231
Vendor	0.01	< 0.005	0.14	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	113	113	< 0.005	0.02	0.01	118
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.01	0.15	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	41.3	41.3	< 0.005	< 0.005	0.06	41.9
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	20.4	20.4	< 0.005	< 0.005	0.02	21.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.84	6.84	< 0.005	< 0.005	0.01	6.94
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.37	3.37	< 0.005	< 0.005	< 0.005	3.53
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.8. PFAS facility (2028) - Mitigated

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

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

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.12	0.64	8.10	0.01	0.02	—	0.02	0.02	—	0.02	—	1,305	1,305	0.05	0.01	—	1,309
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.12	0.64	8.10	0.01	0.02	—	0.02	0.02	—	0.02	—	1,305	1,305	0.05	0.01	—	1,309
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.12	1.46	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	235	235	0.01	< 0.005	—	236
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.27	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	38.9	38.9	< 0.005	< 0.005	—	39.0
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.06	0.96	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	246	246	< 0.005	< 0.005	0.76	247
Vendor	0.01	< 0.005	0.13	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	113	113	< 0.005	0.02	0.27	118
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.07	0.84	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	228	228	0.01	0.01	0.02	231
Vendor	0.01	< 0.005	0.14	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	113	113	< 0.005	0.02	0.01	118
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.01	0.15	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	41.3	41.3	< 0.005	< 0.005	0.06	41.9
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	20.4	20.4	< 0.005	< 0.005	0.02	21.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.84	6.84	< 0.005	< 0.005	0.01	6.94
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.37	3.37	< 0.005	< 0.005	< 0.005	3.53
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Paving (2028) - Unmitigated

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

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

Off-Road Equipm	0.56	0.47	4.05	5.31	0.01	0.15	—	0.15	0.14	—	0.14	—	823	823	0.03	0.01	—	826
Paving	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	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.50	0.65	< 0.005	0.02	—	0.02	0.02	—	0.02	—	101	101	< 0.005	< 0.005	—	102
Paving	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	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.09	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.8	16.8	< 0.005	< 0.005	—	16.9
Paving	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	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.06	0.96	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	246	246	< 0.005	< 0.005	0.76	247
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	28.3	28.3	< 0.005	< 0.005	0.04	28.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.68	4.68	< 0.005	< 0.005	0.01	4.75
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Paving (2028) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.27	0.23	2.09	5.55	0.01	0.06	—	0.06	0.06	—	0.06	—	823	823	0.03	0.01	—	826
Paving	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	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.03	0.03	0.26	0.68	< 0.005	0.01	—	0.01	0.01	—	0.01	—	101	101	< 0.005	< 0.005	—	102
Paving	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	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.8	16.8	< 0.005	< 0.005	—	16.9
Paving	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	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.06	0.96	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	246	246	< 0.005	< 0.005	0.76	247
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	28.3	28.3	< 0.005	< 0.005	0.04	28.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.68	4.68	< 0.005	< 0.005	0.01	4.75
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Architectural Coating (2028) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.81	1.12	< 0.005	0.02	—	0.02	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	14.4	14.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.04	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.32	7.32	< 0.005	< 0.005	—	7.34
Architectural Coatings	0.79	0.79	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.21	1.21	< 0.005	< 0.005	—	1.22
Architectural Coatings	0.14	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.06	0.96	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	246	246	< 0.005	< 0.005	0.76	247
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.6	12.6	< 0.005	< 0.005	0.02	12.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.08	2.08	< 0.005	< 0.005	< 0.005	2.11
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Architectural Coating (2028) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.65	0.96	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	14.4	14.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.32	7.32	< 0.005	< 0.005	—	7.34
Architectural Coatings	0.79	0.79	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.21	1.21	< 0.005	< 0.005	—	1.22

Architectural Coating	0.14	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.06	0.96	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	246	246	< 0.005	< 0.005	0.76	247
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.6	12.6	< 0.005	< 0.005	0.02	12.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.08	2.08	< 0.005	< 0.005	< 0.005	2.11
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Water transmission line (2027) - Unmitigated

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

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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.67	1.40	12.6	13.6	0.02	0.49	—	0.49	0.45	—	0.45	—	2,381	2,381	0.10	0.02	—	2,389
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.17	1.56	1.67	< 0.005	0.06	—	0.06	0.06	—	0.06	—	294	294	0.01	< 0.005	—	295
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.28	0.31	< 0.005	0.01	—	0.01	0.01	—	0.01	—	48.6	48.6	< 0.005	< 0.005	—	48.8
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.08	0.90	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	232	232	0.01	0.01	0.02	235
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	28.8	28.8	< 0.005	< 0.005	0.05	29.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.77	4.77	< 0.005	< 0.005	0.01	4.84
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.14. Water transmission line (2027) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	0.36	3.29	13.6	0.02	0.08	—	0.08	0.08	—	0.08	—	2,381	2,381	0.10	0.02	—	2,389
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.41	1.68	< 0.005	0.01	—	0.01	0.01	—	0.01	—	294	294	0.01	< 0.005	—	295
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.01	0.01	0.07	0.31	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	48.6	48.6	< 0.005	< 0.005	—	48.8
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.08	0.90	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	232	232	0.01	0.01	0.02	235
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	28.8	28.8	< 0.005	< 0.005	0.05	29.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.77	4.77	< 0.005	< 0.005	0.01	4.84
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Bypass line (2027) - Unmitigated

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

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

Off-Road Equipment	1.67	1.40	12.6	13.6	0.02	0.49	—	0.49	0.45	—	0.45	—	2,381	2,381	0.10	0.02	—	2,389
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.67	1.40	12.6	13.6	0.02	0.49	—	0.49	0.45	—	0.45	—	2,381	2,381	0.10	0.02	—	2,389
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	0.31	2.76	2.98	0.01	0.11	—	0.11	0.10	—	0.10	—	522	522	0.02	< 0.005	—	524
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.50	0.54	< 0.005	0.02	—	0.02	0.02	—	0.02	—	86.4	86.4	< 0.005	< 0.005	—	86.7
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.06	1.01	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	250	250	< 0.005	0.01	0.85	254
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.08	0.90	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	232	232	0.01	0.01	0.02	235
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.19	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	51.2	51.2	< 0.005	< 0.005	0.08	52.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.48	8.48	< 0.005	< 0.005	0.01	8.60
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.16. Bypass line (2027) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	0.36	3.29	13.6	0.02	0.08	—	0.08	0.08	—	0.08	—	2,381	2,381	0.10	0.02	—	2,389
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.39	0.36	3.29	13.6	0.02	0.08	—	0.08	0.08	—	0.08	—	2,381	2,381	0.10	0.02	—	2,389
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.72	2.98	0.01	0.02	—	0.02	0.02	—	0.02	—	522	522	0.02	< 0.005	—	524
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.13	0.54	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	86.4	86.4	< 0.005	< 0.005	—	86.7
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.06	1.01	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	250	250	< 0.005	0.01	0.85	254
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.08	0.90	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	232	232	0.01	0.01	0.02	235
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.02	0.02	0.01	0.19	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	51.2	51.2	< 0.005	< 0.005	0.08	52.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.48	8.48	< 0.005	< 0.005	0.01	8.60
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.01	0.01	< 0.005	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	11.5	11.5	< 0.005	< 0.005	0.03	11.7
Total	0.01	0.01	< 0.005	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	11.5	11.5	< 0.005	< 0.005	0.03	11.7
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.01	0.01	< 0.005	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	10.8	10.8	< 0.005	< 0.005	< 0.005	11.0
Total	0.01	0.01	< 0.005	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	10.8	10.8	< 0.005	< 0.005	< 0.005	11.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Light Industry	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.80	1.80	< 0.005	< 0.005	< 0.005	1.83
Total	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.80	1.80	< 0.005	< 0.005	< 0.005	1.83

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.01	0.01	< 0.005	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	11.5	11.5	< 0.005	< 0.005	0.03	11.7
Total	0.01	0.01	< 0.005	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	11.5	11.5	< 0.005	< 0.005	0.03	11.7
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.01	0.01	< 0.005	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	10.8	10.8	< 0.005	< 0.005	< 0.005	11.0
Total	0.01	0.01	< 0.005	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	10.8	10.8	< 0.005	< 0.005	< 0.005	11.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.80	1.80	< 0.005	< 0.005	< 0.005	1.83
Total	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.80	1.80	< 0.005	< 0.005	< 0.005	1.83

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	168	168	0.03	< 0.005	—	170
Total	—	—	—	—	—	—	—	—	—	—	—	—	168	168	0.03	< 0.005	—	170
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	168	168	0.03	< 0.005	—	170
Total	—	—	—	—	—	—	—	—	—	—	—	—	168	168	0.03	< 0.005	—	170
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	27.8	27.8	< 0.005	< 0.005	—	28.1
Total	—	—	—	—	—	—	—	—	—	—	—	—	27.8	27.8	< 0.005	< 0.005	—	28.1

4.2.2. Electricity Emissions By Land Use - Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	168	168	0.03	< 0.005	—	170
Total	—	—	—	—	—	—	—	—	—	—	—	—	168	168	0.03	< 0.005	—	170

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	168	168	0.03	< 0.005	—	170
Total	—	—	—	—	—	—	—	—	—	—	—	—	168	168	0.03	< 0.005	—	170
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	27.8	27.8	< 0.005	< 0.005	—	28.1
Total	—	—	—	—	—	—	—	—	—	—	—	—	27.8	27.8	< 0.005	< 0.005	—	28.1

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.04	0.02	0.32	0.27	< 0.005	0.02	—	0.02	0.02	—	0.02	—	387	387	0.03	< 0.005	—	388
Total	0.04	0.02	0.32	0.27	< 0.005	0.02	—	0.02	0.02	—	0.02	—	387	387	0.03	< 0.005	—	388
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.04	0.02	0.32	0.27	< 0.005	0.02	—	0.02	0.02	—	0.02	—	387	387	0.03	< 0.005	—	388
Total	0.04	0.02	0.32	0.27	< 0.005	0.02	—	0.02	0.02	—	0.02	—	387	387	0.03	< 0.005	—	388
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Light Industry	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	64.0	64.0	0.01	< 0.005	—	64.2
Total	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	64.0	64.0	0.01	< 0.005	—	64.2

4.2.4. Natural Gas Emissions By Land Use - Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.04	0.02	0.32	0.27	< 0.005	0.02	—	0.02	0.02	—	0.02	—	387	387	0.03	< 0.005	—	388
Total	0.04	0.02	0.32	0.27	< 0.005	0.02	—	0.02	0.02	—	0.02	—	387	387	0.03	< 0.005	—	388
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.04	0.02	0.32	0.27	< 0.005	0.02	—	0.02	0.02	—	0.02	—	387	387	0.03	< 0.005	—	388
Total	0.04	0.02	0.32	0.27	< 0.005	0.02	—	0.02	0.02	—	0.02	—	387	387	0.03	< 0.005	—	388
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	64.0	64.0	0.01	< 0.005	—	64.2
Total	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	64.0	64.0	0.01	< 0.005	—	64.2

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.59	0.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.08	0.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.21	0.20	0.01	1.20	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.93	4.93	< 0.005	< 0.005	—	4.94
Total	0.88	0.86	0.01	1.20	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.93	4.93	< 0.005	< 0.005	—	4.94
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.59	0.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.08	0.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.67	0.67	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.11	0.11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Landsca Equipment	0.02	0.02	< 0.005	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.40	0.40	< 0.005	< 0.005	—	0.40
Total	0.14	0.14	< 0.005	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.40	0.40	< 0.005	< 0.005	—	0.40

4.3.2. Mitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.59	0.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.08	0.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.21	0.20	0.01	1.20	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.93	4.93	< 0.005	< 0.005	—	4.94
Total	0.88	0.86	0.01	1.20	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.93	4.93	< 0.005	< 0.005	—	4.94
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.59	0.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.08	0.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.67	0.67	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Consum Products	0.11	0.11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.02	0.02	< 0.005	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.40	0.40	< 0.005	< 0.005	—	0.40
Total	0.14	0.14	< 0.005	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.40	0.40	< 0.005	< 0.005	—	0.40

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	12.2	23.1	35.3	1.26	0.03	—	75.6
Total	—	—	—	—	—	—	—	—	—	—	—	12.2	23.1	35.3	1.26	0.03	—	75.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	12.2	23.1	35.3	1.26	0.03	—	75.6
Total	—	—	—	—	—	—	—	—	—	—	—	12.2	23.1	35.3	1.26	0.03	—	75.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Light Industry	—	—	—	—	—	—	—	—	—	—	—	2.02	3.82	5.84	0.21	< 0.005	—	12.5
Total	—	—	—	—	—	—	—	—	—	—	—	2.02	3.82	5.84	0.21	< 0.005	—	12.5

4.4.2. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	12.2	23.1	35.3	1.26	0.03	—	75.6
Total	—	—	—	—	—	—	—	—	—	—	—	12.2	23.1	35.3	1.26	0.03	—	75.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	12.2	23.1	35.3	1.26	0.03	—	75.6
Total	—	—	—	—	—	—	—	—	—	—	—	12.2	23.1	35.3	1.26	0.03	—	75.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	2.02	3.82	5.84	0.21	< 0.005	—	12.5
Total	—	—	—	—	—	—	—	—	—	—	—	2.02	3.82	5.84	0.21	< 0.005	—	12.5

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	18.4	0.00	18.4	1.84	0.00	—	64.4
Total	—	—	—	—	—	—	—	—	—	—	—	18.4	0.00	18.4	1.84	0.00	—	64.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	18.4	0.00	18.4	1.84	0.00	—	64.4
Total	—	—	—	—	—	—	—	—	—	—	—	18.4	0.00	18.4	1.84	0.00	—	64.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	3.05	0.00	3.05	0.30	0.00	—	10.7
Total	—	—	—	—	—	—	—	—	—	—	—	3.05	0.00	3.05	0.30	0.00	—	10.7

4.5.2. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	18.4	0.00	18.4	1.84	0.00	—	64.4
Total	—	—	—	—	—	—	—	—	—	—	—	18.4	0.00	18.4	1.84	0.00	—	64.4

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	18.4	0.00	18.4	1.84	0.00	—	64.4
Total	—	—	—	—	—	—	—	—	—	—	—	18.4	0.00	18.4	1.84	0.00	—	64.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	3.05	0.00	3.05	0.30	0.00	—	10.7
Total	—	—	—	—	—	—	—	—	—	—	—	3.05	0.00	3.05	0.30	0.00	—	10.7

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

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

4.6.2. Mitigated

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

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

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

4.7.2. Mitigated

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

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

4.8.2. Mitigated

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

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

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

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

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

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

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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

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

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

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

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

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

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

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

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

Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Site Preparation	Site Preparation	12/1/2026	1/3/2027	5.00	24.0	—
PFAS facility	Building Construction	6/28/2027	4/1/2028	5.00	200	—
Paving	Paving	4/2/2028	6/4/2028	5.00	45.0	—
Architectural Coating	Architectural Coating	6/5/2028	7/1/2028	5.00	20.0	—
Water transmission line	Trenching	1/4/2027	3/5/2027	5.00	45.0	—
Bypass line	Trenching	3/6/2027	6/27/2027	5.00	80.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Site Preparation	Tractors/Loaders/Back hoes	Diesel	Average	1.00	8.00	84.0	0.37
Site Preparation	Skid Steer Loaders	Diesel	Average	1.00	8.00	71.0	0.37
PFAS facility	Cranes	Diesel	Average	1.00	4.00	367	0.29
PFAS facility	Forklifts	Diesel	Average	2.00	6.00	82.0	0.20
PFAS facility	Tractors/Loaders/Back hoes	Diesel	Average	2.00	8.00	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	4.00	6.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	7.00	81.0	0.42
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Paving	Tractors/Loaders/Back hoes	Diesel	Average	1.00	7.00	84.0	0.37

Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Water transmission line	Plate Compactors	Diesel	Average	4.00	8.00	8.00	0.43
Water transmission line	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Water transmission line	Tractors/Loaders/Back hoes	Diesel	Average	2.00	8.00	84.0	0.37
Water transmission line	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Bypass line	Plate Compactors	Diesel	Average	4.00	8.00	8.00	0.43
Bypass line	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Bypass line	Tractors/Loaders/Back hoes	Diesel	Average	2.00	8.00	84.0	0.37
Bypass line	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Graders	Diesel	Tier 4 Final	1.00	8.00	148	0.41
Site Preparation	Tractors/Loaders/Back hoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Site Preparation	Skid Steer Loaders	Diesel	Tier 4 Final	1.00	8.00	71.0	0.37
PFAS facility	Cranes	Diesel	Tier 4 Final	1.00	4.00	367	0.29
PFAS facility	Forklifts	Diesel	Tier 4 Final	2.00	6.00	82.0	0.20
PFAS facility	Tractors/Loaders/Back hoes	Diesel	Tier 4 Final	2.00	8.00	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	4.00	6.00	10.0	0.56
Paving	Pavers	Diesel	Tier 4 Final	1.00	7.00	81.0	0.42
Paving	Rollers	Diesel	Tier 4 Final	1.00	7.00	36.0	0.38
Paving	Tractors/Loaders/Back hoes	Diesel	Tier 4 Final	1.00	7.00	84.0	0.37

Architectural Coating	Air Compressors	Diesel	Tier 4 Final	1.00	6.00	37.0	0.48
Water transmission line	Plate Compactors	Diesel	Average	4.00	8.00	8.00	0.43
Water transmission line	Excavators	Diesel	Tier 4 Final	2.00	8.00	36.0	0.38
Water transmission line	Tractors/Loaders/Back hoes	Diesel	Tier 4 Final	2.00	8.00	84.0	0.37
Water transmission line	Rubber Tired Dozers	Diesel	Tier 4 Final	1.00	8.00	367	0.40
Bypass line	Plate Compactors	Diesel	Average	4.00	8.00	8.00	0.43
Bypass line	Excavators	Diesel	Tier 4 Final	2.00	8.00	36.0	0.38
Bypass line	Tractors/Loaders/Back hoes	Diesel	Tier 4 Final	2.00	8.00	84.0	0.37
Bypass line	Rubber Tired Dozers	Diesel	Tier 4 Final	1.00	8.00	367	0.40

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	30.0	11.7	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.40	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Bypass line	—	—	—	—
Bypass line	Worker	30.0	11.7	LDA,LDT1,LDT2
Bypass line	Vendor	—	8.40	HHDT,MHDT
Bypass line	Hauling	0.00	20.0	HHDT
Bypass line	Onsite truck	—	—	HHDT
Water transmission line	—	—	—	—

Water transmission line	Worker	30.0	11.7	LDA,LDT1,LDT2
Water transmission line	Vendor	—	8.40	HHDT,MHDT
Water transmission line	Hauling	0.00	20.0	HHDT
Water transmission line	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	30.0	11.7	LDA,LDT1,LDT2
Paving	Vendor	—	8.40	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	30.0	11.7	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.40	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
PFAS facility	—	—	—	—
PFAS facility	Worker	30.0	11.7	LDA,LDT1,LDT2
PFAS facility	Vendor	4.51	8.40	HHDT,MHDT
PFAS facility	Hauling	0.00	20.0	HHDT
PFAS facility	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	30.0	11.7	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.40	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Bypass line	—	—	—	—

Bypass line	Worker	30.0	11.7	LDA,LDT1,LDT2
Bypass line	Vendor	—	8.40	HHDT,MHDT
Bypass line	Hauling	0.00	20.0	HHDT
Bypass line	Onsite truck	—	—	HHDT
Water transmission line	—	—	—	—
Water transmission line	Worker	30.0	11.7	LDA,LDT1,LDT2
Water transmission line	Vendor	—	8.40	HHDT,MHDT
Water transmission line	Hauling	0.00	20.0	HHDT
Water transmission line	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	30.0	11.7	LDA,LDT1,LDT2
Paving	Vendor	—	8.40	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	30.0	11.7	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.40	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
PFAS facility	—	—	—	—
PFAS facility	Worker	30.0	11.7	LDA,LDT1,LDT2
PFAS facility	Vendor	4.51	8.40	HHDT,MHDT
PFAS facility	Hauling	0.00	20.0	HHDT
PFAS facility	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%

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)
Architectural Coating	0.00	0.00	41,316	13,772	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	12.0	0.00	—
Paving	0.00	0.00	0.00	0.00	0.00

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

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

2026	0.00	204	0.03	< 0.005
2027	0.00	204	0.03	< 0.005
2028	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	15.2	15.2	15.2	5,549

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	15.2	15.2	15.2	5,549

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	41,316	13,772	—

5.10.3. Landscape Equipment

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

5.10.4. Landscape Equipment - Mitigated

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

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Light Industry	300,509	204	0.0330	0.0040	1,206,127

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	300,509	204	0.0330	0.0040	1,206,127

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Light Industry	6,369,550	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Light Industry	6,369,550	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Light Industry	34.2	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Light Industry	34.2	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

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

5.14.2. Mitigated

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

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

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

5.15.2. Mitigated

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

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

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

5.16.2. Process Boilers

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

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

5.18.2.2. Mitigated

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

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	17.9	annual days of extreme heat
Extreme Precipitation	5.65	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	23.4	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	2	0	0	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	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	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	2	1	1	3
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A

Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

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	26.7
AQ-PM	22.0
AQ-DPM	42.1
Drinking Water	44.8
Lead Risk Housing	10.2
Pesticides	0.00
Toxic Releases	33.2
Traffic	61.1
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	83.2
Haz Waste Facilities/Generators	66.1
Impaired Water Bodies	23.9
Solid Waste	0.00

Sensitive Population	—
Asthma	16.7
Cardio-vascular	14.2
Low Birth Weights	13.7
Socioeconomic Factor Indicators	—
Education	4.21
Housing	6.10
Linguistic	43.3
Poverty	6.28
Unemployment	22.6

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	89.13127165
Employed	78.49351983
Median HI	94.21275504
Education	—
Bachelor's or higher	88.31002181
High school enrollment	100
Preschool enrollment	49.04401386
Transportation	—
Auto Access	58.83485179
Active commuting	73.95098165
Social	—
2-parent households	86.01308867
Voting	85.69228795

Neighborhood	—
Alcohol availability	68.86949827
Park access	81.35506224
Retail density	42.29436674
Supermarket access	86.09008084
Tree canopy	68.24072886
Housing	—
Homeownership	78.96830489
Housing habitability	90.3118183
Low-inc homeowner severe housing cost burden	91.74900552
Low-inc renter severe housing cost burden	78.7501604
Uncrowded housing	90.74810728
Health Outcomes	—
Insured adults	91.7875016
Arthritis	25.8
Asthma ER Admissions	83.2
High Blood Pressure	63.5
Cancer (excluding skin)	12.2
Asthma	72.9
Coronary Heart Disease	54.4
Chronic Obstructive Pulmonary Disease	71.2
Diagnosed Diabetes	80.8
Life Expectancy at Birth	91.0
Cognitively Disabled	82.5
Physically Disabled	76.0
Heart Attack ER Admissions	68.6
Mental Health Not Good	87.0
Chronic Kidney Disease	64.9

Obesity	79.9
Pedestrian Injuries	19.6
Physical Health Not Good	82.3
Stroke	75.8
Health Risk Behaviors	—
Binge Drinking	41.7
Current Smoker	88.4
No Leisure Time for Physical Activity	89.8
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	62.5
Elderly	28.2
English Speaking	67.9
Foreign-born	35.9
Outdoor Workers	86.6
Climate Change Adaptive Capacity	—
Impervious Surface Cover	58.5
Traffic Density	33.0
Traffic Access	60.8
Other Indices	—
Hardship	10.8
Other Decision Support	—
2016 Voting	87.3

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	5.00

Healthy Places Index Score for Project Location (b)	94.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Project schedule assumptions
Construction: Off-Road Equipment	Project specific equipment
Construction: Trips and VMT	Maximum 15 workers onsite
Operations: Refrigerants	No AC/heating
Operations: Vehicle Data	2 trips per day for facility check in

Appendix B

Special Status Species List

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To: 03/05/2025 00:13:52 UTC
Project Code: 2025-0064116
Project Name: Mocho PFAS

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

To Whom It May Concern:

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

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

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

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

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

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

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

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

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

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

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

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

This species list is provided by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

PROJECT SUMMARY

Project Code: 2025-0064116
Project Name: Mocho PFAS
Project Type: Wastewater Facility - New Construction
Project Description: Water purification facility
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@37.6883316,-121.87933362713211,14z

Counties: Alameda County, California

ENDANGERED SPECIES ACT SPECIES

There is a total of 11 threatened, endangered, or candidate species on this species list.

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

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

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

---

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

MAMMALS

NAME	STATUS
San Joaquin Kit Fox *Vulpes macrotis mutica* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2873	Endangered

BIRDS

NAME	STATUS
California Condor *Gymnogyps californianus* Population: Wherever found, except where listed as an experimental population There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8193	Endangered
California Least Tern *Sternula antillarum browni* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8104	Endangered

REPTILES

NAME	STATUS
Alameda Whipsnake (=striped Racer) *Masticophis lateralis euryxanthus* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5524	Threatened
Northwestern Pond Turtle *Actinemys marmorata* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1111	Proposed Threatened

AMPHIBIANS

NAME	STATUS
California Red-legged Frog *Rana draytonii* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander *Ambystoma californiense* Population: U.S.A. (Central CA DPS) There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2076	Threatened
Foothill Yellow-legged Frog *Rana boylii* Population: Central Coast Distinct Population Segment (Central Coast DPS) There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5133	Threatened
Western Spadefoot *Spea hammondii* No critical habitat has been designated for this species.	Proposed Threatened

NAME	STATUS
Species profile: https://ecos.fws.gov/ecp/species/5425	

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

CRUSTACEANS

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

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: ESA
Name: Liza Ryan
Address: 775 Baywood Dr. Suite 100
City: Petaluma
State: CA
Zip: 94954
Email lizahr@gmail.com
Phone: 7072850583

Selected Elements by Element Code

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Dublin (3712168) OR Livermore (3712167))

Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
AAAAA01181	***Ambystoma californiense pop. 1*** California tiger salamander - central California DPS	Threatened	Threatened	G3T3	S3	WL
AAABH01022	***Rana draytonii*** California red-legged frog	Threatened	None	G2G3	S2S3	SSC
AAABH01054	***Rana boylii pop. 4*** foothill yellow-legged frog - central coast DPS	Threatened	Endangered	G3T2	S2	
ABNKC06010	***Elanus leucurus*** white-tailed kite	None	None	G5	S3S4	FP
ABNKC19120	***Buteo regalis*** ferruginous hawk	None	None	G4	S3S4	WL
ABNSB10010	***Athene cunicularia*** burrowing owl	None	Candidate Endangered	G4	S2	SSC
ABPAT02011	***Eremophila alpestris actia*** California horned lark	None	None	G5T4Q	S4	WL
ABPBXB0020	***Agelaius tricolor*** tricolored blackbird	None	Threatened	G1G2	S2	SSC
AMACC01020	***Myotis yumanensis*** Yuma myotis	None	None	G5	S4	
AMACC05032	***Lasiurus cinereus*** hoary bat	None	None	G3G4	S4	
AMACC08010	***Corynorhinus townsendii*** Townsend's big-eared bat	None	None	G4	S2	SSC
AMACC10010	***Antrozous pallidus*** pallid bat	None	None	G4	S3	SSC
AMAJA03041	***Vulpes macrotis mutica*** San Joaquin kit fox	Endangered	Threatened	G4T2	S3	
AMAJF04010	***Taxidea taxus*** American badger	None	None	G5	S3	SSC
ARAAD02031	***Actinemys marmorata*** northwestern pond turtle	Proposed Threatened	None	G2	SNR	SSC
ARADB21031	***Masticophis lateralis euryxanthus*** Alameda whipsnake	Threatened	Threatened	G4T2	S2	
CTT36210CA	***Valley Sink Scrub*** Valley Sink Scrub	None	None	G1	S1.1	
CTT62100CA	***Sycamore Alluvial Woodland*** Sycamore Alluvial Woodland	None	None	G1	S1.1	
ICBRA03030	***Branchinecta lynchi*** vernal pool fairy shrimp	Threatened	None	G3	S3	
ICBRA06010	***Linderiella occidentalis*** California linderiella	None	None	G2G3	S2S3	

Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
IIHYM24252	***Bombus occidentalis*** western bumble bee	None	Candidate Endangered	G3	S1	
IIHYM24480	***Bombus crotchii*** Crotch's bumble bee	None	Candidate Endangered	G2	S2	
PDAST4M020	***Helianthella castanea*** Diablo helianthella	None	None	G2	S2	1B.2
PDAST4R0P1	***Centromadia parryi ssp. congdonii*** Congdon's tarplant	None	None	G3T2	S2	1B.1
PDBOR0V0B0	***Plagiobothrys glaber*** hairless popcornflower	None	None	GX	SX	1A
PDBRA2R010	***Tropidocarpum capparideum*** caper-fruited tropidocarpum	None	None	G1	S1	1B.1
PDCAR0W062	***Spergularia macrotheca var. longistyla*** long-styled sand-spurrey	None	None	G5T2	S2	1B.2
PDCHE041F3	***Extriplex joaquinana*** San Joaquin spearscale	None	None	G2	S2	1B.2
PDCHE042L0	***Atriplex depressa*** brittlescale	None	None	G2	S2	1B.2
PDCHE042M0	***Atriplex minuscula*** lesser saltscale	None	None	G2	S2	1B.1
PDFAB400R5	***Trifolium hydrophilum*** saline clover	None	None	G2	S2	1B.2
PDPLM0C0Q0	***Navarretia prostrata*** prostrate vernal pool navarretia	None	None	G2	S2	1B.2
PDPLM0E050	***Polemonium carneum*** Oregon polemonium	None	None	G3G4	S2	2B.2
PDSCR0J0J0	***Chloropyron palmatum*** palmate-bracted bird's-beak	Endangered	Endangered	G1	S1	1B.1

Record Count: 34

ScientificName	CommonName	Family	Lifeform	CRPR		OtherStatu	CESA
Atriplex coronata var. corona	crownscale	Chenopodiaceae	annual herb		4.2	SB_CalBG/	None
Atriplex depressa	brittlescale	Chenopodiaceae	annual herb	1B.2			None
Atriplex minuscula	lesser saltscale	Chenopodiaceae	annual herb	1B.1		SB_CalBG/	None
Centromadia parryi ssp. con	Congdon's tarplant	Asteraceae	annual herb	1B.1		BLM_S; SB_	None
Chloropyron palmatum	palmate-bracted bird's-beak	Orobanchaceae	annual herb (hemiparasitic	1B.1		SB_CalBG/	CE
Clarkia concinna ssp. autom	Santa Clara red ribbons	Onagraceae	annual herb		4.3	SB_CalBG/	None
Extriplex joaquinana	San Joaquin spearscale	Chenopodiaceae	annual herb	1B.2		BLM_S; SB_	None
Helianthella castanea	Diablo helianthella	Asteraceae	perennial herb	1B.2		BLM_S; SB_	None
Lasthenia ferrisiae	Ferris' goldfields	Asteraceae	annual herb		4.2		None
Leptosiphon ambiguus	serpentine leptosiphon	Polemoniaceae	annual herb		4.2	SB_UCBG	None
Leptosiphon aureus	bristly leptosiphon	Polemoniaceae	annual herb		4.2		None
Navarretia prostrata	prostrate vernal pool navarretia	Polemoniaceae	annual herb	1B.2		BLM_S	None
Plagiobothrys glaber	hairless popcornflower	Boraginaceae	annual herb	1A			None
Polemonium carneum	Oregon polemonium	Polemoniaceae	perennial herb	2B.2			None
Spergularia macrotheca var.	long-styled sand-spurrey	Caryophyllaceae	perennial herb	1B.2			None
Trifolium hydrophilum	saline clover	Fabaceae	annual herb	1B.2			None
Tropidocarpum capparideun	caper-fruited tropidocarpum	Brassicaceae	annual herb	1B.1		SB_CalBG/	None

FESA	BloomingP	Habitat	Microhabita
None	Mar-Oct	Chenopod scrub, Valley and foothill grassland, Vernal pools	
None	Apr-Oct	Chenopod scrub, Meadows and seeps, Playas, Valley and foothill grassland, Vernal pools	
None	May-Oct	Chenopod scrub, Playas, Valley and foothill grassland	
None	(Apr)May-O	Valley and foothill grassland (alkaline)	
FE	May-Oct	Chenopod scrub, Valley and foothill grassland	
None	(Apr)May-Ju	Chaparral, Cismontane woodland	
None	Apr-Oct	Chenopod scrub, Meadows and seeps, Playas, Valley and foothill grassland	
None	Mar-Jun	Broadleafed upland forest, Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland, Valley and foothill grassland	Azonal soil,
None	Feb-May	Vernal pools (alkaline, clay)	
None	Mar-Jun	Cismontane woodland, Coastal scrub, Valley and foothill grassland	
None	Apr-Jul	Chaparral, Cismontane woodland, Coastal prairie, Valley and foothill grassland	
None	Apr-Jul	Coastal scrub, Meadows and seeps, Valley and foothill grassland (alkaline), Vernal pools	
None	Mar-May	Marshes and swamps (coastal salt), Meadows and seeps (alkaline)	
None	Apr-Sep	Coastal prairie, Coastal scrub, Lower montane coniferous forest	
None	Feb-May	Marshes and swamps, Meadows and seeps	
None	Apr-Jun	Marshes and swamps, Valley and foothill grassland (mesic, alkaline), Vernal pools	
None	Mar-Apr	Valley and foothill grassland (alkaline hills)	

Microhabit	ElevationLc	ElevationLc	ElevationHi	ElevationHi	CAEndemic	States	Counties
Alkaline, C	1	5	590	1935	TRUE	CA	ALA, CCA, FRE, KNG, KRN, MER, MNT, SBT, SLO, SOL, STA, TUL
Alkaline, C	1	5	320	1050	TRUE	CA	ALA, CCA, COL, FRE, GLE, KNG, MER, SOL, TUL, YOL
Alkaline, S	15	50	200	655	TRUE	CA	ALA, BUT, FRE, KNG, KRN, MAD, MER, STA, TUL
	0	0	230	755	TRUE	CA	ALA, CCA, MNT, SCL, SCR, SLO, SMT, SOL
Alkaline	5	15	155	510	TRUE	CA	ALA, COL, FRE, GLE, MAD, SJQ, YOL
	90	295	1500	4920	TRUE	CA	ALA, SCL, SCR, SMT
Alkaline	1	5	835	2740	TRUE	CA	ALA, CCA, COL, FRE, GLE, MER, NAP, SAC, SBT, SJQ, SLO, SOL, YOL
Rocky (usu	60	195	1300	4265	TRUE	CA	ALA, CCA, MRN, SFO, SMT
	20	65	700	2295	TRUE	CA	ALA, BUT, CCA, COL, FRE, KNG, KRN, MER, MNT, SAC, SJQ, SLO, SOL, S
Serpentine	120	395	1130	3710	TRUE	CA	ALA, BUT, CCA, ELD, FRE, MER, MNT, SBT, SCL, SCR, SJQ, SMT, SON, S
	55	180	1500	4920	TRUE	CA	ALA, BUT, COL, HUM, KRN, LAK, MEN, MRN, NAP, PLA, SBT, SCL, SMT,
Mesic	3	10	1210	3970	TRUE	CA	ALA, FRE, LAX, MER, MNT, ORA, RIV, SBD, SBT, SDG, SLO
	15	50	180	590	TRUE	CA	ALA, MRN, SBT, SCL
	0	0	1830	6005	FALSE	CA, OR, W	ALA, DNT, HUM, MRN, SFO, SIS, SMT, SON
Alkaline	0	0	255	835	TRUE	CA	ALA, CCA, NAP, SOL
	0	0	300	985	TRUE	CA	ALA, CCA, LAK, MEN, MNT, NAP, SAC, SBT, SCL, SCR, SJQ, SLO, SMT, S
	1	5	455	1495	TRUE	CA	ALA, CCA, MNT, SJQ, SLO

Appendix C
Noise Modeling Data

Summary

File Name on Meter	LxT_Data.150.s
File Name on PC	LxT_0004337-20250415 100000-LxT_Data.150.ldbin
Serial Number	0004337
Model	SoundTrack LxT®
Firmware Version	2.404
User	J.Manansala
Location	LT-1: Project Site Adjacent
Job Description	Mocho Wells PFAS
Note	

Measurement

Description	
Start	2025-04-15 10:00:00
Stop	2025-04-16 10:00:00
Duration	24:00:00.0
Run Time	24:00:00.0
Pause	00:00:00.0
Pre-Calibration	2025-04-15 03:12:28
Post-Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting				
Peak Weight	Z Weighting				
Detector	Slow				
Preamplifier	PRMLxT2B				
Microphone Correction	Off				
Integration Method	Exponential				
Overload	143.1	dB			
	A		**C**	**Z**	
Under Range Peak	99.4		96.4	**101.4**	dB
Under Range Limit	**37.8**		37.3	44.1	dB
Noise Floor	28.6		28.2	35.0	dB
	First		**Second**	**Third**	
Instrument Identification					

Results

LASeq	52.8	dB		
LASE	102.2	dB		
EAS	1.829	mPa²h		
EAS8	609.747	µPa²h		
EAS40	3.049	mPa²h		
LZpk (max)	2025-04-15 18:04:11		103.5	dB
LASmax	2025-04-15 10:24:07		82.7	dB
LASmin	2025-04-16 02:50:47		35.5	dB
SEA	-99.9	dB		

	Exceedance Counts	**Duration**	
LAS > 85.0 dB	0	0.0	s
LAS > 115.0 dB	0	0.0	s
LZpk > 135.0 dB	0	0.0	s

LZ_{pk} > 137.0 dB	0	0.0 s
LZ_{pk} > 140.0 dB	0	0.0 s

LCS_{eq}	64.8	dB
LAS_{eq}	52.8	dB
LCS_{eq} - LAS_{eq}	12.0	dB
LAI_{eq}	54.7	dB
LA_{eq}	52.8	dB
LAI_{eq} - LA_{eq}	1.9	dB

	A		C		Z	
	dB	**Time Stamp**	**dB**	**Time Stamp**	**dB**	**Time Stamp**
L_{eq}	52.8					
$L_{S(max)}$	82.7	2025/04/15 10:24:07				
$L_{S(min)}$	35.5	2025/04/16 2:50:47				
$L_{pk(max)}$					103.5	2025/04/15 18:04:11

Overload Count	0	
Overload Duration	0.0	s

Dose Settings

Dose Name	OSHA-1	OSHA-2	
Exchange Rate	5	5	dB
Threshold	90	80	dB
Criterion Level	90	90	dB
Criterion Duration	8	8	h

Results

Dose	-99.94	0.01	%
Projected Dose	-99.94	0.00	%
TWA (Projected)	-99.9	12.7	dB
TWA (t)	-99.9	20.6	dB
Lep (t)	57.6	57.6	dB

Ln Percentiles

LAS 5.00	56.2	dB
LAS 10.00	54.8	dB
LAS 33.30	52.3	dB
LAS 50.00	50.7	dB
LAS 66.60	47.7	dB
LAS 90.00	40.4	dB

Calculated Ldn from Long-Term Noise Monitoring Data

File Name LxT_Data.150.s
File Name LxT_0004337-20250415 100000-LxT_Data.150.ldbin
Serial Num 0004337
Model SoundTrack LxT®
Start 2025-04-15 10:00:00
Stop 2025-04-16 10:00:00

		TIME	dBA	Numbers...	10 dBA More Numbers...	5 dBA
Midnight	12:00AM	0	43.1	20417	204174	64565
	1:00	100	41.4	13804	138038	43652
	2:00	200	41.2	13183	131826	41687
	3:00	300	43.2	20893	208930	66069
	4:00	400	46.1	40738	407380	128825
	5:00	500	48.2	66069	660693	208930
am	6:00	600	53.8	239883	2398833	758578
	7:00	700	52.8	190546	1905461	602560
	8:00	800	53.4	218776	2187762	691831
	9:00	900	53.9	245471	2454709	776247
	10:00	1000	60.0	1000000	10000000	3162278
	11:00	1100	53.9	245471	2454709	776247
Noon	12:00:PM	1200	53.4	218776	2187762	691831
	13:00	1300	54.6	288403	2884032	912011
	14:00	1400	53.8	239883	2398833	758578
	15:00	1500	53.5	223872	2238721	707946
	16:00	1600	55.0	316228	3162278	1000000
	17:00	1700	53.8	239883	2398833	758578
pm	18:00	1800	53.9	245471	2454709	776247
	19:00	1900	52.7	186209	1862087	588844
	20:00	2000	52.4	173780	1737801	549541
	21:00	2100	48.9	77625	776247	245471
	22:00	2200	47.2	52481	524807	165959
	23:00	2300	44.9	30903	309030	97724

Leq Nighttime 8:00 p.m.-8:00 p.m. (not penalized)
50 dBA

Leq Daytime 8:00 am-8:00 p.m.
55 dBA

Leq 24-Hour
53 dBA

Ldn: 10 dBA penalty for noise between 10:00 p.m. and 7:00 a.m.
56 dBA

CNEL: 5 dBA penalty for noise between 7:00p.m. and 10:00 p.m., and 10 dBA penalty for noise between 10:00 p.m. and 7:00 a.m.
56 dBA

CNEL - Ldn 0.429888

Summary

File Name on Meter	LxT_Data.231.s
File Name on PC	LxT_0004435-20250415 102105-LxT_Data.231.ldbin
Serial Number	0004435
Model	SoundTrack LxT®
Firmware Version	2.404
User	J.Manansala
Location	ST-1: End of Lin Gate Street
Job Description	Mocho Wells PFAS
Note	

Measurement

Description	
Start	2025-04-15 10:21:05
Stop	2025-04-15 10:36:06
Duration	00:15:00.9
Run Time	00:15:00.9
Pause	00:00:00.0
Pre-Calibration	2025-04-15 09:50:46
Post-Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting				
Peak Weight	Z Weighting				
Detector	Slow				
Preamplifier	PRMLxT2B				
Microphone Correction	Off				
Integration Method	Exponential				
Overload	143.7	dB			
	A		**C**	**Z**	
Under Range Peak	99.9		96.9	**101.9**	dB
Under Range Limit	**38.3**		37.8	44.6	dB
Noise Floor	29.1		28.7	35.5	dB
	First		**Second**	**Third**	
Instrument Identification					

Results

LASeq	58.6	dB		
LASE	88.1	dB		
EAS	72.516	µPa²h		
EAS8	2.318	mPa²h		
EAS40	11.591	mPa²h		
LZpk (max)	2025-04-15 10:31:40		98.4	dB
LASmax	2025-04-15 10:31:40		77.4	dB
LASmin	2025-04-15 10:22:50		42.5	dB
SEA	-99.9	dB		

	Exceedance Counts	**Duration**	
LAS > 85.0 dB	0	0.0	s
LAS > 115.0 dB	0	0.0	s
LZpk > 135.0 dB	0	0.0	s

LZ_{pk} > 137.0 dB	0	0.0 s
LZ_{pk} > 140.0 dB	0	0.0 s

LC_{Seq}	67.9	dB
LA_{Seq}	58.6	dB
LC_{Seq} - LA_{Seq}	9.3	dB
LAI_{eq}	59.9	dB
LA_{eq}	58.6	dB
LAI_{eq} - LA_{eq}	1.3	dB

	A		C		Z	
	dB	**Time Stamp**	**dB**	**Time Stamp**	**dB**	**Time Stamp**
L_{eq}	58.6					
$L_{S(max)}$	77.4	2025/04/15 10:31:40				
$L_{S(min)}$	42.5	2025/04/15 10:22:50				
$L_{pk(max)}$					98.4	2025/04/15 10:31:40

Overload Count	0	
Overload Duration	0.0	s

Dose Settings

Dose Name	OSHA-1	OSHA-2	
Exchange Rate	5	5	dB
Threshold	90	80	dB
Criterion Level	90	90	dB
Criterion Duration	8	8	h

Results

Dose	-99.94	-99.94	%
Projected Dose	-99.94	-99.94	%
TWA (Projected)	-99.9	-99.9	dB
TWA (t)	-99.9	-99.9	dB
Lep (t)	43.6	43.6	dB

Ln Percentiles

LAS 5.00	57.2	dB
LAS 10.00	54.0	dB
LAS 33.30	50.8	dB
LAS 50.00	49.4	dB
LAS 66.60	47.9	dB
LAS 90.00	45.4	dB

Summary

File Name on Meter	LxT_Data.230.s
File Name on PC	LxT_0004435-20250415 095723-LxT_Data.230.ldbin
Serial Number	0004435
Model	SoundTrack LxT®
Firmware Version	2.404
User	J.Manansala
Location	ST-2: Stoneridge Drive x Santa Rita Road
Job Description	Mocho Wells PFAS
Note	

Measurement

Description	
Start	2025-04-15 09:57:23
Stop	2025-04-15 10:12:24
Duration	00:15:00.9
Run Time	00:15:00.9
Pause	00:00:00.0
Pre-Calibration	2025-04-15 09:50:46
Post-Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting				
Peak Weight	Z Weighting				
Detector	Slow				
Preamplifier	PRMLxT2B				
Microphone Correction	Off				
Integration Method	Exponential				
Overload	143.7	dB			
	A		**C**	**Z**	
Under Range Peak	99.9		96.9	**101.9**	dB
Under Range Limit	**38.3**		37.8	44.6	dB
Noise Floor	29.1		28.7	35.5	dB
	First		**Second**	**Third**	
Instrument Identification					

Results

LASeq	68.5	dB		
LASE	98.0	dB		
EAS	708.654	µPa²h		
EAS8	22.654	mPa²h		
EAS40	113.271	mPa²h		
LZpk (max)	2025-04-15 10:00:13		105.3	dB
LASmax	2025-04-15 10:00:13		81.6	dB
LASmin	2025-04-15 10:05:22		57.0	dB
SEA	-99.9	dB		

	Exceedance Counts	**Duration**	
LAS > 85.0 dB	0	0.0	s
LAS > 115.0 dB	0	0.0	s
LZpk > 135.0 dB	0	0.0	s

LZ_{pk} > 137.0 dB	0	0.0 s
LZ_{pk} > 140.0 dB	0	0.0 s

LC_{Seq}	76.8	dB
LA_{Seq}	68.5	dB
LC_{Seq} - LA_{Seq}	8.3	dB
LAI_{eq}	69.7	dB
LA_{eq}	68.5	dB
LAI_{eq} - LA_{eq}	1.2	dB

	A		C		Z	
	dB	**Time Stamp**	**dB**	**Time Stamp**	**dB**	**Time Stamp**
L_{eq}	68.5					
$L_{S(max)}$	81.6	2025/04/15 10:00:13				
$L_{S(min)}$	57.0	2025/04/15 10:05:22				
$L_{pk(max)}$					105.3	2025/04/15 10:00:13

Overload Count	0	
Overload Duration	0.0	s

Dose Settings

Dose Name	OSHA-1	OSHA-2	
Exchange Rate	5	5	dB
Threshold	90	80	dB
Criterion Level	90	90	dB
Criterion Duration	8	8	h

Results

Dose	-99.94	0.00	%
Projected Dose	-99.94	0.06	%
TWA (Projected)	-99.9	37.0	dB
TWA (t)	-99.9	12.0	dB
Lep (t)	53.5	53.5	dB

Ln Percentiles

LAS 5.00	72.4	dB
LAS 10.00	71.5	dB
LAS 33.30	68.5	dB
LAS 50.00	66.6	dB
LAS 66.60	64.8	dB
LAS 90.00	61.8	dB

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 06/22/2025
Case Description: Mocho PFAS Construction Equipment Noise at 25 feet

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
At nearest residences	Residential	55.0	55.0	50.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	25.0	0.0
Excavator	No	40		80.7	25.0	0.0

Results

	Calculated (dBA)		Noise Limits (dBA) Day		Evening		Night		Noise Limit Exceedance (dBA) Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	86.6	78.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	86.7	82.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	86.7	84.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 06/22/2025
Case Description: Mocho PFAS Combined Equipment Noise at Receptor

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
At nearest residences	Residential	55.0	55.0	50.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	40.0	0.0
Excavator	No	40		80.7	40.0	0.0

Results

	Calculated (dBA)		Noise Limits (dBA) Day		Evening		Night		Noise Limit Exceedance (dBA) Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	82.5	74.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	82.6	78.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	82.6	80.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A