East Bay Municipal Utility District

Miller Road Trench Soil Management Project Initial Study/Mitigated Negative Declaration – Final

August 2025

NOTE: The Miller Road Trench Soil Management Project Mitigated Negative Declaration dated March 2025, together with the added Appendix D, "Response to Comments," comprise the Final Mitigated Negative Declaration

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PANORAMA ENVIRONMENTAL, INC.

East Bay Municipal Utility District

Miller Road Trench Soil Management Project

Initial Study/Mitigated Negative Declaration – Final

August 2025

Prepared for:

East Bay Municipal Utility District

375 Eleventh Street

Oakland, CA 94607-4240

Prepared by:

Panorama Environmental, Inc.

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PANORAMA ENVIRONMENTAL, INC.

EBMUD

NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION
Miller Road Trench Soil Management Project

Project Title: Miller Road Trench Soil Management Project (Project)

Lead Agency and Project Applicant/Proponent: East Bay Municipal Utility District (EBMUD), 510-287-1264
375 Eleventh Street, Oakland, CA, 94607-4240

Project Location: EBMUD-owned watershed land off of Miller Road in Alameda County approximately 2 miles east of Oakland and 2.5 miles north of Castro Valley

Project Description: The Miller Road stockpile site has been operated to store excavated material generated by EBMUD pipeline construction and maintenance activities (i.e., trench soil) since 1975 and supports EBMUD's efforts to proactively replace and rehabilitate critical water system infrastructure. The Project involves the continued operation of the Miller Road stockpile site, including import, temporary storage, and periodic removal of trench soil. The Project also includes continued operation of the rock and sand stockpile site located approximately 1 mile south of the Miller Road soil stockpile site on EBMUD-owned property within the Project site. Materials from the rock and sand stockpile site are used to backfill trenches from the pipeline construction and maintenance activities. Continued operation of the rock and sand stockpile site includes import, temporary storage, and removal of these backfill materials. The Project includes a gradual increase in the volume of trench soil stockpiled at the Miller Road site, routine removal of stockpiled trench soil (off-haul events) every 5 years, or more frequent if opportunities for beneficial reuse of the trench soil arise, and an increase in the import and off-haul of backfill materials to and from the rock and sand stockpile site.

Project Objective: Annual EBMUD pipeline replacement is estimated to increase from 20 to 25 miles per year to approximately 30 miles per year by 2030 to rehabilitate and replace critical water system infrastructure and increase both system reliability and operating efficiency. EBMUD will need to increase the stockpiling and storage of materials to support this increase in pipeline replacement.

Environmental Determination: Pursuant to the requirements of the California Environmental Quality Act, an Initial Study was prepared for the Project. Based on the results of the Initial Study, it was determined that Project-related work could potentially generate environmental impacts to transportation and wildfire. Continued operation of EBMUD's Miller Road stockpile site and rock and sand stockpile site will not generate significant impacts. Proposed mitigations will be implemented into the Project to ensure that the Project will not generate a significant adverse impact on the environment. Based on this assessment, a Mitigated Negative Declaration has been prepared.

Environmental Mitigation: All impacts of the proposed Project will be reduced to Less than Significant levels by implementation of proposed mitigation measures, standard operating procedures, and complying with the existing environmental regulations.

Public Comment/Review: The Mitigated Negative Declaration is available for review at:

- East Bay Municipal Utility District, 375 11th Street, Oakland, CA 94607
- EBMUD website (www.ebmud.com/MillerRoad)
- Castro Valley Library, 3600 Norbridge Ave., Castro Valley, CA 94546

In accordance with Section 15073 of the California Environmental Quality Act Guidelines, this Mitigated Negative Declaration is available for public review from March 20, 2025 through April 21, 2025. Written comments on this Mitigated Negative Declaration must be received no later than 4:30 p.m. on April 21, 2025. Please address comments to East Bay Municipal Utility District, Gus Cicala, Senior Civil Engineer, 375 11th Street, M/S 704, Oakland, California 94607, or email to miller.road@ebmud.com. Action on this Mitigated Negative Declaration is currently scheduled to be taken by the EBMUD Board of Directors at a regularly scheduled Board meeting in August 2025 at 375 11th Street, Oakland, CA.

3/20/25
Date

David A. Briggs
Director of Operations and Maintenance

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1 Summary

East Bay Municipal Utility District (EBMUD) provides water service to 20 incorporated cities and 15 unincorporated areas in Alameda and Contra Costa Counties (Figure 1-1). The water distribution system is comprised of 6 water treatment plants, 167 potable water reservoirs, 131 pumping plants, over 4,200 miles of potable (treated) water distribution and transmission pipelines, and numerous accessory structures that altogether provide water service to EBMUD's approximately 1.4 million customers.

1.1 Project Objective

EBMUD owns and operates the existing Miller Road stockpile site in Alameda County. The site has been operated to store excavated material generated by EBMUD pipeline construction and maintenance activities (i.e., trench soil) since 1975. The Miller Road stockpile site supports EBMUD's efforts to proactively replace and rehabilitate critical water system infrastructure. EBMUD estimates annual pipeline replacement will increase through 2030, and an increase in storage of excavated material will be required, to support the increase in pipeline replacement needs. Currently the stockpile storage site is near capacity; approximately 9,000 cubic yards (CY) of storage remains.

EBMUD's Miller Road Trench Soil Management Project (Project) involves the continued operation of the Miller Road stockpile site, including import, temporary storage, and periodic removal of trench soil, with the next removal event potentially occurring in 2025. The Project also includes continued operation of the rock and sand stockpile site approximately one mile south of the Miller Road stockpile site on EBMUD-owned property within the Project site. The Project includes a gradual increase in the volume of trench soil stockpiled at the Miller Road site, routine removal of stockpiled trench soil (referred to as *off-haul events*), and an increase in the import and off-haul of backfill materials to and from the rock and sand stockpile site. Figure 1-2, below, shows the location of the Project.

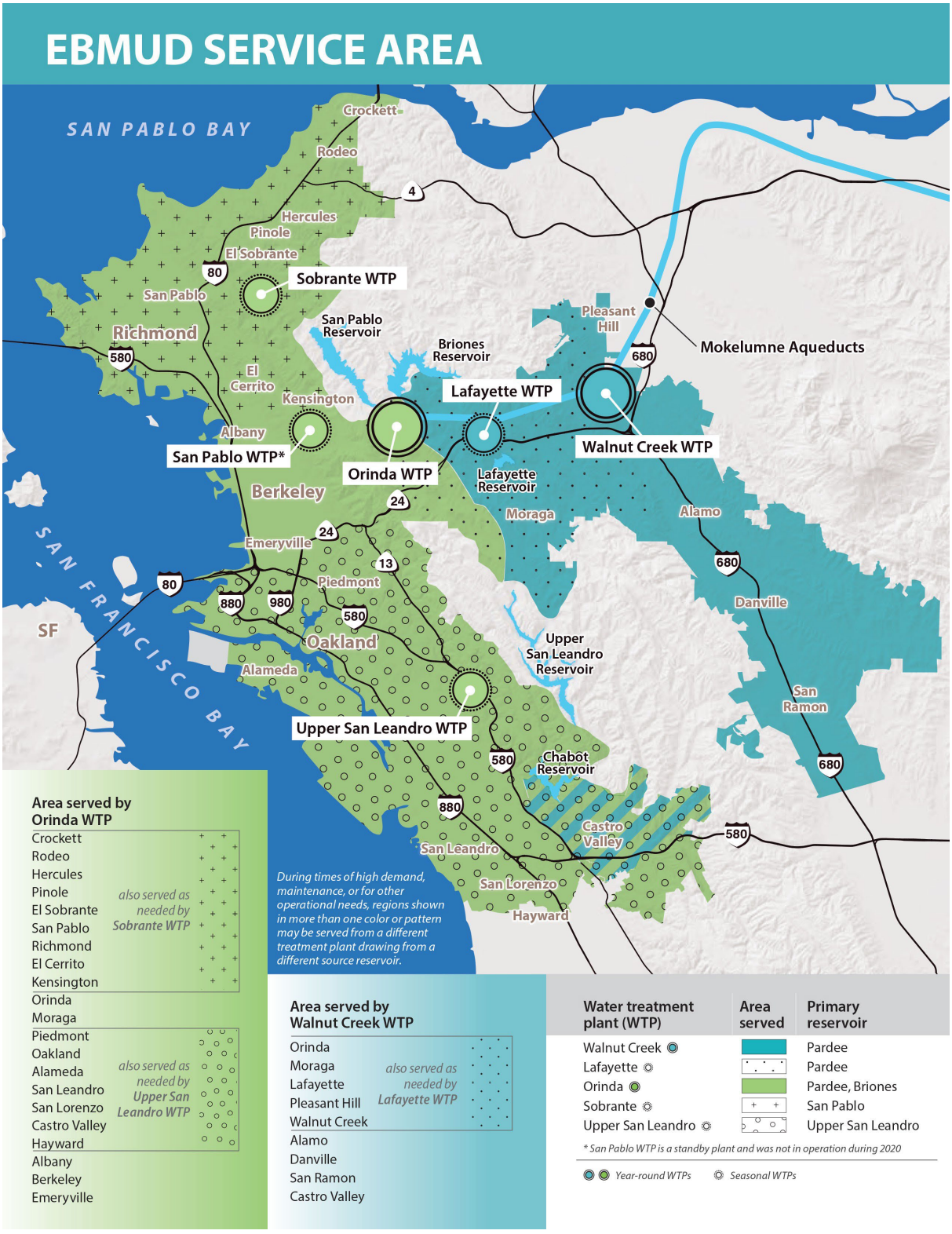

Figure 1-1 Utility District Service Area

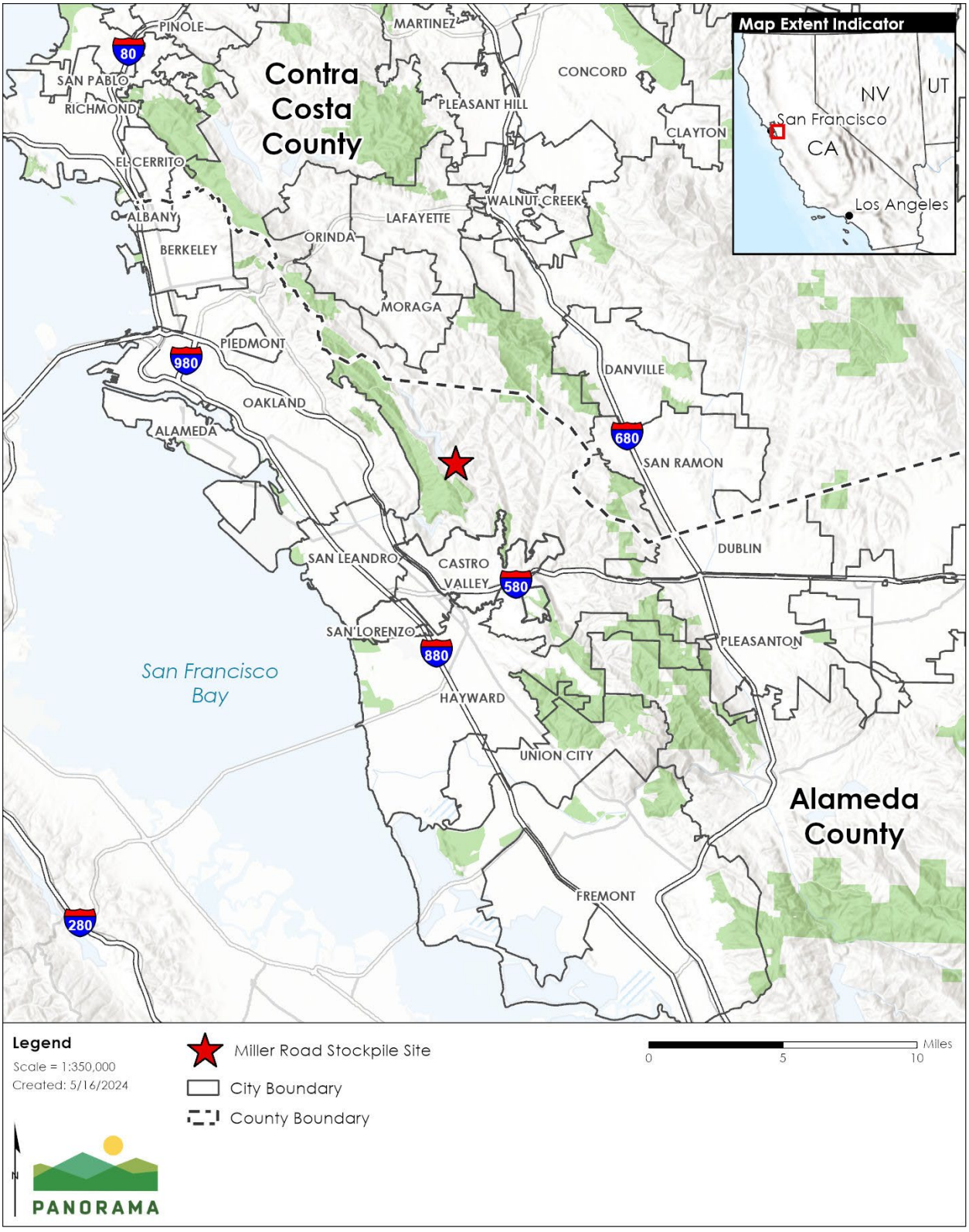

Figure 1-2 Regional Overview

1.2 Purpose of Mitigated Negative Declaration

This Initial Study and Mitigated Negative Declaration (MND) assesses the potential environmental impacts related to the Project proposed by EBMUD and has been prepared in accordance with the California Environmental Quality Act (CEQA) statutes and guidelines in which EBMUD is the lead agency. EBMUD has incorporated mitigations into the Project to mitigate the potentially significant impacts identified in the Initial Study such that no significant impacts would occur. These mitigations are summarized in the attached Mitigation Monitoring and Reporting Program (MMRP) (see Appendix A).

1.3 Summary of Environmental Considerations

Based on the results of the Initial Study, off-haul events could potentially generate environmental impacts to traffic along the off-haul routes and to emergency providers who service the areas along the off-haul routes. Mitigation measures incorporated into the Project that would reduce impacts to less-than-significant levels are discussed in Chapter 3 of this MND. EBMUD determined that an MND is the appropriate level of CEQA review for this Project. The mitigations that have been incorporated into the Project are summarized in the attached MMRP (see Appendix A).

1.4 Circulation of the MND

In accordance with CEQA, during the preparation of the Initial Study and MND, EBMUD made a good faith effort to contact affected agencies, organizations and persons who may have an interest in the Project. In reviewing the Initial Study and MND, affected persons and public agencies should focus on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and the ways in which the significant effects of the Project were avoided or mitigated.

Comments on the Initial Study and MND may be made in writing before the end of the comment period. A 30-day review and comment period has been established in accordance with section 15205(d) of the CEQA Guidelines. Following the close of the public comment period, which ends on April 21, 2025 at 4:30 p.m., EBMUD will consider this Initial Study and MND and comments thereto in determining whether to approve the proposed Project.

The Initial Study and MND are available online on EBMUD's webpage (https://www.ebmud.com/MillerRoad). Written comments should be sent to EBMUD's street address or email address as follows:

East Bay Municipal Utility District
Gus Cicala, Senior Civil Engineer
375 11th Street, M/S 704
Oakland, CA 94607

or

Miller.Road@ebmud.com

2 Project Description

2.1 Overview

The East Bay Municipal Utility District (EBMUD) owns and operates the Miller Road stockpile site, which is located within EBMUD-owned watershed land southeast of EBMUD's Upper San Leandro Reservoir in Castro Valley, in unincorporated Alameda County. The Miller Road stockpile site, which has been used by EBMUD for managing trench soil since 1975, is used to store excavated material generated by EBMUD pipeline construction and maintenance activities. Stockpiled materials include soil (sand, silt, and clay) mixed with asphalt, concrete, rock, and pipeline fragments. The Miller Road stockpile site supports EBMUD's efforts to proactively replace and rehabilitate critical water system infrastructure. Based on projected pipeline improvements required to address EBMUD's aging infrastructure, EBMUD estimates annual pipeline replacement will increase from 20 to 25 miles per year to approximately 30 miles per year by 2030. There is a need to increase the stockpiling and storage of materials to support this increase in pipeline replacement needs.

EBMUD's Miller Road Trench Soil Management Project (Project) involves the continued operation of the Miller Road stockpile site, including import, temporary storage, and periodic removal of trench soil. The Project also includes continued operation of the rock and sand stockpile site approximately 1 mile, south of the Miller Road soil stockpile site on EBMUD-owned property within the Project site. Materials from the rock and sand stockpile site are used to backfill trenches from the pipeline construction and maintenance activities. Continued operation of the rock and sand stockpile site includes import, temporary storage, and removal of these backfill materials. The Project includes a gradual increase in the volume of trench soil stockpiled at the Miller Road site, routine removal of stockpiled trench soil (referred to as off-haul events), and an increase in the import and off-haul of backfill materials to and from the rock and sand stockpile site.

2.2 Project Location and Site Description

The Project is located within EBMUD-owned watershed land in Alameda County approximately 2 miles east of Oakland and 2.5 miles north of Castro Valley, as shown in Figure 1-2. The Project site includes the Miller Road stockpile site and the rock and sand stockpile site, which is accessed by a portion of Miller Road (from the intersection of Redwood Road to the Miller Road stockpile site) routinely used by trucks for import and off-haul.

The Miller Road stockpile site, as shown in Figure 2-1, is located approximately 2 miles north of the intersection of Miller Road and Redwood Road and is approximately 5.9 acres.

Figure 2-1 Project Location

The site is surrounded by Upper San Leandro Reservoir to the north, Miller Road to the east and south, and San Leandro Creek to the west. Anthony Chabot Regional Park is approximately 0.7 miles west of the Miller Road stockpile site. The rock and sand stockpile site is approximately 1 acre and located approximately 1 mile south of the Miller Road stockpile site, adjacent to the Castro Valley Christmas Tree Farm.

2.3 Historic and Existing Site Operations

The Project involves EBMUD's continued operation of the Miller Road stockpile site and rock and sand stockpile site. Existing operations for each site are discussed below.

2.3.1 Miller Road Stockpile Site

The existing Miller Road stockpile site is used to store trench soil in support of EBMUD's pipeline repair and replacement work and has been used for this purpose since 1975. Trench soil is generated from EBMUD operations and maintenance, principally pipeline replacements and repairs, as trenches are excavated in the ground along pipeline lengths being replaced or repaired. Trench soil is imported to the site and managed by EBMUD or EBMUD contractors using excavators and dozers to place soil according to designed slopes to maintain proper drainage and unimpeded site access. A representative view of the Miller Road stockpile site is shown in Figure 2-2. On an as-needed basis, soil is also periodically removed, as described below.

The Miller Road stockpile site has a storage capacity of approximately 125,000 CY. As of the end of 2024, the stockpile site is currently over 90 percent filled containing approximately 116,000 CY. The average annual import of trench soil to the Miller Road stockpile site is approximately 7,000 CY. Trench soil is imported to the stockpile site from EBMUD pipeline repair and replacement projects using an average of approximately 3 roundtrips per day (typically Monday through Friday from 7 a.m. to 5 p.m.) using 10-CY dump trucks. Once the trench soil is unloaded at the Miller Road stockpile site, the empty trucks drive to the rock and sand stockpile site (discussed below) and load their trucks with trench backfill material before returning to the pipeline repair and replacement site to backfill the trench.

Historically, trench soil has been removed from the Miller Road stockpile site on an as-needed basis. Soil is removed using 11 CY end dump trucks or 13 CY double-bottom trucks. The most recent off-haul event occurred in 2019. Prior to that, an off-haul event occurred in 2005.

Figure 2-2 Existing Miller Road Stockpile Site (Facing North)

2.3.2 Rock and Sand Stockpile Site

The rock and sand stockpile site is approximately 1 acre and is used to store approximately 2,000 CY of trench backfill materials. Import trucks typically pick up backfill material from this designated storage location after unloading trench soil at the Miller Road stockpile site. The average annual export of rock and sand materials from this site is approximately 7,000 CY. Each backfill import refilling event requires approximately 30 roundtrips using 10 CY dump trucks and is completed in approximately two days on a biweekly (every 2 weeks) basis.

2.4 Proposed Project

EBMUD's pipeline replacement program focuses on pipelines that are near the end of their useful lives. Currently, EBMUD replaces between 20 and 25 miles of pipeline per year of its approximately 4,200-mile-long distribution pipeline network. Based on the age of these pipelines, EBMUD estimates that approximately 25 miles of pipeline replacement will be required in 2025 and approximately 30 miles of pipeline will need replacement annually by 2030. The Miller Road stockpile site supports EBMUD's efforts to repair and replace pipeline infrastructure, and EBMUD plans to gradually increase operations of the Miller Road stockpile site and its associated rock and sand stockpile site to meet the need associated with the

increased pipeline replacement. Trench soil generation rates are estimated by EBMUD using various methods, including drone surveys, topographic surveys, typical trench cross-sections, operations and maintenance databases, temporary stockpile inventories over time, and the anticipated repair and replacement rate of EBMUD's pipeline network.

The Project includes three primary components: 1) an increase in import of trench soil to the Miller Road stockpile site; 2) an increase in the import and off-haul of backfill materials at the rock and sand stockpile site; and 3) implementation of smaller off-haul events at regular intervals (estimated at every 5 years with the potential of off-hauls every 1 to 2 years to respond to opportunities for beneficial soil reuse in the area) to remove stockpiled soils at the Miller Road stockpile site. These Project components are described in further detail below.

2.4.1 Increased Import of Miller Road Stockpile Site Trench Soil

Trench soil transported to the Miller Road stockpile site is generated from pipeline operations and maintenance as trenches are excavated in the ground along pipeline lengths being replaced or repaired. Based on generation rate estimation methods and current and projected pipeline replacement rates, the current average annual import of trench soil of approximately 7,000 CY is anticipated to increase to approximately 11,000 CY by 2030. Worker trips constitute the number of trips EBMUD or an EBMUD contractor makes to complete weekly soil stockpile management activities. As with current operations, soil would be imported to the site by 10 CY dump trucks for a total annual number of approximately 1,100 truck trips (roundtrip) to import trench soil to the Miller Road stockpile site (see Table 2-1). However, to accommodate the increased soil import volumes, daily truck trips (roundtrip) would increase to an average of approximately 5 daily truck trips (roundtrip) per working day to import soil to the site, which includes trips in the morning period (7 a.m. to 12 p.m.) including an estimated 1 truck trip during a.m. peak hour. Additionally, EBMUD anticipates 1 worker would be at the site 1 day per week to manage the soil, with a total of approximately 52 trips per year.

The imported soil would be placed within the existing stockpile footprint with no disturbance to areas outside the existing stockpile site. EBMUD or an EBMUD contractor would continue to manage the stockpile site using excavators and dozers to place soil according to designed slopes to maintain drainage and site access.

Table 2-1 Project Truck Trips

Component	Trip type	Historic and existing annual trips (roundtrips)	Proposed annual trips (roundtrips)	Historic and existing daily trips (roundtrips)	Proposed daily trips (roundtrips)
Annual import of trench soil to Miller Road stockpile site	Truck	700[a]	1,100[b]	3[c]	5[c]
	Worker	52	52	1	1
	Truck	700[a]	1,100[b]	15	23

Component	Trip type	Historic and existing annual trips (roundtrips)	Proposed annual trips (roundtrips)	Historic and existing daily trips (roundtrips)	Proposed daily trips (roundtrips)
Annual backfill material delivery to rock and sand stockpile site	Worker	N/A	N/A	N/A	N/A
Miller Road off-haul events	Truck	6,700 to 9,700[d]	4,200[e]	150 to 300[d]	70 to 200[f]
	Worker	As needed	80 to 240[g]	As needed	4
Total for off-haul event years	Truck	8,100 to 11,100	6,400	168 to 318	98 to 228
	Worker	52 plus those associated with off-haul events	132 to 292	1 plus those associated with off-haul events	5

Table Notes:

a. For 7,000 CY of material using 10 CY trucks.
b. For 11,000 CY of material in 2030 using 10 CY trucks.
c. Assumes an average of 260 work days per year.
d. Because off-haul events were conducted as needed, the number of truck trips could vary.
e. Off-haul event of 50,000 CY every 5 years assuming an average of 12 CY per truck trip.
f. The 4,200 truck trips associated with an off-haul event would occur over a 1-month to 3-month period (21 days for a 1-month period and 60 days for a 3-month period) with a cap of 200 trucks.
g. Estimated based on 4 worker commute roundtrips per day during off-haul events over a 1-month to 3-month period.

2.4.2 Increased Import and Off-Haul of Rock and Sand Backfill Materials

Import trucks would continue to pick up backfill material from the designated rock and sand stockpile site. The volume of rock and sand backfill materials exported from the site would be similar to the volume of total soil imported. For the Project, each backfill import refilling event requires approximately 46 roundtrips using 10 CY dump trucks and is completed in approximately two days on a biweekly (every two weeks) basis. There would be an average of 23 truck roundtrips per day, with 3 roundtrips during both the a.m. and p.m. peak hours. Approximately 1,100 truck trips (roundtrip) per year would be made to deliver backfill material to the rock and sand stockpile site.

Similar to the Miller Road stockpile site, imported materials at the rock and sand stockpile site would be placed within the existing stockpile footprints with no disturbance to surrounding vegetation.

2.4.3 Smaller Routine Off-Haul Events

As similar to current operations, trench soil would be removed from the Miller Road stockpile site prior to exceeding the site's storage capacity for ongoing EBMUD pipeline replacement and repair activities. Under the Project, routine off-haul events could begin as early as 2025.

However, to accommodate the projected increase in future trench soil generation, the Project would implement smaller routine soil removal events instead of the current larger, less frequent off-haul events. Specifically, smaller soil removal events could off-haul up to 50,000 CY of material every 5 years with the potential for an off-haul every 1 to 2 years if opportunities arise for beneficial reuse in the area as opposed to being disposed at landfills. These off-haul events would require 1 to 3 months to complete and between 70 to 200 truck roundtrips per day, see Table 2-1. Approximately 4 additional workers would be on site per day during off-haul events, with an estimated 240 worker trips per year bringing the total worker truck trips to 292. Activities associated with trench soil removal include screening, loading, and hauling of trench soil from the Miller Road stockpile site to an end use facility. Standard EBMUD stormwater and dust control measures that are currently used, including street sweeping services to clear debris on portions of the haul route affected by soil removal operations, would be implemented as part of the Project. In addition, a water truck would be used daily on Miller Road to reduce dust from soil removal trucks. Excavation equipment, such as excavators and dozers, would be used to load trench soil into trucks for hauling to reuse, recycling, or disposal sites. Trucks used to export soil from the site would include 11 CY end dump trucks and 13 CY double-bottom trucks. Contractors would be required to enforce safety measures, including training in traffic safety requirements and providing public information.

2.4.4 Site Access/Haul Route

The Miller Road stockpile site is accessed via a private EBMUD roadway and is fenced with a locked gate. Similar to existing operations, access to and from the Miller Road stockpile site and the rock and sand stockpile site for all Project activities would be via Interstate 580 (I-580), Redwood Road, and Miller Road, as shown in Figure 2-3. Miller Road is an all-weather gravel road that varies from approximately 25 feet to 35 feet wide. Miller Road is within EBMUD property and begins at the Chabot Staging area near Redwood Road and terminates at the Upper San Leandro Reservoir. Redwood Road is a major arterial that spans a route from south of I-580 through Castro Valley to Skyline Boulevard in Oakland. The width of Redwood Road varies from approximately 20 to 40 feet.

Figure 2-3 Trench Soil Import and Removal Haul Route

2.4.5 Schedule and Duration

Typical hours of import operations at the Miller Road stockpile site and rock and sand stockpile site would be 7 a.m. to 5 p.m. Monday through Friday, although limited operations may occur outside these hours in response to emergency pipeline repairs.

Routine off-haul events for the Miller Road stockpile site would occur approximately every 5 years with the potential for off-haul events every 1 to 2 years to respond to beneficial soil reuse opportunities in the area. It would generally be limited to the summer season to minimize overlap when schools along the haul route are in session with a typical duration of approximately 1 to 3 months. Work hours for removal of trench soil would typically be 9 a.m. to 4 p.m. on weekdays and would be reduced to 9 a.m. to 3 p.m. if the off-haul event occurs when Castro Valley Union School District schools are in session.

2.4.6 Workforce and Equipment

The number of workers required will vary based on the Project activity occurring. Worker estimates by Project component are summarized in Table 2-2.

Table 2-2 Anticipated Workforce

Project component	Approximate workforce
Import of Miller Road stockpile site trench soil	1 truck driver per truck load 1 operator for on-site management
Import and off-haul of rock and sand stockpiles	1 truck driver per truck load 1 operator for on-site management
Miller Road off-haul events	1 truck driver per truck load 2 operators, 1 truck boss, 1 foreman on-site

Standard equipment that would be used under the Project is provided in Table 2-3.

Table 2-3 Anticipated Equipment Use

Equipment	Activity
Excavator	Stockpile management and trench soil off-haul
D6 dozer	Stockpile management, trench soil off-haul, and the import of backfill material
D8 dozer	Trench soil off-haul and the import of backfill material
Water truck	Trench soil off-haul
Sweeper	Trench soil off-haul

2.4.7 Additional Operations and Maintenance Activities

Miller Road is located on EBMUD property, and EBMUD would maintain the gravel surface of Miller Road from Redwood Road to the stockpile site as required. Ongoing required operations and maintenance of the Project site would be managed by EBMUD and/or a contractor. Additionally, EBMUD staff or EBMUD's contractors would conduct regular inspections and oversee the installation and maintenance of best management practices (BMPs) and requirements in compliance with EBMUD's existing Stormwater Pollution Prevention Plan (SWPPP) for existing operation of both the Miller Road and rock and sand stockpile sites and along Miller Road (EBMUD 2019).

2.5 Permits and Approvals

Table 2-4, below, provides a summary of the approvals and permits that EBMUD would be required to obtain prior to the start of the Project.

Table 2-4 Agency-Required Approvals and Permits

Agency/stakeholder	Type of jurisdiction	Type of approval	Status
Alameda County	Local	Conditional Use Permit	Pending
State Water Resources Control Board (SWRCB)	State	SWPPP	Obtained

3 Environmental Checklist

3.1 Project Information

1. **Project Title**
   Miller Road Trench Soil Management Project
2. **Lead Agency Name and Address**
   East Bay Municipal Utility District
   Maintenance & Construction Department
   375 11th Street
   Oakland, CA 94607
3. **Contact Person and Phone Number**
   Gus Cicala, Senior Civil Engineer
   (510) 287-1264
4. **Location**
   Unincorporated Alameda County
5. **Project Sponsor's Name and Address**
   East Bay Municipal Utility District
   Maintenance & Construction Department
   375 11th Street
   Oakland, CA 94607
6. **General Plan Designation and Zoning**
   General Plan Designation: Resource Management (RM); Zoning: Agriculture (A)
7. **Description of the proposed project**
   Please see Chapter 2 of the MND.
8. **Surrounding Land Uses and Setting**
   Open space
9. **Other Public Agencies Whose Approval is Required**
   Alameda County – Conditional Use Permit
   State Water Resources Control Board – Stormwater Pollution Prevention Plan (SWPPP)
10. **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.?**

No California Native American tribes traditionally and culturally affiliated with the Project area have requested consultation pursuant to Public Resources Code section 21080.3.1.

3.2 Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by the project, but impacts would be mitigated to a less-than-significant level as indicated in the Initial Study.

- ☐ Aesthetics
- ☐ Agriculture and Forestry
- ☐ 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

3.3 Environmental Determination

On the basis of this initial evaluation:

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

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

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

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

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

Pursuant to Section 21082.1 of the California Environmental Quality Act, EBMUD has independently reviewed and analyzed the Initial Study and Mitigated Negative Declaration for the proposed project and finds that the Initial Study and Mitigated Negative Declaration reflect the independent judgement of EBMUD. EBMUD further finds that the project mitigation measures shall be implemented as stated in this Mitigated Negative Declaration.

I hereby approve this project:

David A. Briggs
Director of Operations and Maintenance
East Bay Municipal Utility District

3/20/25
Date

3.4 Evaluation of Environmental Impacts and Initial Study Checklist

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
1. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
2. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
3. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less-than-significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).
4. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D) (2017 CEQA Guidelines). In this case, a brief discussion should identify the following:
    a. Earlier Analysis Used. Identify and state where they are available for review.
    b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards and state whether such effects were addressed by mitigation measures based on the earlier analysis.
    c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
5. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where

appropriate, include a reference to the page or pages where the statement is substantiated.

6. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
7. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
8. The explanation of each issue should identify:
   d. The significance criteria or threshold, if any, used to evaluate each question.
   e. The mitigation measure identified, if any, to reduce the impact to less than significant.

3.5 Environmental Analysis

3.5.1 Aesthetics

Environmental Impacts	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
1. 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 points). 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 day or nighttime views in the area?	☐	☐	☐	☒

Discussion

The Project site is located within EBMUD-owned watershed land southeast of EBMUD's Upper San Leandro Reservoir in Castro Valley. The Project site includes the Miller Road stockpile site and the rock and sand stockpile site and is characterized by flat land in the locations used for trench soil and stockpile management and are surrounded by hilly forested areas. Anthony Chabot Regional Park is approximately 0.7 miles west of the Miller Road stockpile site. The rock and sand stockpile site is located approximately 1 mile south of the Miller Road stockpile site, adjacent to the Castro Valley Christmas Tree Farm (off Miller Road) (see Figure 2-1). Both the Miller Road stockpile site and the rock and sand stockpile site are accessed via Miller Road, which is a private, gated road off Redwood Road, a public road. The Project site is approximately 350 feet above sea level and is surrounded by areas with higher elevation (Topographic-Map.com, n.d.). The Miller Road stockpile site spans approximately 5.9 acres and the rock and sand stockpile site spans approximately one acre. The nearest residents to the Project site are located approximately 1.6 miles to the west. The Ramage Peak Trail passes approximately 0.5 miles east of the Miller Road stockpile site and is publicly accessible with an EBMUD trail permit; users on this trail may experience views of the Project site (EBMUD n.d.).

a. Less than Significant Impact
A scenic vista is defined as a distant view encompassing valued natural or built landscape features such as ridgelines, water bodies, landmark features, or open space lands. Anthony Chabot Regional Park is approximately 0.7 miles west of the Miller Road stockpile; the Project would not be visible from the park due to intervening hills and topography as well as trees and vegetation. Currently, the Project site may be visible from limited portions of the Ramage Peak Trail. The Project would not alter the appearance of the stockpile sites as compared to existing conditions. Therefore, the Project would not have a substantial adverse effect on a scenic vista, and the impact would be less than significant.

b. No Impact
The nearest scenic highway is I-580 which is located approximately 3 miles to the west of the Project site (Caltrans 2024). The Project site is not visible from the highway due to distance and intervening topography. Therefore, the Project would have no impact on a designated state scenic highway.

c. Less than Significant Impact
The Project is located within EBMUD-owned watershed land in Alameda County in a non-urbanized area. Public views of the site would be available from the Ramage Peak Trail east of the Project site. The Project would not build any new structures. The Project would involve an increase in the import of trench soil at the Miller Road stockpile site, and an increase in the import and pickup of backfill materials at the rock and sand stockpile site. However, the volume of stockpiled materials at the sites would not change because the Project would involve more frequent off-haul events. The Project would not increase the volume of soil, rock, or sand stockpiled at a given time, and would not introduce new facilities or equipment to the Project site. The Project would not result in changes to the visual character of the sites or surroundings. Therefore, the Project would not substantially degrade the existing visual character or quality of public views of the site, and the impact would be less than significant.

d. No Impact
The Project would not involve nighttime activities. As described in Section 2.4.5, Schedule and Duration, Project operations would occur during daytime hours and no new temporary or permanent lighting is proposed. Therefore, the Project would not create a new source of light or glare which would adversely affect day or nighttime views, and there would be no impact.

3.5.2 Agriculture and Forestry

Environmental Impacts	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
2. 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

The Project stockpile sites are located on land that is zoned for Agriculture (A) by Alameda County and land that is designated as Resource Management (RM) in the Castro Valley Area Plan of the Alameda County General Plan. The proposed haul route travels through land zoned and designated for residential, business and commercial uses (Alameda County n.d.-b; 2012).

The California Department of Conservation (CDOC) classifies land according to agricultural suitability through the Farmland Mapping and Monitoring Program (FMMP) based on land uses, irrigation, and soil conditions. The categories of Prime Farmland, Farmland of Statewide

Importance, and Unique Farmland constitute "agricultural land" (Public Resources Code [PRC] Section 21060.1), and are defined below (CDOC n.d.-b):

- **Prime Farmland**. Farmland with the best combination of physical and chemical features able to sustain long-term agricultural production. Land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.
- **Farmland of Statewide Importance**. Farmland like Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.
- **Unique Farmland**. Farmland of lesser quality soils used to produce the state's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards, as found in some climatic zones in California. Land must have been cropped at some time during the 4 years prior to the mapping date.

a. No Impact

Neither of the Project stockpile sites are located on lands designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (CDOC n.d.-a). Therefore, the Project would not have the potential to convert Farmland to non-agricultural use, and there would be no impact.

b. Less than Significant Impact

The Project stockpile sites are not located on land under a Williamson Act contract (CDOC 2024a). The Project stockpile sites are located on land zoned for Agriculture (A) by Alameda County. Uses permitted by right in the Agriculture zone include various traditional agricultural uses. Conditionally permitted uses include those uses related to public utility uses or buildings (Alameda County Zoning Ordinance Chapter 17.06.40) (Alameda County n.d.-a). The public utility use is consistent with the Project because the Project would facilitate EBMUD's continued replacement of critical public utility pipelines that serve the public. Public utility use in Agricultural lands requires a conditional use permit from Alameda County, for which EBMUD will submit an application. The Project would be implemented in compliance with the conditional use permit and would thus be compliant with applicable zoning regulations. Because the Project would obtain a conditional use permit, and because the Project would comply with permit conditions set by Alameda County, the Project would not conflict with agricultural zoning. The impact would be less than significant.

c and d. No Impact

Neither of the Project stockpile sites are zoned for forest land, timberland, or timberland production. The existing Project stockpile site boundaries would be maintained; no land would be converted. The Project would not have the potential to conflict with existing zoning for, or cause rezoning of, forest or timberland uses. The Project would also not have the potential to

result in the loss of forest land or conversion of forest land to non-forest use. No impact would occur.

e. No Impact

As described above in Impacts a through d, the Project is not located on Farmland or forest land and would not convert any Project sites away from agricultural or forest uses (since such uses are not present). The Project supports EBMUD's trench soil management as part of EBMUD's ongoing pipeline repair and replacement activities. The pipelines undergoing repair and replacement serve existing customers within EBMUD's service area; therefore, pipeline repair and replacement would not contribute to indirect or off-site conversion of agricultural or forest land (e.g., by inducing unplanned population growth that could cause additional development and land conversion). Therefore, implementation of the Project would not have the potential to 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. No impact would occur.

3.5.3 Air Quality

Environmental Impacts	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
3. 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?	☐	☐	☒	☐

Discussion

Setting

The Project is located within the San Francisco Bay Area Air Basin (SFBAAB). The San Francisco Bay Area (Bay Area) has a Mediterranean climate characterized by wet winters and dry summers. During the summer, a high-pressure cell centered over the northeastern Pacific Ocean results in stable meteorological conditions and a steady northwesterly wind flow that generally keeps storms from affecting the California coast. During the winter, the Pacific high-pressure cell weakens, resulting in increased precipitation and the occurrence of storms. The highest air pollutant concentrations in the Bay Area generally occur during inversions, when a surface layer of cooler air becomes trapped beneath a layer of warmer air. An inversion reduces the amount of vertical mixing and dilution of air pollutants in the cooler air near the surface.

The California Air Resources Board (CARB) and United States Environmental Protection Agency (U.S. EPA) focus on the following criteria air pollutants as regional indicators of ambient air quality:

- ozone
- coarse particulate matter (PM_{10})
- fine particulate matter ($PM_{2.5}$)
- nitrogen dioxide
- carbon monoxide
- sulfur dioxide
- lead

In the SFBAAB, the primary criteria air pollutants of concern are ground-level ozone formed through reactions of oxides of nitrogen (NO_x) and reactive organic gases (ROG), PM_{10}, and $PM_{2.5}$.

Localized air pollutants that generally dissipate with distance from the emission source can pose a health risk to nearby populations. Toxic air contaminants (TACs), such as diesel particulate matter (DPM), are considered localized pollutants. $PM_{2.5}$ is also considered a localized air pollutant, in addition to being considered a regional air pollutant. Unlike criteria air pollutants, which generally affect regional air quality, TAC emissions are evaluated based on estimations of local concentrations and risk assessments.

Sensitive Receptors

Sensitive receptors are areas where individuals are more susceptible to the adverse effects of poor air quality. Sensitive receptors include, but are not limited to, hospitals, schools, daycare facilities, elderly housing, and convalescent facilities. Residential areas are also considered sensitive receptors because people are often at home for extended periods, thereby increasing the duration of exposure to potential air contaminants.

There are no sensitive receptors identified within 1,000 feet of the Miller Road stockpile site and the rock and sand stockpile site.

During Project operation, trucks will access the Miller Road stockpile site and the rock and sand stockpile site via Redwood Road and Miller Road. Sensitive receptors located on Redwood Road include residences on both sides of the road, three schools (including Castro Valley High School, Redwood Christian Elementary School, and Proctor Elementary School), two pre-schools (Redwood Forest Pre-School and A Kids Kingdom Pre-School), and Kenneth C Aitken Senior Center. These sensitive receptors are located as close as 50 feet from the road's centerline. Additional sensitive receptors located within 1,000 feet of Redwood Road include Honey Bees Preschool and Daycare about 620 feet to the east, Little Duck Montessori Preschool about 760 feet to the west, Alma Preschool about 550 feet to the east of the Redwood Road, and additional residences.

The Bay Area Air Quality Management District (BAAQMD) recommends evaluating health risks to offsite worker receptors, which are not considered sensitive receptors[1]. There are no offsite worker receptors identified within 1,000 feet of the Miller Road stockpile site and the rock and sand stockpile site. Offsite worker receptors are located at the commercial uses along both sides of Redwood Road as close as 50 feet from the road's centerline.

Bay Area Air Quality Management District CEQA Guidelines

The Project site is in the SFBAAB, which is under the jurisdiction of the BAAQMD. The BAAQMD has adopted thresholds of significance to assist lead agencies in the evaluation and

[1] On January 22, 2025, the BAAQMD announced its new name as the Bay Area Air District (Bay Area Air District 2025).

mitigation of air quality impacts under CEQA (BAAQMD 2022). The BAAQMD's thresholds established levels at which emissions of ozone precursors (i.e., reactive organic gases [ROGs] and NO_x), PM_{10}, $PM_{2.5}$, carbon monoxide, TACs, and odors could cause significant air quality impacts. The BAAQMD's thresholds of significance are used in this analysis and are summarized in Table 3-1.

Table 3-1 BAAQMD's Project-Level Thresholds of Significance for Air Quality

Impact Analysis	Pollutant	Threshold
Regional Air Quality (Operation)	ROG	54 pounds/day (average daily emission) 10 tons/year (maximum annual emission)
	NOx	54 pounds/day (average daily emission) 10 tons/year (maximum annual emission)
	PM_{10}	82 pounds/day (average daily emission) 15 tons/year (maximum annual emission)
	$PM_{2.5}$	54 pounds/day (average daily emission) 10 tons/year (maximum annual emission)
Local Community Risks and Hazards	$PM_{2.5}$	0.3 µg/m^3 (annual average)
	TACs	Cancer risk increase > 10.0 in one million Chronic hazard index > 1.0
	Local CO	9.0 ppm (8-hour average), 20.0 ppm (1-hour average)

µg/m^3 = micrograms per cubic meter; ROG = reactive organic gases; NO_x = oxides of nitrogen; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; CO = carbon monoxide

Sources: (BAAQMD 2022)

Air districts such as BAAQMD use regional air dispersion models to evaluate regional criteria air pollutants. However, these dispersion models have limited sensitivity to the relatively small (or negligible) changes in criteria air pollutant concentrations associated with an individual project. Therefore, providing reliable estimates of specific health risks associated with regional air pollutant emissions from an individual project is not feasible and would result in speculative results (SJVUAP 2018; SCAQMD 2018). The methodology used in this analysis for regional criteria air pollutants is consistent with the California Supreme Court's ruling regarding Sierra Club v. County of Fresno (California Supreme Court 2018).

The BAAQMD's threshold of significance for local carbon monoxide concentrations is equivalent to the 1- and 8-hour California ambient air quality standards of 20.0 and 9.0 parts per million, respectively, because these represent levels that are protective of public health. The BAAQMD has developed conservative screening criteria that can be used to determine if a project would generate traffic congestion at intersections that could potentially cause or contribute to local carbon monoxide levels above the California ambient air quality standards.

According to the BAAQMD, a project would result in a less-than-significant impact related to localized carbon monoxide concentrations if all the following screening criteria are met:

- The project is consistent with an applicable Congestion Management Program (CMP) established by the County Congestion Management Agency for designated roads or highways, regional transportation plans, and local congestion management agency plans.
- The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.
- The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

a. Less than Significant

The BAAQMD's 2017 Clean Air Plan (BAAQMD 2017) is the applicable air quality plan for projects located in the SFBAAB. Consistency may be determined by evaluating whether the Project supports the primary goals of the 2017 Clean Air Plan, including applicable control measures contained within the plan, and would not conflict with or obstruct implementation of any of the control measures.

The primary goals of the 2017 Clean Air Plan are the attainment of ambient air quality standards and reduction of population exposure to air pollutants for the protection of public health in the Bay Area. The control measures from the 2017 Clean Air Plan, which aim to reduce air pollution and greenhouse gases (GHGs) from stationary, area, and mobile sources, are organized into nine categories. As described in Table 3-2, the Project would be consistent with the applicable control measures from the 2017 Clean Air Plan. Therefore, the Project would not conflict with or obstruct implementation of the applicable air quality plan, and the impact would be less than significant.

Table 3-2 Project Consistency with BAAQMD's 2017 Clean Air Plan

Control Measures	Project Consistency
Stationary Source	**Not applicable**. The stationary source measures, which are designed to reduce emissions from stationary sources, are incorporated into rules adopted by the BAAQMD and then enforced by the BAAQMD's Permit and Inspection programs. Because the Project would not include stationary sources, the stationary source control measures are not applicable to the Project.
Transportation	**Consistent.** The transportation control measures are designed to reduce vehicle trips, use, miles traveled, idling, or traffic congestion for the purpose of reducing vehicle emissions. As noted in Section 3.5.17 Transportation, the Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, and the Project would have a less than significant vehicle miles traveled (VMT) impact. In addition, according to the 2024 Climate Action Plan Update, EBMUD has transitioned from petroleum diesel to nearly 100 percent renewable diesel for its medium- and heavy-duty fleet, reducing on-road vehicle GHG emissions. Therefore, the Project would be consistent with the transportation control measures in the 2017 Clean Air Plan.

Control Measures	Project Consistency
Energy	**Not applicable**. The energy control measures are designed to reduce emissions of criteria air pollutants, TACs, and GHGs by decreasing the amount of electricity consumed in the Bay Area, as well as decreasing the carbon intensity of the electricity used by switching to less GHG-intensive fuel sources for electricity generation. Since these measures primarily apply to electrical utility providers, the energy control measures are not applicable to the Project.
Buildings	**Not applicable**. The BAAQMD has authority to regulate emissions from certain sources in buildings such as boilers and water heaters but has limited authority to regulate buildings themselves. Therefore, the building control measures focus on working with local governments that have authority over local building codes to facilitate adoption of best practices and policies to control GHG emissions. Because the Project would not construct new buildings, the building control measures are not applicable to the Project.
Agriculture	**Not applicable**. The agriculture control measures are designed to primarily reduce emissions of methane. Since the Project does not include any agricultural activities, the agriculture control measures are not applicable to the Project.
Natural and Working Lands	**Not applicable.** The control measures for the natural and working lands sector focus on increasing carbon sequestration on rangelands and wetlands, as well as encouraging local governments to adopt ordinances that promote urban-tree plantings. Since the Project does not include the disturbance of any rangelands or wetlands, the natural and working lands control measures are not applicable to the Project.
Waste Management	**Consistent.** The waste management measures focus on reducing or capturing methane emissions from landfills and composting facilities, diverting organic materials away from landfills, and increasing waste diversion rates through efforts to reduce, reuse, and recycle. A goal of the more frequent off-haul events is for the trench soil to be reused beneficially as opposed to being disposed at landfills. Therefore, the Project would be consistent with the waste management control measures in the 2017 Clean Air Plan.
Water	**Not applicable**. The water control measures to reduce emissions from the water sector will reduce emissions of criteria pollutants, TACs, and GHGs by encouraging water conservation, limiting GHG emissions from publicly owned treatment works, and promoting the use of biogas recovery systems. Since these measures primarily apply to publicly owned treatment works (sewage treatment plant that is owned, and usually operated, by a government agency), the water control measures are not applicable to the Project.
Super GHGs	**Not applicable**. The super-GHG control measures are designed to facilitate the adoption of best GHG control practices and policies through the BAAQMD and local government agencies. Since these measures do not apply to individual developments, the super-GHG control measures are not applicable to the Project.

Sources: (BAAQMD 2017)

b. Less than Significant

The Project does not include construction. The Project involves three operational components, including a gradual increase in the amount of trench soil imported to the Miller Road stockpile site, an increase in the import and export of backfill materials at the rock and sand stockpile site, and removal of stockpiled trench soil (referred to as off-haul events) approximately every 5 years but potentially every 1 to 2years if beneficial reuse opportunities arise.

Operation of the Project would generate criteria pollutant emissions that could potentially impact regional air quality. The primary pollutant emissions of concern during Project operation would be ROG, NOx, and exhaust PM_{10} and $PM_{2.5}$ from mobile sources (i.e., truck trips and worker commute trips) and on-site off-road construction equipment. For the import of trench soil to the Miller Road stockpile site and the import and export of backfill materials at the rock and sand stockpile site, the increases in annual import and export amount would increase the off-site truck trips, while the worker commute trips and off-road construction equipment usage would be similar to existing conditions. To be conservative, criteria air pollutant emissions from the existing operations of the Miller Road stockpile site and the rock and sand stockpile site were not estimated and subtracted from the Project's estimated criteria air pollutant emissions.

For mobile sources, the import of trench soil to the Miller Road stockpile site, and the import and export of backfill materials at the rock and sand stockpile site would each generate about 1,100 truck roundtrips per year for a total 2,200 truck roundtrips per year. Additionally, one worker would travel to the Project site once per week to maintain both the Miller Road stockpile site and the rock and sand stockpile site, generating 52 worker commute roundtrips per year in total. During each off-haul event, which would occur approximately every 5 years and last for 1 to 3 months, up to 50,000 CY of trench soil would be off-hauled, generating 4,200 truck roundtrips and up to 240 worker commute roundtrips per event.[2] To be conservative, a worst-case scenario is assumed for the off-haul events where the off-haul events would occur once every year with 50,000 CY of trench soil being removed over a one-month period, resulting in the highest daily truck trips.

Under the worst-case scenario, the three components of the Project would generate in total 6,400 truck roundtrips and 292 worker commute roundtrips annually, see Table 2-1.[3] The Project's average daily criteria air pollutant emissions would be highest when all three Project components would occur concurrently on the same day. During the worst-case scenario day, the three components of the Project would generate in total 228 truck roundtrips and five worker commute roundtrips per day.

The BAAQMD currently recommends using the most recent version of the California Emissions Estimator Model (CalEEMod version 2022.1) to estimate construction and operational emissions of criteria air pollutants and precursors for a proposed project. CalEEMod uses widely accepted models for emission estimates combined with appropriate default data for a variety of land use projects that can be used if site-specific information is not available. The primary input data

[2] See Table 2-1 for truck trip details. If off-haul events occurred consistently every 1 to 2 years, they would remove less than 50,000 CY because the import is estimated to be up to 11,000 CY per year.

[3] Under the worst-case scenario, the off-haul events would last for a 1-month period and generates 80 worker commute roundtrips per event, which is less than the upper bound worker commute roundtrip generation of 240 roundtrips per event (assuming a 3-month event period). The upper bound estimate of 240 worker commute roundtrips per event is used to calculate the Project's annual criteria air pollutant and GHG emissions to provide the most conservative analysis.

used to estimate criteria air pollutant emissions associated with operation of the Project included information about the off-road construction equipment inventory and usage, frequency of import and off-haul events, Project-generated truck and worker commute trips, and travel distances for each trip category[4]. The Project would utilize the existing SWPPP, which includes best management practices for wind erosion control, requiring watering exposed soil and unpaved areas and limiting vehicle speeds on unpaved areas for dust control (EBMUD 2019). A water truck and a sweeper will be used during the off-haul event for dust control. It was assumed that the exposed areas will be watered twice per day. Based on Project-specific information, criteria air pollutant emissions from Project operation were calculated using CalEEMod version 2022.1 and its associated methodologies. The input parameters and assumptions used to estimate criteria air pollutant emissions, detailed calculations for criteria air pollutant emissions from off-road heavy construction equipment, and CalEEMod reports for criteria air pollutant emissions from mobile sources are provided in Appendix B.1.

Project emissions were estimated for the 2030 Project condition regarding trip generation and off-road construction equipment usage. Since routine off-haul events may begin as early as 2025, year 2025 emission factors were used in this analysis to be conservative because statewide vehicle emission standards are required to improve over time, and estimating emissions for the earliest year of operation provides the maximum expected annual emissions. The annual emissions during operation of the Project were estimated for the increased import of trench soil to the Miller Road stockpile site, the increased import and export of backfill materials at the rock and sand stockpile site, and the off-haul events. To analyze average daily emission rates, the total annual emissions estimated for each Project component were averaged over the total working days associated for that component:

- Import of trench soil to the Miller Road stockpile site: 260 workdays per year for truck trips and 52 workdays for off-road equipment usage and worker commute trips[5];
- Import and export of backfill materials at the rock and sand stockpile site: 52 workdays per year for truck trips and off-road equipment usage;
- Off-haul events: 21 workdays per year for a one-month off-haul event (worst-case scenario) for truck trips, worker commute trips,[6] and off-road equipment usage.

The estimated maximum annual emissions and average daily emissions during operation of the Project are presented in Table 3-3. As shown in Table 3-3, the Project's estimated ROG, NOx,

[4] To be conservative, the air emissions calculations assumed that all trucks used for the Project are heavy-duty diesel trucks.

[5] The same worker will maintain both the Miller Road stockpile site and the rock and sand stockpile site.

[6] As discussed above, the upper bound estimate of 240 worker commute roundtrips per event based on a 3-month event period is used to calculate the Project's annual criteria air pollutant and GHG emissions to provide the most conservative analysis. The emissions associated with off-haul event worker commute trips were averaged over a 1-month period (21 workdays) instead of 3 months again, as a worst-case scenario. It should be noted that both worst-case scenarios would not happen during a single off-haul event.

PM_{10}, and $PM_{2.5}$ emissions during operation are below the BAAQMD's threshold of significance and would not result in a cumulatively considerable net increase in criteria air pollutants for which the region is in nonattainment; therefore, the Project's impact on regional air quality would be less than significant.

Table 3-3 Summary of Estimated Operation Emissions for Criteria Air Pollutants

Emission Scenario		Maximum Annual Emissions (tons)				Average Daily Emissions (pounds)			
		ROG	NOx	PM_{10}	$PM_{2.5}$	ROG	NOx	PM_{10}	$PM_{2.5}$
Trench Soil Import and Backfill Material Import/Export	Off-Road Equipment	0.01	0.11	0.06	0.03	0.20	4.3	2.20	1.2
	Mobile	<0.005	0.12	0.02	0.01	0.06	2.9	0.59	0.18
	Subtotal	**0.01**	**0.23**	**0.08**	**0.04**	**0.26**	**7.2**	**2.8**	**1.4**
Off-haul events (Every 5 years)	Off-Road Equipment	0.01	0.19	0.06	0.03	1.3	17.7	5.6	3.2
	Mobile	0.01	0.29	0.06	0.02	0.52	27.9	6.0	1.9
	Subtotal	**0.02**	**0.48**	**0.12**	**0.05**	**1.9**	**45.6**	**11.6**	**5.0**
Total Emissions		**0.03**	**0.71**	**0.20**	**0.09**	**2.1**	**52.8**	**14.4**	**6.4**
BAAQMD Threshold		10	10	15	10	54	54	82	54
Exceed Threshold?		No	No	No	No	No	No	No	No

Sources: See Appendix B.1.

c. Less than Significant

Exposure to Diesel Particulate Matter Emissions during Project Operation

Project operation would generate DPM emissions from the exhaust of on-road trucks and on-site off-road diesel construction equipment. In addition, the Project would generate fugitive $PM_{2.5}$ emissions from onsite earthwork activities, on-road vehicle brake wear and tire wear, and resuspended road dust. As discussed above, there are no sensitive receptors identified within 1,000 feet of the Project site. For sensitive receptors along the haul route, a health risk assessment was conducted to estimate the incremental increase in cancer risk and chronic hazard index (HI) from exposure to DPM emissions from trucks in accordance with guidance from the BAAQMD and Office of Environmental Health Hazard Assessment (OEHHA) (OEHHA 2015). The acute HI for DPM was not calculated because an acute reference exposure level has not been approved by OEHHA and CARB, and the BAAQMD does not recommend analysis of acute non-cancer health hazards from construction activity.

The on-road DPM and $PM_{2.5}$ emissions from trucks travelling by sensitive receptors along the haul route were estimated based on the average daily truck trips. Emission factors for operating and fugitive emissions were derived from CARB's Emission Factors Model (EMFAC2021) and based on U.S. EPA's Compilation of Air Pollutant Emissions Factors (AP-42), Section 13.2.1

Paved Road, respectively. The model input parameters, assumptions, and results are summarized in Appendix B.2.

The annual average concentrations of DPM and $PM_{2.5}$ during Project operation, including the import of trench soil to the Miller Road stockpile site, import and export of backfill materials at the rock and sand stockpile site, and off-haul events, were estimated using the American Meteorological Society/U.S. EPA regulatory air dispersion model (AERMOD). For the analysis, emissions of exhaust PM_{10} were used as a surrogate for DPM, which is a conservative assumption because more than 90 percent of DPM is less than 1 micron in diameter. The input parameters and assumptions used for estimating emission rates of DPM and $PM_{2.5}$ from trucks are included in Appendix B.2.

PM_{10} and $PM_{2.5}$ emissions from off-site trucks were modeled as a line source along Redwood Road between the I-580 Westbound On-Off Ramps and Camino Alta Mira. Daily emissions from operation would occur between 9:00 a.m. and 4:00 p.m. Monday through Friday. The AERMOD model input parameters included one year of BAAQMD meteorological data from the Hayward Executive Airport Automated Surface Observing Systems (ASOS) Met Site (KHWD) located approximately 7.2 miles to the southwest of the Project site.

For sensitive receptors along the haul route, a uniform grid of receptors spaced approximately 66 feet apart with receptor heights of approximately 5 feet was placed along the haul route as a means of developing isopleths (i.e., concentration contours) that illustrate the air dispersion pattern. In addition, lines of discrete receptors spaced approximately 66 feet apart and approximately 50 feet away from the haul route centerline were created for ground level receptors at heights of 5 feet to calculate concentrations at the closest sensitive receptors to the haul route. Comparing to other sensitive receptors and offsite workers receptors identified above, the residential receptors identified along the haul route are among the receptors that are closest to the road and have a longer exposure duration and frequency. Therefore, the discrete residential receptors modeled at 50 feet from the centerline of the haul route represent a reasonable worst-case scenario.

Based on the annual average concentrations of DPM and PM2.5 estimated using AERMOD, potential health risks were evaluated for the maximally exposed individual resident (MEIR) as shown in Figure 3-1. The incremental increase in cancer risk on the MEIR was assessed for an individual initially exposed to DPM as a fetus during the third trimester of pregnancy until the age of 30, assuming 30 years of exposure to Project operation emissions which represents the most sensitive individual who could be exposed to adverse air quality conditions in the vicinity of the haul route. The input parameters and results of the health risk assessment are included in Appendix B.2.

The estimated health risks at the MEIR due to DPM and PM2.5 emissions from Project operation are summarized and compared to the BAAQMD's thresholds of significance in Table 3-4.

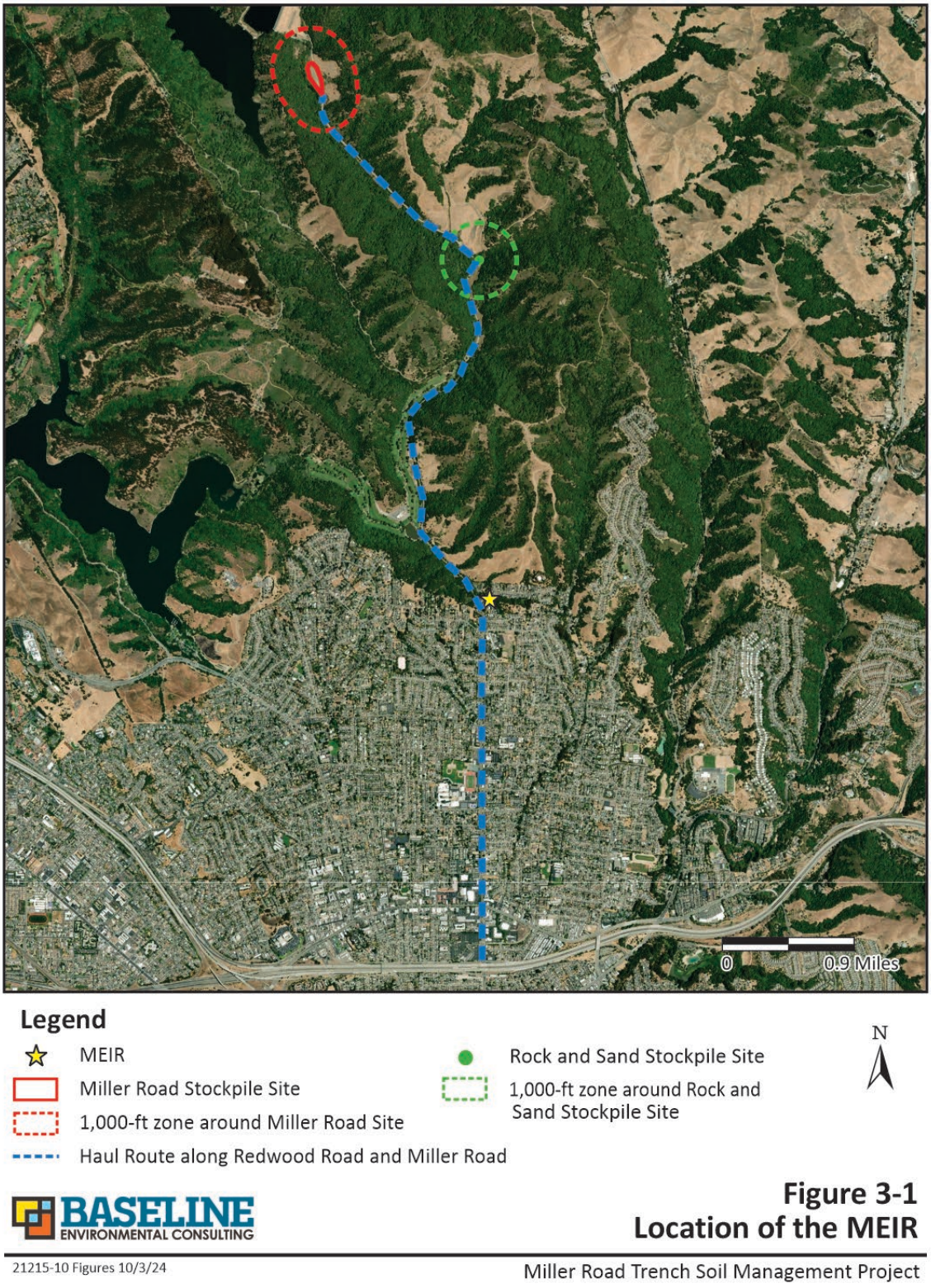

Figure 3-1 Location of the Maximally Exposed Individual Resident (MEIR)

The estimated cancer risk and chronic HI for DPM and average annual concentration of $PM_{2.5}$ at the MEIR were below the BAAQMD's thresholds. Therefore, the Project would not expose sensitive receptors to substantial pollutant concentrations. The impact would be less than significant.

Table 3-4 Health Risks at MEIR during Project Operation

Exposure Scenario	Receptor	Diesel Particulate Matter		$PM_{2.5}$ Annual Average Concentration ($\mu g/m^3$)
		Cancer Risk (per million)	Chronic Hazard Index	
Trench Soil Import and Backfill Material Import/Export	Haul Route MEIR	0.03	<0.01	<0.001
Off-haul events (Every 5 years but modeled yearly to be conservative)		0.06	<0.01	0.005
Total		0.09	<0.01	0.005
BAAQMD Threshold		10	1.0	0.3
Exceed Threshold?		No	No	No

Notes: $\mu g/m^3$ = micrograms per cubic meter

Sources: See Appendix B.2.

Exposure to Carbon Monoxide Emissions during Project Operation

The source of local carbon monoxide concentrations is often associated with heavy traffic congestion at nearby intersections. The Project would generate approximately 233 roundtrips per day (466 one-way trips), including 228 truck roundtrips and 5 worker commute trips during an off-haul year event, which would not exceed the BAAQMD's screening criteria for local carbon monoxide concentrations. Therefore, the Project would not result in a net increase in the potential exposure of existing sensitive receptors to carbon monoxide concentrations from Project-generated traffic.

d. Less than Significant

Facilities that may generate objectionable odors affecting a substantial number of people include wastewater treatment facilities, sanitary landfills, composting facilities, petroleum refineries, chemical manufacturing plants, and food processing facilities. As a stockpile operation, the Project would not be expected to generate significant odors or other emissions for a substantial duration. The Project would increase the existing operation at the Project site and would not introduce new odor sources. Therefore, Project impacts related to odors and other emissions would be less than significant.

3.5.4 Biological Resources

Environmental Impacts	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
4. 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 US 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?	☐	☐	☒	☐

Discussion

The Project is within EBMUD's Upper San Leandro Watershed, which ranges in elevation from 460 to 2,000 feet and is both rugged and ecologically diverse. Primary vegetation types include California annual grassland, coyote brush, chamise-black sage chaparral, mixed oak, coast live oak, and eucalyptus series. The Upper San Leandro Watershed also contains the only occurrences of knobcone pine forest and a large stand of second growth redwood. The Miller Road stockpile site and rock and sand stockpile site are previously disturbed and consists of dirt and gravel piles that are predominantly devoid of vegetation with occasional patches of weedy vegetation.

a. Less than Significant Impact

The potential for special-status species to occur at the Project site was evaluated by determining which special-status species occur in the vicinity of the Project through a literature and database search. Special-status species included those listed as endangered, threatened, rare, or proposed for listing by U.S. Fish and Wildlife Service (USFWS) or California Department of Fish and Wildlife (CDFW). California Native Plant Society (CNPS) plant lists and locally rare plant lists were also reviewed. The following sources were reviewed to determine which special-status plant and wildlife species have been documented to occur in the vicinity of the Project:

- California Natural Diversity Database (CNDDB) records
- USFWS Information for Planning and Consultation (IPaC) Trust Resource Report
- USFWS Critical Habitat Mapper

The special-status species with known occurrences within 5 miles of the Project site and for which suitable habitat is present in the Project area are summarized in Table 3-5. The Project site is located within USFWS-designated critical habitat for Alameda whipsnake.

Table 3-5 Special Status Species with Potential to Occur in the Project Area

Common Name	Scientific Name	Federal Status	State Status
Plants			
bent-flowered fiddleneck	*Amsinckia lunaris*	None	None; CRPR 1B.2
big-scale balsamroot	*Balsamorhiza macrolepis*	None	None; CRPR 1B.2
Congdon's tarplant	*Centromadia parryi ssp. congdonii*	None	None; CRPR 1B.1
dark-eyed gilia	*Gilia millefoliata*	None	None; CRPR 1B.2
Dense flower owl's clover	*Castilleja densiflora*	None	None; CRPR 1B.2
Diablo helianthella	*Helianthella castanea*	None	None; CRPR 1B.2
fragrant fritillary	*Fritillaria liliacea*	None	None; CRPR 1B.2
Jepson's coyote-thistle	*Eryngium jepsonii*	None	None; CRPR 1B.2
Loma Prieta hoita	*Hoita strobilina*	None	None; CRPR 1B.1
Marin knotweed	*Polygonum marinense*	None	None; CRPR 3.1
most beautiful jewelflower	*Streptanthus albidus ssp. peramoenus*	None	None; CRPR 1B.2
Mt. Diablo fairy-lantern	*Calochortus pulchellus*	None	None; CRPR 1B.2
Presidio clarkia	*Clarkia franciscana*	Endangered	Endangered; CRPR 1B.1
Santa Cruz tarplant	*Holocarpha macradenia*	Threatened	Endangered; CRPR 1B.1
Tiburon buckwheat	*Eriogonum luteolum var. caninum*	None	None; CRPR 1B.2
western leatherwood	*Dirca occidentalis*	None	None; CRPR 1B.2

Common Name	Scientific Name	Federal Status	State Status
woodland woollythreads	*Monolopia gracilens*	None	None; CRPR 1B.2
Wildlife			
Alameda whipsnake	*Masticophis lateralis euryxanthus*	Threatened	Threatened
Bay checkerspot butterfly	*Euphydryas editha bayensis*	Threatened	Invertebrate of Conservation Priority
California red-legged frog	*Rana draytonii*	Threatened	None
California tiger salamander	*Ambystoma californiense*	Threatened	Threatened
Foothill yellow-legged frog	*Rana boylii*	Threatened	Endangered
Monarch butterfly	*Danaus plexippus*	Candidate	Invertebrate of Conservation Priority
Western bumble bee	*Bombus occidentalis*	None	Candidate Endangered; Invertebrate of Conservation Priority
Western pond turtle	*Emys marmorata*	Proposed Threatened	None

Source: (CDFW 2024; USFWS 2024)

Under the Project, the existing operation and maintenance activities would continue. The Project would not expand or modify the footprints of the stockpiles sites or access roads. The Project would alter the frequency and timing of haul trips (as discussed in 2, Project Description), but would not change the type or location of the existing activities that could result in adverse impacts to or a reduction of special-status species habitat. All trucks would use the existing access roads (Miller Road and Redwood Road), which do not provide suitable habitat for special-status plant species. Ground-disturbing activities would be limited to the stockpile sites, where ground cover consists of dirt and gravel piles that are predominantly devoid of vegetation with occasional patches of weedy vegetation. Tiburon buckwheat, dotseed plantain, and milkweed may occur in disturbed areas. Dotseed plantain and milkweed are known host plants for bay checkerspot butterfly and monarch butterfly, respectively. Due to the existing and ongoing level of disturbance at the Project site these species are unlikely to be present. Similarly, although Tiburon buckwheat can establish on gravelly substrate, the ongoing disturbance at both stockpile sites is expected to preclude the species' ability to occupy the Project site. Therefore, the Project would not result in impacts to special-status plants or host plants for special-status butterfly species.

The Miller Road stockpile site and rock and sand stockpile site are currently operated under the Trench Spoils Storage and Removal Program, which is one of the covered activities identified in the EBMUD Low Effect East Bay Habitat Conservation Plan (HCP) (EBMUD 2008). The Trench Spoils Storage and Removal Program specifically includes the hauling, storage, and removal of trench spoils associated with the Miller Road site. In compliance with HCP requirements,

EBMUD implements HCP best management practices (BMPs) and avoidance and minimization measures (AMMs) as part of the Trench Spoils Storage and Removal Program within the watershed, including Erosion Control (3.2.1.4), Operation of Farm Machinery (3.2.5.1), and Vehicular Access of Watershed Roads (3.2.9.1). BMPs include environmental training and educational materials regarding covered species identification, stop work if encountering a covered species, including environmental awareness training for EBMUD staff and contractor, restricted access along watershed roads, adherence to posted speed limits, and implementation and routine inspection and maintenance of erosion control devices at stockpile sites. Although the HCP specifically provides coverage for impacts to California red-legged frog, western pond turtle, and Alameda whipsnake, implementation of these measures also minimizes potential impacts to other special-status wildlife species. Because the Project would not result expand or modify stockpile sites or access roads and would be required to implement HCP avoidance and minimization measures to reduce impacts to special-status species and their habitat, the impact would be less than significant.

b. Less than Significant Impact

The Miller Road stockpile site is bounded by Lower San Leandro Creek to the west. No riparian habitat or other sensitive natural communities are present within the Project site where ground cover consists of dirt and gravel piles that are predominantly devoid of vegetation with occasional patches of weedy vegetation. The Project would not change the existing footprints of the stockpile sites, and therefore would not impact habitat or natural communities. The Project would continue to be operated in accordance with the existing SWPPP (EBMUD 2019) or any updated SWPPP. The SWPPP requires implementation of BMPs to control stormwater runoff or erosion and avoid impacts to off-site water bodies. BMPs include practices such as stabilizing soils in disturbed areas, covering stockpiles, appropriate compaction and grading, and completing regular inspections. Compliance with the SWPPP would avoid any impacts 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; the impact would be less than significant.

c. Less than Significant Impact

No state or federally protected wetlands occur within Project stockpile sites. As described above under Impact b, the Project would continue to be operated in accordance with the existing SWPPP (EBMUD 2019), which would prevent impacts to off-site water bodies by implementing appropriate stormwater control BMPs. Compliance with the SWPPP would avoid any impacts 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; the impact would be less than significant.

d. No Impact

Wildlife corridors link together areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. Wildlife movement activities usually fall into one of three movement categories: (1) dispersal (e.g., juvenile animals from

natal areas, or individuals extending range distributions); (2) seasonal migration; and (3) movements related to home range activities (foraging for food or water, defending territories, searching for mates, breeding areas, or cover).

The Project stockpile sites are isolated areas within the landscape of EBMUD watershed land; the sites are occupied by stockpiles and already experience regular use as trench soils are deposited, and as rock and sand is delivered and picked up. The sites do not serve as important regional wildlife corridors or nursery sites. The stockpile sites are surrounded by watershed land which allow wildlife movement in the vicinity. The Project would not change the boundaries of the stockpile sites or construct new facilities (e.g., fences, roadways) that could pose an impediment to wildlife movement or interfere with nursery sites. Therefore, the Project would not result in any impact to 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. Less than Significant Impact
Although EBMUD is not subject to building and land use zoning ordinances (such as tree ordinances) for projects involving the transmission of water (Government Code Section 53091), EBMUD strives to consider and work with host jurisdictions and neighboring communities during project planning and to conform to local environmental protection policies, where feasible and not contrary to its public purpose and responsibilities. As discussed under impact 4 a. above, the Project would be operated in accordance with the conditions of the HCP, which would ensure continued protection of biological resources. The Project would not involve tree removal that could potentially conflict with a policy or ordinance protecting biological resources. Therefore, the impact would be less than significant.

f. Less than Significant Impact
The stockpile sites are located within the boundaries of the HCP and trench soil storage and removal is a covered activity under the HCP. The Project activities would continue to be managed in accordance with HCP conditions, as described above under impact 4 a. Therefore, the Project would not conflict with the applicable habitat conservation plan, and the impact would be less than significant.

3.5.5 Cultural Resources

Environmental Impacts	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
5. 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 formal cemeteries?	☐	☐	☒	☐

Discussion

Project activities would occur on sites that have been previously disturbed for existing stockpile operations. Although the Project would involve an increase in the volume of trench soil taken to Miller Road stockpile site, and a corresponding increase in rock and sand stockpile site, off-haul and delivery events would be more frequent; therefore, the Project site footprints would not be increased, and no new area would be disturbed. EBMUD maintains an Archaeological Resources Geographic Information System (GIS) database that is updated annually with the results of a records search of the Northwest Information Center (NWIC) of the California Historical Resources Information System; no known cultural resources are present at the Project sites.

a. No Impact

CEQA Guidelines Section 15064.5 requires the lead agency (EBMUD) 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 of Historical Resources (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 Project footprint would be limited to the existing stockpile sites, where no historical resources are present. Therefore, the Project would have no potential to cause a substantial adverse change in the significance of a historical resource. No impact would occur.

b. Less than Significant Impact

The Project would involve vehicle and equipment use within the existing bounds of the highly disturbed stockpile sites. The Project would not require construction or excavation; no ground disturbance would occur. Thus, the Project would not involve activities that would have the potential to result in inadvertent discovery of buried archaeological resources. As a result, the

Project would not have the potential to cause a substantial adverse change in the significance of an archaeological resource, and the impact would be less than significant.

c. Less than Significant Impact

As described under Impact b, above, the Project would not involve ground-disturbing activities. If, however, human remains were found during Project operation, EBMUD would be required by law to adhere to regulations outlined in the California Health and Safety Code Section 7050.5. In accordance with this section, in the event of unanticipated discovery of human remains, no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. If the human remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission, which will determine and notify a most likely descendant. The most likely descendant shall complete the inspection of the site within 48 hours of being granted access and provide recommendations as to the treatment of the remains to the landowner. As required by law, EBMUD will work with the most likely descendant to implement the recommendations for treatment of the remains. EBMUD would adhere to existing statutory requirements, and the impact would be less than significant.

3.5.6 Energy

Environmental Impacts	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
6. ENERGY. Would the project:				
a) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

Discussion

As discussed in Section 3.5.3, Air Quality, the CalEEMod version 2022.1 was used to quantify construction and operational emissions of criteria air pollutants and precursors for the Project. The CalEEMod quantifies direct emissions from off-road construction equipment inventory and usage, frequency of import and off-haul events, project-generated truck and worker commute trips, and travel distances for each trip category.

a. Less than Significant

Operation of the Project would require the use of machinery and vehicles, which are discussed in Chapter 2, Project Description, including a breakdown of equipment use by Project activity in Table 2-3. The Project would require the use of an excavator, D6 dozer, D8 dozer, water truck and a sweeper. While the precise amount of construction energy consumption is uncertain, use of these fuels would be consistent with typical construction and manufacturing practices and would not be wasteful or unnecessary because doing so would not be economically sustainable for contractors. Vehicles and equipment would comply with federal standards for vehicle fuel efficiency because all vehicles and machinery that are sold in the U.S. must meet those standards. The Project would increase the import of trench soil to the Miller Road stockpile site; increase the import and off-haul of backfill materials at the rock and sand stockpile site; and require smaller off-haul events at regular intervals to remove stockpiled soils at the Miller Road stockpile site. Operational energy use would be similar to the existing operational energy use of the site, despite the increased aforementioned level of activities, due to advances in energy efficiency of equipment resulting in a less than significant impact.

b. No Impact

The Project would comply with federal standards for vehicle fuel efficiency because all vehicles and machinery that are sold within the U.S. are required to meet those standards. EBMUD has long been committed to renewable energy generation and wise energy use, and generates energy through hydropower, solar power, and biogas production at its wastewater treatment plant. The Project would neither affect the generation nor use of renewable energy. Therefore, there would be no impact associated with conflicts with energy plans and policies related to renewable energy or energy efficiency.

3.5.7 Geology and Soils

Environmental Impacts	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
7. 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 offsite 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 wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒

Discussion

This section describes the existing geologic and paleontological environmental setting in the Project area based on review of published reports and maps, including a 1998 geotechnical investigation report prepared by the EBMUD for the Miller Road stockpile site. This section also

discusses the applicable regulatory framework and assesses the Project's impacts related to geology, soils, seismicity, and paleontological resources.

Impact Evaluation

a. Less than Significant Impact

The Project stockpile sites are located within the Coast Ranges geomorphic province, which includes numerous active faults identified by the California Geological Survey (CGS) under the Alquist-Priolo Earthquake Fault Zoning Act. The Alquist-Priolo Earthquake Fault Zoning Act requires the State Geologist to establish regulatory zones (known as Earthquake Fault Zones) around the surface traces of known active faults and to issue appropriate maps. CGS defines an active fault as one that has ruptured during the Holocene Epoch (i.e., the last 11,000 years). The entire Bay Area is within the San Andreas Fault Zone, a complex of active faults. Numerous historical earthquakes have been generated in Northern California on faults within the San Andreas Fault Zone. The major active faults that are closest to the Project stockpile sites are the Hayward (2.8 miles away), Calaveras (5.6 miles away), and San Andreas (21 miles away) faults (CDOC 2024b).

(i) Surface Fault Rupture

A surface rupture occurs when fault movement breaks through to the surface and is expected to occur along known active fault traces. Areas susceptible to surface fault ruptures are delineated by the CGS Alquist-Priolo Earthquake Fault Zones. The Project stockpile sites are not located within an Alquist-Priolo Earthquake Fault Zone (CDOC 2024b). The nearest Alquist-Priolo Earthquake Fault Zone is the Hayward Fault Zone approximately 2.8 miles southwest of the Project stockpile sites. No impact would occur.

(ii) Seismic Ground Shaking

Seismic ground shaking generally refers to all aspects of motion of the earth's surface resulting from an earthquake and is normally the major cause of damage in seismic events. The extent of ground shaking is controlled by the magnitude and intensity of the earthquake, distance from the epicenter, and local geologic conditions.

The Working Group on California Earthquake Probabilities and the U.S. Geological Survey (USGS) have predicted the following probabilities of a Moment Magnitude (MW) 6.7 or greater earthquake occurring on Bay Area faults between 2014 and 2043 (USGS 2016):

- 33 percent probability on the Hayward Fault;
- 22 percent probability on the San Andreas Fault; and
- 72 percent total probability on one of the regional Bay Area faults.

Earthquakes this large can cause widespread damage to structures. The Project would not introduce new structures that would be susceptible to strong ground shaking. No impact would occur.

(iii) Seismic-Related Ground Failure

Liquefaction and lateral spreading are types of ground failure that can be triggered by a seismic event. Liquefaction is the temporary transformation of loose, saturated granular sediments from a solid state to a liquefied state due to seismic ground shaking. In the process, the soil undergoes transient loss of strength, which commonly causes ground displacement or ground failure to occur. Because saturated soils are a necessary condition for liquefaction, soil layers in areas where the groundwater table is near the surface have higher liquefaction potential than those in which the water table is located at greater depths.

Lateral spreading is a form of horizontal displacement of soil toward an open channel or other "free" face, such as an excavation boundary or a creek bank. In a lateral spread failure, a layer of ground at the surface is carried on an underlying layer of liquefied material over a nearly flat surface toward a free face. The lateral spreading hazard tends to mirror the liquefaction hazard for a site when a free face is present.

According to the 1998 geotechnical investigation report, the Miller Road stockpile site is predominantly underlain by approximately 20 feet of fill materials generally consisting of medium-dense clayey, sand silts and silty clays (EBMUD 1998). The fill materials are underlain by bedrock composed of shale, siltstone, and sandstone. The trench soil that are present above the fill materials consist of soil mixed with concrete, asphalt, and gravel. The fill materials and trench soil have a low liquefaction potential.

The native alluvial soils located around the Miller Road stockpile site area, including along the San Leandro Creek bank, consist of medium stiff to stiff sandy clay, and medium dense to dense clayey or silty sand with occasional layers of loose to medium dense sand and gravel. The loose to medium dense sand lenses within the alluvial materials have a high liquefaction potential when saturated. However, due to the discontinuous and random nature of the lenses, the extent of liquefaction would be expected to be limited. Seismic-related ground failures, if they were to occur, would not be large enough to block creek flow or to affect overall stability of the trench soil (EBMUD 1998).

The native soils underlaying and/or surrounding the rock and sand stockpile site likely have a similar liquefaction potential to the Miller Road stockpile site based on the proximity of the stockpile sites to each other and San Leandro Creek. Therefore, impacts associated with ground failure during a seismic event would be less than significant.

(iv) Landslides

Slope failure can occur as either rapid movement of large masses of soil (landslide) or slow, continuous movement (creep) on slopes of varying steepness. Areas susceptible to landslides are characterized by steep slopes and downslope creep of surface materials.

The 1998 geotechnical investigation report found that maintaining a stockpile slope of 3H:1V would provide adequate slope stability under static and seismic conditions. According to EBMUD's current Stockpile Operations Plan, a 3H:1V slope is currently maintained at the Miller

Road stockpile site and trench soil are compacted in approximate 1-foot-thick layers with three to five passes using a dozer or compacter to maintain slope stability (Terraphase Engineering Inc. 2021). The Project would continue to implement the slope stability protocols identified in the Stockpile Operations Plan. The maximum capacity of the rock and sand stockpile (2,000 CY) is substantially less than the Miller Road stockpile (125,000 CY) and would not pose a risk related to landslides under the Project. Therefore, impacts associated with landslides would be less than significant.

b. Less than Significant

Soil erosion is discussed in greater detail in Section 3.5.10, Hydrology and Water Quality. As detailed in the Project Description, the Project would continue to adhere to the existing SWPPP. EBMUD's existing SWPPP identifies erosion controls for the Miller Road stockpile site, such as implementation of hydroseeding and drainage swales (EBMUD 2019). The rock and sand stockpile area is covered with coarse sand and gravel to prevent erosion. The Project would continue to implement erosion controls in accordance with the SWPPP and would not substantially alter existing stormwater runoff for the stockpile sites. Therefore, impacts associated with substantial soil erosion, or the loss of topsoil would be less than significant.

c. Less than Significant

Subsidence or Collapse

Subsidence or collapse can result from the removal of subsurface water resulting in either catastrophic or gradual depression of the surface elevation of the Project site. The Project would not include groundwater pumping or removal. No impact would occur.

Settlement

The Project does not propose new structures and there are no existing structures located on or adjacent to the existing stockpile sites that could be affected by settlement. No impact would occur.

Liquefaction, lateral Spreading, and Landslides

As discussed above, the Project's potential impacts related to liquefaction, lateral spreading, and landslides would be less than significant.

d. No Impact

Expansive soils are characterized by the potential for shrinking and swelling as the moisture content of the soil decreases and increases, respectively. Shrink-swell potential is influenced by the amount and type of clay minerals present and can be measured by the percent change of the soil volume. The Project does not propose new structures and there are no existing structures located on or adjacent to the existing stockpile sites that could be affected by settlement. No impact would occur.

e. No Impact

The Project stockpile sites do not have existing or proposed septic tanks or alternative wastewater disposal systems. No impact would occur.

f. No Impact

The Project would not excavate or disturb the existing native soils at the stockpile sites. No impact would occur.

3.5.8 Greenhouse Gas Emissions

Environmental Impacts	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
8. 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?	☐	☐	☒	☐

Discussion

Climate change refers to change in the Earth's weather patterns, including the rise in temperature because of an increase in heat-trapping GHGs in the atmosphere. Existing GHGs allow about two-thirds of the visible and ultraviolet light from the sun to pass through the atmosphere and be absorbed by the Earth's surface. To balance the absorbed incoming energy, the surface radiates thermal energy back to space at longer wavelengths, primarily in the infrared part of the spectrum. Much of the thermal radiation emitted from the surface is absorbed by the GHGs in the atmosphere and is re-radiated in all directions. Because part of the re-radiation is back toward the Earth's surface and the lower atmosphere, the global surface temperatures are elevated above what they would be in the absence of GHGs. This process of trapping heat in the lower atmosphere is known as the greenhouse effect.

An increase of GHGs in the atmosphere affects the energy balance of the Earth and results in a global warming trend. Increases in global average temperatures have been observed since the mid-twentieth century and have been linked to observed increases in GHG emissions from anthropogenic sources. The primary GHG emissions of concern are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). Other GHGs of concern include hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6), but their contributions to climate change is less than one percent of the total GHGs that are well-mixed (i.e., that have atmospheric lifetimes long enough to be homogeneously mixed in the troposphere) (IPCC 2013). Each GHG has a different global warming potential. For instance, CH_4 traps about 28 times more heat per molecule than CO_2 (IPCC 2014). Therefore, GHG emissions are reported in metric tons of carbon dioxide equivalent (CO_2e), wherein each GHG emission is weighted by its global warming potential relative to CO_2.

According to the Intergovernmental Panel on Climate Change (IPCC), over the past few hundred years, the atmospheric concentrations of CO_2 have increased to unprecedented levels. Fossil fuels combustion and industrial processes account for the largest share and growth in gross GHG emissions (IPCC 2023). According to the BAAQMD, some of the effects of increased GHG emissions and associated climate change may include loss of snowpack (affecting water supply), more frequent extreme weather events, more large forest fires, more drought years,

and sea-level rise. In addition, climate change may increase electricity demand for cooling, decrease the availability of hydroelectric power, and affect regional air quality and public health (BAAQMD 2017)

California has established the following long-term climate action goals:

- **Assembly Bill (AB) 32:** Reduce GHG emissions to 1990 levels by 2020. The state achieved its 2020 GHG emissions reductions target of returning to 1990 levels four years earlier than mandated by AB 32 (CARB n.d.).
- **Senate Bill (SB) 32:** Reduce GHG emissions to 40 percent below 1990 levels by 2030.
- **AB 1279:** Achieve carbon neutrality as soon as possible, but no later than 2045 and maintain net negative GHG emissions thereafter; and reduce GHG emissions to 85 percent below 1990 levels by 2045.

In 2008, EBMUD adopted a climate change objective in its Strategic Plan. In 2014, EBMUD updated its Climate Change Monitoring and Response Plan to inform future planning of water supply, water quality, and infrastructure planning, and to guide GHG mitigation efforts (EBMUD 2014). In 2023, EBMUD's Energy Policy (Policy 7.07) was updated to achieve carbon neutrality for GHG emissions from both the water and wastewater systems by 2030. In 2024, EBMUD prepared an updated Climate Action Plan that includes mitigation actions to reduce EBMUD's GHG emissions, as well as adaptation plans to cope with the inevitable changing conditions to ensure resilience.

a. Less than Significant

Operation of the Project would generate GHG emissions from several sources, such as operation of on-site off-road construction equipment, off-site truck trips, and worker commute trips. The Project involves three operational components, including a gradual increase in the volume of trench soil imported to the Miller Road stockpile site, an increase in the import and off-haul of backfill materials at the rock and sand stockpile site, and removal of stockpiled trench soil (referred to as off-haul events) approximately every 5 years but potentially every 1 to 2 years. The increases in annual import and export volumes would increase the off-site truck trips, while the worker commute trips and off-road construction equipment usage would be similar to existing conditions. To be conservative, all trucks used for the Project are assumed to be heavy-duty diesel trucks.

The BAAQMD does not have a quantitative threshold of significance for GHG emissions; therefore, the estimated net increase in GHG emissions from Project operations is provided for informational purposes and potential impacts related to GHG emissions are discussed qualitatively. Based on Project-specific information, GHG emissions from Project operation were calculated for the 2030 Project condition regarding trip generation and off-road construction equipment usage using the California Emissions Estimator Model (CalEEMod) version 2022.1 and its associated methodologies. Since routine off-haul events may begin as early as 2025, year 2025 emission factors were used in this analysis to be conservative because

statewide vehicle emission standards are required to improve over time, so estimating emissions for the earliest year of operation provides the maximum expected annual emissions. To be conservative, GHG emissions from the existing operations of the Miller Road stockpile site and the rock and sand stockpile site were not estimated and subtracted from the Project's estimated GHG emissions. As discussed in Section 3.5.3 Air Quality, under the worst-case scenario, the Project would generate in total approximately 6,400 truck roundtrips[7] and 292 roundtrip worker commute trips per year.

As shown in Table 3-6, the Project's estimated GHG emissions from operation would total approximately 373.7 metric tons CO_2e per year during an off-haul event year. The input parameters, assumptions, and calculations for estimating GHG emissions from off-road heavy construction equipment and the CalEEMod reports for estimating GHG emissions from mobile sources are provided in Appendix B.1.

Table 3-6 Maximum Annual GHG Emissions from Project Operation

Project Component	GHG Emissions (Metric Tons CO_2e)
Import to Miller Road Stockpile Site Trench Soil	62.2
Import and Off-Haul of Rock and Sand Stockpiles	62.2
Miller Road Off-Haul Events	282.4
Total	**406.8**

As noted previously, the BAAQMD does not have a quantitative threshold of significance for GHG emissions and climate change is not caused by any individual emissions source but by a large number of sources around the world emitting GHGs that collectively create a significant cumulative impact. CEQA requires agencies in California to analyze such impacts by evaluating whether a proposed project would make a "cumulatively considerable" contribution to the significant cumulative impact on climate change. The BAAQMD's CEQA Air Quality Guidelines include recommended thresholds of significance for GHG emissions from typical land use projects that are intended to assist public agencies in determining whether proposed projects would make a cumulatively considerable contribution to global climate change, as required by CEQA (BAAQMD 2022). The thresholds identify design elements that an individual project needs to incorporate to do its "fair share" in achieving the State's goals to reduce GHG emissions to 40 percent below 1990 levels by 2030 and carbon neutrality by 2045. The GHG thresholds for typical land use projects include two options, as follows:

Option 1. Projects must include, at a minimum, the following project design elements:

[7] Import of trench soil to Miller Road Stockpile Site and backfill material delivery to the rock and sand stockpile site would each generate 1,100 truck trips per year and the off-hauling event would generate 4,200 truck trips per event.

Buildings

a) The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development).
b) The project will not result in any wasteful, inefficient, or unnecessary electrical usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines.

Transportation

a) Achieve compliance with electric vehicle (EV) requirements in the most recently adopted version of CALGreen Tier 2.
b) Achieve a reduction in project-generated vehicle miles travelled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted Senate Bill 743 VMT target, reflecting the recommendations provided in the Governor's Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA:
    - Residential projects: 15 percent below the existing VMT per capita
    - Office projects: 15 percent below the existing VMT per employee
    - Retail projects: no net increase in existing VMT

Option 2. Be consistent with local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b).

The thresholds described under Option 1 were developed for typical residential and commercial land use development and have limited applicability to the Project. For example, the BAAQMD's Option 1 design elements for buildings and EV parking infrastructure are not applicable to the Project because the Project would not construct buildings or parking spaces. However, the VMT reduction goal under Option 1 is applicable to the Project and evaluated below. Alameda County and EBMUD do not have a local GHG Reduction Strategy that meets the Option 2 criterion.

The BAAQMD's VMT reduction goal under Option 1 is based on the Office of Land Use and Climate Innovation (LCI) which was previously the Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA (OPR 2018). The Technical Advisory defines VMT as the amount and distance of travel attributable to a project, pursuant to section 15064.3(a) of the CEQA Guidelines. Vehicle trips generated during Project operation would include passenger vehicle trips for employee commute as well as truck trips. The VMT reduction goal under Option 1 is applicable only to the employee commute VMT that would be generated by the Project; the term *automobile* is defined to include cars and light duty trucks. As mentioned above, the worker commute trips associated with the import of trench soil to the Miller Road stockpile site and import and export of backfill materials to the rock and sand stockpile site would be similar to the existing conditions. The off-haul events would occur every 5 years, but potentially every 1 to 2 years and generate approximately 240 additional worker

commute roundtrips (480 worker commute one-way trips) per event. For an off-haul event year, this would result in an annual net increase in GHG emissions that would be equivalent to approximately 1 to 2 additional worker commute one-way trip per day, which is considered a negligible increase in Project-generated VMT compared to existing conditions. Because the net increase in Project-generated VMT associated with employee commute trips is negligible, the Project would not conflict with the VMT reduction goal.

In summary, the Project would be consistent with the applicable BAAQMD's CEQA Guidance design element necessary to help achieve the statewide goal of carbon neutrality by 2045. Therefore, the Project would not generate a net increase in GHG emissions that would, either directly or indirectly, have a significant impact on the environment. The impact would be less than significant.

b. Less than Significant

Consistency with 2022 Scoping Plan

In December 2008, the CARB adopted the Climate Change Scoping Plan to identify how the State can achieve its 2020 climate action goal under AB 32. The state achieved its 2020 GHG emissions reductions target of returning to 1990 levels four years earlier than mandated by AB 32 (CARB, n.d.). In 2017, CARB updated the Scoping Plan to identify how the State can achieve its 2030 climate action goal under SB 32 and substantially advance toward its 2050 climate action goal under Executive Order S-3-05. The state is currently implementing strategies in the 2017 Scoping Plan Update to further reduce its GHG emissions by 40 percent below 1990 levels by 2030 (CARB, n.d.). The 2017 Scoping Plan includes the regulatory programs such as the Advanced Clean Cars Program, Low-Carbon Fuel Standard, Renewable Portfolio Standard Program, and energy efficiency standards (CARB 2017).

In December 2022, CARB adopted the 2022 Scoping Plan for Achieving Carbon Neutrality, which outlines a roadmap to achieve targets for carbon neutrality and reduce anthropogenic GHG emissions by 85 percent below 1990 levels no later than 2045 (CARB 2022). Building on the 2017 Scoping Plan, the 2022 Scoping Plan evaluates the progress made toward meeting the 2030 GHG reduction target established in SB 32 and identifies a technologically feasible, cost-effective, and equity-focused path to achieve carbon neutrality by 2045. The 2022 Scoping Plan presents an approach for an aggressive reduction of fossil fuels and a rapid transition to renewable energy resources and zero-emission vehicles. The 2022 Scoping Plan identifies actions and outcomes such as rapidly moving to zero-emission transportation; electrifying cars, buses, trains, and trucks; phasing out the use of fossil gas used for heating homes and buildings; clamping down on chemicals and refrigerants; providing communities with sustainable options for walking, biking, and public transit; building out clean, renewable energy resources (such as solar arrays and wind turbine capacity) to displace fossil-fuel fired electrical generation; and scaling up new options such as renewable hydrogen and biomethane.

The trucks used for the Project would be subject to State regulations, strategies, and plans to reduce GHG emissions, such as Truck and Bus Regulation and Advanced Clean Fleets

Regulation. The Truck and Bus Regulation, as amended in 2014, requires heavy-duty diesel vehicles that operate in California to reduce TACs emissions from their exhaust. As of January 1, 2023, nearly all trucks and buses are required to have 2010 or newer model year engines, to reduce particulate matter and oxides of nitrogen emissions, which also will help to reduce GHG emissions. Under the CARB's Advanced Clean Fleets Regulation, California State and local government fleets would be required to ensure 50 percent of vehicle purchases are zero-emissions beginning in 2024 and 100 percent of vehicle purchases are zero-emissions by 2027. EBMUD will comply with the Advanced Clean Fleets Regulation. After 2027, all purchased medium- and heavy-duty vehicles will be 100 percent zero-emissions (EBMUD 2024), supporting the transition from internal combustion to zero-emission vehicles and will not conflict with CARB's 2022 Scoping Plan for Achieving Carbon Neutrality (CARB 2022). Therefore, the Project would comply with the State GHG emissions reduction strategies for on-road vehicles. In addition, according to the 2024 Climate Action Plan Update, EBMUD has also transitioned from petroleum diesel to nearly 100 percent renewable diesel for its medium- and heavy-duty fleet, reducing GHG emissions (EBMUD 2024). In summary, the Project would not conflict with the 2022 Scoping Plan, and the impact would be less than significant.

Consistency with Alameda County CAP 2026

In May 2010, Alameda County adopted the Alameda County Climate Action Plan (CAP) for Government Services and Operations Through 2020 (Alameda County 2020) including 16 Commitments to Climate Project that aim to reduce GHG emissions associated with providing government services by 15 percent to 30 percent below 2003 levels by 2020. The CAP 2020 goal was met in 2019. The updated CAP, Alameda County Climate Action Plan for Government Services and Operations Through 2026 (Alameda County 2023), was adopted by Alameda County in May 2023. Aligning with the State's long-term climate action goals, CAP 2026 set a goal to achieve carbon neutrality by 2045 and contains six action areas including building environment, community resilience, green economy and prosperity, sustainable materials management, transportation, and climate leadership and governance. The CAP 2026 focuses on actions that need to be taken between 2023 to 2026.

The CAP 2026 Transportation Measure – Green Fleet aims to reduce transportation-related emissions via transitioning Alameda County fleet away from internal combustion engine vehicles to ZEVs. For the transition from internal combustion to ZEV, EBMUD would comply with the applicable State regulations, strategies, and plans, such as the Advanced Clean Cars Regulation and the Advanced Clean Fleet Regulation. According to the 2024 Climate Action Plan Update, EBMUD's present light-duty fleet consists of 402 vehicles in total, including 70 hybrid vehicles and 14 ZEVs. Starting in 2024, hybrid and internal combustion engine vehicles surpassing 100,000 VMT will generally be replaced with ZEVs. As required by the Advanced Clean Fleets Regulation, all vehicle purchases will be ZEVs after 2027. The EBMUD fleet used for this Project would be consistent with the CAP 2026 Transportation Measure – Green Fleet. The Project would not conflict with CAP 2026, and the impact would be less than significant.

3.5.9 Hazards and Hazardous Materials

Environmental Impacts	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
9. 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

This section describes the existing conditions in the Project area related to hazards and hazardous materials based on review of published reports and maps discussed below. This section also discusses applicable plans and guidelines implemented by EBMUD to manage hazardous material concerns and assesses the Project's potential impacts related to hazards and hazardous materials.

For the purposes of this section, the term *hazardous material* refers to both hazardous materials and hazardous wastes. The California Health and Safety Code section 25501(n) define

hazardous material as any material that because of its quantity, concentrations, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. Hazardous materials include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or the administering agency has a reasonable basis for believing would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

Hazardous waste is any waste that meets the criteria for identification of a hazardous waste as set forth in California Code of Regulations, title 22, section 66261.3. A waste may be hazardous if it exhibits one or more of the characteristics of toxicity, reactivity, corrosivity, or ignitability, or if it is included on a specific list of wastes the U.S. EPA and/or Department of Toxic Substances Control (DTSC) has determined are hazardous because the waste poses substantial present or potential hazards to human health or the environment.

Impact Evaluation

a. Less than Significant

A hazardous material is any substance or material that could adversely affect human health or the environment, such as petroleum products. Hazardous wastes are hazardous materials that no longer have practical use (e.g., waste oil) or are discarded or released into the environment. The Project proposes to increase the import and export of materials at the stockpile sites, which would result in a net increase in petroleum products (e.g., diesel and oil) used for operation of trucks and off-road equipment. However, the Project would not include the storage of fuel, waste oil, or other types of hazardous materials at the stockpile sites.

Hazardous materials handling, disposal, and transport must occur in accordance with applicable federal, state, and local regulations. Hazardous materials must be transported to and from the Project site in accordance with Resource Conservation and Recovery Act (RCRA) and U.S. Department of Transportation (U.S. DOT) regulations, managed in accordance with the Alameda County Department of Environmental Health's Certified Unified Program Agency (CUPA) programs, and disposed of in accordance with RCRA and the California Code of Regulations at a facility that is permitted to accept the waste. Workers handling hazardous materials are also required to adhere to federal Occupational Safety and Health Administration (OSHA) and California Division of Occupational Safety and Health Administration (CAL OSHA) health and safety requirements. In addition to complying with federal, state, and local regulations, as detailed in the Project Description, the Project would continue to adhere to the existing SWPPP.

In accordance with EBMUD's existing SWPPP, spill kits would be available on equipment with hydraulics used at the stockpile sites (Pacific States Environmental Contractors, Inc. 2019). Additionally, the existing SWPPP, requires the preparation of a Spill Prevention and Emergency Response Plan to specify methods for preventing and controlling the accidental release of hazardous materials (EBMUD 2019). The Project does not propose any other activities that

would involve the routine transport, use, or disposal of significant quantities of hazardous materials, and the Project would continue to implement the existing SWPPP for the stockpile sites. Therefore, impacts associated with the routine transport, use, or disposal of hazardous materials would be less than significant.

b. Less than Significant

As discussed above, the Project involves the routine use of fuels for trucks and off-road equipment to manage trench soil at the stockpile sites. An accidental release of petroleum (e.g., hydraulic oil) from trucks or off-road equipment used at the stockpile sites could potentially create a significant hazard to the public or the environment if not properly managed. In accordance with the EBMUD's existing SWPPP, equipment with hydraulics must be equipped with spill kits to cleanup any petroleum products accidentally released during Project operations (EBMUD 2019).

Excavated trench soil could potentially be contaminated and accidently introduced to the stockpile sites if not properly evaluated. According to the EBMUD's Trench Soils Program Guidelines, contaminated trench soils and trench soils from Areas of Concern (AOC)[8] are not permitted for stockpiling at the Miller Road stockpile site (EBMUD 2022). Trench soil site investigations are required for all planned jobs with the potential for encountering contaminated trench soils and/or if the work is being performed in an AOC. The investigation results are then used to determine appropriate management and disposal methods for the excavated trench soil. Trench soil excavated outside an AOC may only be stockpiled at the Miller Road site if no evidence of contamination, such as odors or staining, is detected during excavation.

The Project would continue to implement the existing SWPPP and the Trench Soils Program Guidelines for the stockpile sites. Therefore, impacts associated with the foreseeable upset and accident conditions involving the release of hazardous materials into the environment would be less than significant.

c. No Impact

The Project stockpile sites are not located within one-quarter mile of an existing or proposed school. No impact would occur.

d. No Impact

The Project stockpile sites are not included on any of the lists of hazardous material release sites compiled in accordance with Government Code section 65962.5 (also known as the Cortese List) (DTSC n.d.; SWRCB n.d.; CalEPA n.d.). No impact would occur.

[8] AOC include, but are not limited to, industrial areas, current and former clean-up sites, areas with land use restrictions, and areas immediately adjacent to older freeways (where there is an increased potential for lead contamination of soil).

e. No Impact
The Project site is not located within an airport land use plan or within 2 miles of where a plan has been adopted. No impact would occur.

f. No Impact
The Project stockpile sites would not impair implementation or physically interfere with the Alameda County Emergency Operations Plan due to the remote location of the sites (Alameda County 2012). The Project would not close or block any roads required for emergency response during operation of the stockpile sites. No impact would occur.

g. Less than Significant
According to the California Department of Forestry and Fire Protection (CAL FIRE) the Project stockpile sites are located in a Very High Fire Hazard Severity Zone for a State Responsibility Area (CAL FIRE 2024). While the Project would gradually increase operations of the Miller Road stockpile site and its associated rock and sand stockpile site, the Project would not introduce new types of equipment or operations that could potentially generate a substantial increase in the risk of wildfire hazards. Therefore, impacts related to the exposure of people or structures to a significant risk of loss, injury, or death involving wildland fires would be less than significant.

3.5.10 Hydrology and Water Quality

Environmental Impacts	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
10. HYDROLOGY AND WATER QUALITY. Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater 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

The Project site is surrounded by the Upper San Leandro Reservoir to the north, Miller Creek to the east, and San Leandro Creek to the west. The Project is located within the San Leandro Creek Watershed (Alameda County Flood Control District, n.d.).

a. Less than Significant

The San Leandro Creek and Upper San Leandro Reservoir are listed as impaired on the SWRCB section 303(d) list. San Leandro Creek is impaired by several types of pesticides, metals,

nutrients, pathogens, trash, and toxic organics, while the Upper San Leandro Reservoir is impaired by pesticides, metals, and toxic organics (SWRCB 2018).

The Project supports EBMUD's efforts to repair and replace pipeline infrastructure under EBMUD's pipeline replacement program. The Project would gradually increase operations of the Miller Road stockpile site and its associated rock and sand stockpile site to meet anticipated needs to support EBMUD's pipeline replacement projections throughout its service area. The Project would not require excavation, nor would the Project require construction of any structures. Additionally, no potable water discharges would result from the Project, and the Project would not increase impervious surfaces to implement Project activities.

The Project site would continue to be maintained in a manner that keeps it clean and free of trash and other debris. Backfill materials and soil transported under the Project would be clean and inert (i.e., non-hazardous) and would not be expected to introduce pollutants that could impact surface or groundwater quality. As discussed in Section 3.5.9, Hazards and Hazardous Materials, the Project would involve the routine use of fuels for trucks and off-road equipment to manage trench soils at the stockpile sites. Project activities could result in an accidental release of petroleum (e.g., hydraulic oil) from trucks or off-road equipment used at the stockpile sites and could potentially create a significant hazard to the public or the environment if not properly managed. As detailed in the Project Description, the Project would continue to adhere to the existing SWPPP. In compliance with the existing SWPPP for the Project, during the rainy season (October 15 through April 15), EBMUD would implement sediment control BMPs, including preservation of existing vegetation, performing soil compaction, stabilization of non-active disturbed areas, grading to minimize steep slopes, permanent stabilization of areas after final completion of Project activities, performing checks on the Upper San Leandro Dam, and the use of fiber rolls when necessary (EBMUD 2019). Additionally, Project vehicles and equipment with hydraulics would be equipped with spill kits to prevent the transport of pollutants offsite should an accidental release occur. Therefore, impacts on water quality standards or waste discharge during Project operation would be less than significant.

b. No Impact

The Project would not require excavation or ground disturbance below existing grade and would not impact groundwater supplies. A water truck would be used daily on Miller Road to reduce dust from soil removal trucks. Water for the truck would come from an EBMUD hydrant and would not require the use of groundwater. No impact would occur.

c. i, ii, iii, iv Less than Significant

The Project would not involve grading or excavation below existing grade and would not increase impervious surfaces, nor would the Project change the course of any waterway or alter drainage patterns at the Project site. Project activities at the Miller Road stockpile site would occur approximately 50 feet from the San Leandro Creek and associated riparian zone, however there is an approximately 3-foot-tall earthen berm separating the creek from the stockpile site to prevent potential runoff into the creek. As detailed in the Project Description, the Project would

continue to adhere to the existing SWPPP. In compliance with EBMUD's existing SWPPP for the Project, EBMUD is required to implement specific erosion and sediment control BMPs during the rainy season (October 15 through April 15), including preservation of existing vegetation, performing soil compaction, stabilization of non-active disturbed areas, grading to minimize steep slopes, permanent stabilization of areas after final completion of Project activities, performing checks on the Upper San Leandro Dam, and the use of fiber rolls when necessary. The SWPPP Measure WM-4 requires spill prevention and control including processes that would be taken to prevent spills, monitor hazardous substances, and provide immediate response to spills. Spill response processes include notification of EBMUD and appropriate agencies including phone numbers; spill-related worker, public health, and safety issues; spill control, and spill cleanup (EBMUD 2019). The Project would not create or contribute runoff water which would a) result in substantial erosion or siltation on or off site, b) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on site or off site, c) 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 d) impede or redirect flood flows. Impacts would be less than significant.

d. Less than Significant

The Project stockpile sites are located sufficiently inland to be out of what would be considered a potential hazard area for seiches, tsunamis, and sea level rise. (CDOC, n.d.; FEMA, 2020). Further, the Project stockpile sites are not located in flood hazard zones, as mapped by the FEMA Flood Map Service Center. The Project stockpile sites are within the dam inundation area for the Upper San Leandro Dam and its spillway, however as stated above, backfill materials and soil transported under the Project would be clean and inert (non-hazardous) and would not be expected to introduce pollutants at the site (California Department of Water Resources (DWR), n.d.). Therefore, impacts associated with flood hazards, tsunamis, or seiche zones, or risk release of pollutants due to project inundation would be less than significant.

e. Less than Significant

The Project would not include any discharges to surface waters and would not require the use of groundwater; therefore, the Project would not interfere with the implementation of a water quality control plan or sustainable groundwater management plan. A water truck would be used daily on Miller Road to reduce dust from soil removal trucks. Water for the truck would be sourced from an EBMUD hydrant and would not require the use of groundwater.

As detailed in the Project Description, the Project would continue to adhere to the existing SWPPP. As discussed under Impacts a. and c. above, in compliance with the Project's existing SWPPP requirements, EBMUD would implement sediment control BMPs during the rainy season (October 15 through April 15), including preservation of existing vegetation, performing soil compaction, stabilization of non-active disturbed areas, grading to minimize steep slopes, permanent stabilization of areas after final completion of Project activities, and the use of fiber rolls when necessary (EBMUD 2019). The Project would not add any impervious area to the Project site and no stormwater flow onto the Project site is anticipated. Additionally, as stated above, the approximately 3-foot-tall earthen berm located at the Miller Road stockpile site

would reduce the potential for runoff from the stockpile site into the adjacent creek. Backfill materials and soil transported under the Project would be clean and inert (non-hazardous) and would not be expected to introduce pollutants at the Project site during precipitation events California Department of Water Resources (DWR, n.d.). Therefore, impacts would be less than significant.

3.5.11 Land Use and Planning

Environmental Impacts	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
11. 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

The Project stockpile sites are designated as Resource Management (RM) by the Castro Valley Area Plan of the Alameda County General Plan (Alameda County 2012), and zoned for Agriculture (A). The Project stockpile sites are located on lands owned by EBMUD and are currently in use for trench soil, rock, and sand stockpiles.

a. No Impact

The Project would be located at existing sites which are currently used for trench soil management, and the Project would not develop new land or facilities that would have the potential to divide a community. Therefore, the Project would not have the potential to physically divide an established community, and there would be no impact.

b. Less than Significant Impact

Castro Valley Area Plan of the Alameda County General Plan policies for RM lands relate to topics such as agricultural processing facilities, development on ridgelines and hilltops, clustering structures, and other topics applicable to new development (Alameda County 2012). None of the policies in the Castro Valley Area Plan would apply directly to the Project. Land uses allowed on parcels with the RM designation (including the EBMUD-owned Project site), are described in the Castro Valley Area Plan. Allowable uses on RM lands include agriculture, recreation, habitat protection, watershed management, public and quasi-public uses, secondary residential units, active sand and gravel and other quarries, reclaimed quarry lakes, and similar and compatible uses. The Project would have features in common with allowable uses, such as stockpiling of aggregate material, equipment use, and regular haul trips, and would be considered a similar and compatible use with the RM designation.

As described in Section 3.5.2 Agriculture and Forestry, public utility uses are considered a conditionally permissible use in areas zoned for Agriculture. The Project would facilitate EBMUD's continued replacement of critical public utility pipelines and would therefore be consistent with the applicable zoning. EBMUD will submit an application for a conditional use permit from Alameda County; the Project would be implemented in compliance with the conditional use permit and would thus be compliant with applicable zoning regulations.

Because the Project would obtain a conditional use permit and would be operated in compliance with the permit, the Project would not 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, and the impact would be less than significant.

3.5.12 Mineral Resources

Environmental Impacts	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
12. 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?	☐	☐	☐	☒

a and b. No Impact

The Castro Valley Area Plan of the Alameda General Plan does not identify significant mineral resources or active mining sites within its planning area boundaries, including the Project stockpile sites and haul routes (Alameda County 2012). The California Department of Conservation Division of Mines and Geology has not identified any mineral resource zone (MRZ) overlying the Project site (Stinson, et. al 1987). The Project would not take place in an area with known mineral resources, including those identified on land use plans. The Project would not expand the footprint of the existing stockpile sites and, therefore, would not have the potential to make a known mineral resource unavailable. Therefore, Project activities would not have the potential to result in the loss of availability of a known mineral resource that would be of value to the region and residents of the State, or of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. No impact would occur.

3.5.13 Noise

Environmental Impacts	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
13. 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?	☐	☐	☐	☒

Discussion

Background Information

Noise is commonly defined as unwanted sound that annoys or disturbs people and can have an adverse psychological or physiological effect on human health. Sound is measured in decibels (dB), which is a logarithmic scale. Decibels describe the purely physical intensity of sound based on changes in air pressure, but they cannot accurately describe sound as perceived by the human ear since the human ear is only capable of hearing sound within a limited frequency range. For this reason, a frequency-dependent weighting system is used, and monitoring results are reported in A-weighted decibels (dBA). Although a measured A-weighted noise level will adequately indicate the level of environmental noise at any instant in time, noise levels in populated communities typically vary by time. Equivalent sound level (L_{eq}) is a commonly used noise metric that is defined as the average A-weighted noise level during the measurement period of time. For this CEQA evaluation, L_{eq} refers to a 1-hour period.

A typical method for determining a person's subjective reaction to a new noise is by comparing it to existing conditions. The following describes the general effects of noise on people (Caltrans 2013):

- A 3 dBA increase is considered barely perceptible.
- A 5 dBA increase is considered readily perceptible.
- A 10 dBA increase is perceived as a doubling in loudness.

Traffic noise levels are often expressed in terms of the hourly dBA. The noise levels generated by vehicular sources mainly depend on three factors: traffic volume, vehicle speed, and percent

of trucks within the fleet. Increases in these three factors will lead to higher noise levels and decreases in these factors will reduce the noise levels. Doubling the number of sources, such as the same types of vehicles, increases the noise level by approximately 3 dBA due to the logarithmic nature of noise levels (FHWA 2018). In an unconfined space, such as outdoors, noise attenuates with distance. Noise levels at a known distance from roadway traffic, a line source, are reduced by 3 dBA for every doubling of that distance for hard surfaces (e.g., asphalt) and by 4.5 dBA for every doubling of distance for soft surfaces (e.g., vegetative areas). Noise levels at a known distance from point sources are reduced by 6 dBA for every doubling of that distance for hard surfaces and by 7.5 dBA for every doubling of distance for soft surfaces.

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Typically, groundborne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Vibration amplitudes are usually expressed as either *peak particle velocity* (PPV) or the *root mean square* (RMS) velocity. The PPV is defined as the maximum instantaneous peak of the vibration signal. PPV is appropriate for evaluating potential damage to buildings, but it is not suitable for evaluating human response to vibration because it takes the human body time to respond to vibration signals. The response of the human body to vibration is dependent on the average amplitude of a vibration. The RMS of a signal is the average of the squared amplitude of the signal and is more appropriate for evaluating human response to vibration. PPV is normally described in units of inches per second (in/sec), and RMS is often described in vibration decibels (VdB).

Vibration can be felt or heard by humans well below a level that would result in damage to a structure. Except for long-term occupational exposure, vibration levels rarely affect human health. Instead, most people consider vibration to be an annoyance that can affect concentration or disturb sleep. People may tolerate infrequent, short-duration vibration levels, but human annoyance to vibration becomes more pronounced if the vibration is continuous or occurs frequently. According to the Federal Transit Administration (FTA), a vibration level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible (FTA 2018).

Setting

Existing Noise Environment

The Project site includes the Miller Road stockpile site and the rock and sand stockpile site located within EBMUD-owned watershed land in unincorporated Alameda County approximately 2.5 miles north of Castro Valley. The Project site is accessed via Redwood Road through Castro Valley and a portion of Miller Road that is closed to the public. The primary sources of noise in the vicinity of the Project site are on-site off-road equipment used for stockpile management and the import/export of materials, and trucks travelling on Miller Road.

The existing noise environment in the vicinity of Redwood Road is dominated by traffic noise. As noted in Section 3.5.17 Transportation, the existing average weekday traffic volume on

Redwood Road is approximately 17,000 vehicles near Somerset Avenue.[9] Approximately 3.3 percent of the total daily traffic volume is from trucks. The posted speed limit along Redwood Road is 35 miles per hour (mph). Using Federal Highway Administration Traffic Noise Model version 2.5 (TNM2.5), the existing day-night average sound level[10] is approximately 70 dBA at 50 feet from the vehicle pathway centerline of Redwood Road near Somerset Avenue. In addition, peak traffic periods were observed between 8 a.m. and 9 a.m. in the morning, and between 5 p.m. and 6 p.m. in the afternoon along Redwood Road. Using TNM2.5, the existing noise levels from vehicular traffic on Redwood Road during the a.m. and p.m. peak hours were estimated for four roadway segments, as presented in Table 3-7. The traffic model inputs and outputs are included in Appendix C.

Table 3-7 Existing (2024) Traffic Noise Levels along Redwood Road during AM and PM Peak Hours

Road segment		Traffic noise levels (dBA L_{eq} at 50 feet from centerline)	
		AM peak	PM peak
Redwood Road	North of Seven Hills Road	65.3	64.6
	Between Seven Hills Road and Castro Valley Road	66.9	67.3
	Between Castro Valley Road and I-580 West Ramps	68.8	69.8
	Between I-580 West Ramps and I-580 East Ramps	69.8	70.3

Sources: See Appendix C.

Sensitive Receptors

Noise-sensitive receptors typically include residences, motels and hotels, schools, libraries, houses of worship, hospitals, and convalescent homes. There are no sensitive receptors located in the vicinity of the Miller Road stockpile site and the rock and sand stockpile site. The nearest noise-sensitive receptors are residences located more than 5,300 feet to the east and northeast, more than 6,000 feet to the southeast, and more than 8,000 feet to the west of the Project site.

As discussed above, during Project operation, trucks would access the Miller Road stockpile site and the rock and sand stockpile site via Redwood Road and Miller Road. There are no noise-sensitive receptors located along the portion of Miller Road that would be used to access the Project site. Sensitive receptors in the vicinity of Redwood Road include the following:

- Residences as close as approximately 50 feet to the centerline of Redwood Road.
- Schools as close as approximately 55 feet to the centerline of Redwood Road, including three schools (Castro Velley High School, Redwood Christian Elementary Schools, and Proctor Elementary School) and two pre-schools (Redwood Forest Pre-School and A Kids Kingdom Pre-School).

[9] Traffic counts were calculated on May 16, 2024.

[10] Day-night average sound level is defined as the average A-weighted sound level during a 24-hour day, obtained after addition of 10 decibels to sound levels during the night between 10:00 p.m. and 7:00 a.m.

- Castro Valley Library approximately 750 feet to the centerline of Redwood Road.
- Place of Worship as close as approximately 50 feet to the centerline of Redwood Road, including Faith Lutheran-Castro Valley, Redwood Chapel Community Church, and Congregation Shir Ami.
- Kenneth C Aitken Senior Center approximately 210 feet to the centerline of Redwood Road.

Vibration-sensitive receptors are locations where people are more susceptible to the adverse effects of vibration. These include residences and other buildings where people normally sleep, such as hotels and hospitals, as well as buildings that have the potential for activity interference, such as schools, places of worship, medical offices, concert halls, recording studios, and theatres (FTA 2018). In certain situations, vibration also can cause structural damage. There are no vibration-sensitive receptors located near the Miller Road stockpile site and the rock and sand stockpile site. Vibration-sensitive receptors near the haul route are the same as the noise-sensitive receptors discussed above.

Regulatory Settings Alameda County Noise Ordinance

Alameda County regulates noise via the County's Noise Ordinance (Code of Ordinance Chapter 6.60). Chapter 6.60.040 establishes exterior noise level standards based on receiving land use, as shown in Table 3-8, below. In addition, Chapter 6.60.050.B prohibits the generation of vibration levels above the vibration perception threshold at or beyond the property boundary of the source if on private property or at 150 feet from the source if on a public space or public right-of-way. Since there are no vibration-sensitive receptors within 150 feet to the Project site, and the nearest vibration-sensitive receptor is located more than 5,300 feet from the Project site, County Noise Ordinance threshold of perceptible vibration levels at 150 feet from the source is not applicable to the Project.

Table 3-8 Alameda County Exterior Noise Level Standards (dBA)

Cumulative number of minutes in any 1-hour time period	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
Single- or multiple-family residential, school, hospital, church, and public library		
30	50	45
15	55	50
5	60	55
1	65	60
0	70	65
Commercial uses		
30	65	60
15	70	65

Cumulative number of minutes in any 1-hour time period	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
5	75	70
1	80	75
0	85	80

Source: Alameda County Code of Ordinance Chapter 6.60.040.

a. Less than Significant Impact

The Project does not include construction. The Project involves three operational components, including a gradual increase in the amount of trench soil imported to the Miller Road stockpile site, an increase in the import and export of backfill materials at the rock and sand stockpile site, and removal of stockpiled trench soil from the Miller Road stockpile site (referred to as off-haul events) approximately every 5 years with the potential for off-haul events every 1 to 2 years to respond to opportunities for beneficial soil reuse.

The primary source of noise during Project operation would be off-road equipment and truck activities on the Project site and Project-generated vehicle trips along the haul route. The increases in annual import and export amounts at the stockpile sites would increase truck trips, but the worker commute trips and off-road construction equipment usage would be similar to existing conditions. As discussed in Section 3.5.3 Air Quality, under the worst-case scenario, the Project's average daily truck trips and associated noise levels would be highest when all three Project components would occur concurrently on the same day. On such days, the Project would generate in total 228 truck roundtrips and 5 worker commute roundtrips per day. To be conservative, the noise levels generated by existing vehicle trips associated with the operations of the Miller Road stockpile site and the rock and sand stockpile site were not estimated as part of the existing setting and subtracted from the Project's estimated noise levels. Project operation would occur during the daytime. No nighttime work is expected for the Project.

Off-Road Equipment Noise

A dozer and excavator currently used at the Project site for trench soil import and import/export of backfill materials would continue to be used in a similar capacity for the Project. During an off-haul event, 2 dozers and 2 excavators would be used at the Project site, as well as a water truck and sweeper for dust control. The estimated noise level at the nearest noise-sensitive receptor, located 5,300 feet from the Miller Road stockpile site and the rock and sand stockpile site, is approximately 39 dBA, below the County Noise Ordinance exterior noise standard of 50 dBA (Noise calculations are provided in Appendix C). Therefore, the Project's operation of off-road equipment would not generate substantial noise levels at the nearest noise-sensitive receptors. The impact would be less than significant.

Vehicle Traffic Noise

Noise levels along the haul route would increase with the additional vehicle trips contributed by Project operations. The analysis focused on the noise impact on sensitive receptors along

Redwood Road because there are no sensitive receptors identified along Miller Road. As presented in Table 3-7, the existing ambient noise levels along Redwood Road range from 64.6 to 70.3 dBA Leq, which exceed the applicable Alameda County Noise Ordinance exterior noise standard listed in Table 3-8. Therefore, the analysis evaluates if the Project would result in a substantial permanent increase in traffic noise levels based on a conservative threshold of 3 dBA above the ambient conditions. A threshold of 3 dBA was selected because according to the noise criteria from Caltrans's Technical Noise Supplement (Caltrans 2013), a 3 dBA increase above ambient noise levels is considered barely perceptible.

The Project would generate a total of 68 one-way truck trips (34 inbound trips and 34 outbound trips) and 5 one-way worker commute trips during the a.m. peak hours and 66 one-way truck trips (33 inbound trips and 33 outbound trips) and 5 one-way worker commute trips during the p.m. peak hours, when all three Project components occur concurrently on the same day (i.e., a worst-case scenario). As presented in Table 3-7, the lowest estimated existing noise level from vehicle traffic along Redwood Road is 64.6 dBA Leq, which occurs north of Seven Hills Road during the p.m. peak period. Therefore, Project-generated traffic noise levels were calculated during the p.m. peak period to represent the highest traffic noise increase during Project operation. Traffic noise impacts are evaluated for the Existing plus Project condition, which is the 2024 condition plus the Project-generated trips, and the Future Baseline plus Project condition, which is the 2030 future baseline condition plus the Project-generate trips. [11] Traffic volumes during the p.m. peak period and associated traffic composition were used in TNM2.5 to estimate traffic noise levels for the Existing (2024) condition, Existing plus Project (2024) condition, Future Baseline (2030) condition, and Future Baseline plus Project (2030) condition. Traffic model inputs and outputs are included in Appendix C.

The estimated Existing (2024), Existing plus Project (2024), Future Baseline (2030), and Future Baseline plus Project (2030) traffic noise levels for the Redwood Road segments are summarized in Table 3-9. Based on these estimates, the Project would increase traffic noise by up to 2.9 dBA and 2.5 dBA along the Redwood Road under the worst-case scenario compared to the Existing (2024) condition and Future Baseline (2030) condition, respectively, which are below the conservative 3 dBA threshold. Therefore, the Project-generated traffic noise increase along the haul route would be less than significant.

[11] For modeling purposes, the Project's a.m. and p.m. peak hours truck trip generations were rounded up to 70 one-way trips (approximately 35 inbound trips and 35 outbound trips) which provides a conservative estimate for noise.

Table 3-9 Traffic Noise Levels along Redwood Road during PM Peak Hours

Road segment	Traffic noise levels (dBA L_{eq} at 50 feet from centerline)					
	Existing (2024)	Existing plus Project (2024)	Estimated increase (2024)	Future baseline (2030)	Future baseline plus Project (2030)	Estimated increase (2030)
Redwood Road North of Seven Hills Road	64.6	67.5	2.9	65.4	67.9	2.5
Redwood Road Between Seven Hills Road and Castro Valley Road	67.3	69.1	1.8	67.8	69.5	1.7
Redwood Road Between Castro Valley Road and I-580 West Ramps	69.8	70.9	1.1	70.3	71.3	1
Redwood Road Between I-580 West Ramps and I-580 East Ramps	70.3	70.8	0.5	70.6	71.1	0.5
Threshold	--	--	3	--	--	3
Exceed threshold?	--	--	No	--	--	No

Sources: See Appendix C.

b. Less than Significant Impact

The Project does not include construction. Operation of the Project includes import, temporary storage, and removal of trench soil (Miller Road stockpile site) or backfill materials (rock and sand stockpile site). Operation at the Project site would not involve equipment (such as vibratory rollers and crack-and-seat equipment) or activities (such as pile driving) that would generate excessive groundborne vibration or groundborne noise levels. Off-road construction equipment that would be used at the Project site include a dozer and excavator. According to FTA, typical vibration levels generated by a large bulldozer at a distance of 25 feet would be 0.089 inch per second, which is below the most conservative criteria of 0.12 inch per second recommended by FTA to prevent damage to structures to buildings extremely susceptible to vibration damage (FTA 2018).

In addition, vibration dissipates quickly with increased distance from the source. The nearest vibration-sensitive receptors, including building structures or human receptors, are located more than 5,300 feet from the Project site. As discussed above, the County's vibration perception threshold applies to 150 feet from the source. Therefore, Project operation would not generate excessive groundborne vibration at sensitive receptors exceeding the criteria related to vibration damage and human disturbance.

Loaded trucks travelling along the Redwood Road and Miller Road is an existing condition. Given the current daily traffic volume of approximately 17,000 vehicles, vibration generated by the Project-generated truck trips, maximum of 249 daily round trip truck trips, would be negligible. Therefore, the impact would be less than significant.

c. No Impact

The Project site is not located within the vicinity of a private airstrip or an airport land use plan, or within 2 miles of a public airport or public-use airport. The nearest airport is the Hayward Executive Airport located about 7.2 miles to the southwest of the Project site. The Project site is not located within the Hayward Executive Airport Influence Area. Therefore, the Project would have no impact related to the exposure of people to excess noise levels from aircraft noise.

3.5.14 Population and Housing

Environmental Impacts	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
14. 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?	☐	☐	☐	☒

a. No Impact

The Project supports EBMUD's trench soil management as part of EBMUD's ongoing pipeline repair and replacement activities. The pipelines undergoing repair and replacement serve existing customers within EBMUD's service area. The Project does not include new homes or businesses and, therefore, would not directly induce growth. The Project would not have indirect impacts associated with accommodation of additional growth because it does not expand utility service areas or increase water supply. Thus, there would be no impact on population and housing.

b. No Impact

No housing presently exists at the Project site; therefore, the Project would not displace people or housing. No impact would occur.

3.5.15 Public Services

Environmental Impacts	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
15. 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 public services:				
Fire protection?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

a. No Impact

The Project does not include residential or commercial development that would induce population growth requiring new or expanded fire and police protection, schools, parks, or other facilities. In addition, the Project would not indirectly induce unplanned population growth that would place new demands on public service providers. Thus, the Project would not require new or expanded governmental facilities. The Project would not affect the ability of local providers to maintain acceptable service ratios, response times, or other performance objectives for services. No new or expanded governmental facilities would be needed; there would be no impact.

3.5.16 Recreation

Environmental Impacts	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
16. 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?	☐	☐	☐	☒

a. No Impact

The Project would not generate or attract additional population as would be associated with residential, commercial, or industrial uses; therefore, it would not affect demand for recreational facilities and no impact would occur.

b. No Impact

The Project consists exclusively of continued operation of the Miller Road stockpile site and rock and sand stockpile site, which supports EBMUD's ongoing pipeline repair and replacement activities and does not require the construction or expansion of recreational facilities. There would be no impact.

3.5.17 Transportation

Environmental Impacts	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
17. 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) 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

This section evaluates the transportation impacts on Redwood Road resulting from increased truck traffic associated with the routine import and removal of stockpiled trench soil and backfill materials to and from the Project site.

Miller Road, a 2.5-mile-long street, extends between Redwood Road and Miller Canyon. Miller Road provides direct access to the Miller Road stockpile site and the rock and sand stockpile site. Miller Road is situated entirely within EBMUD-owned land and is closed to the public north of the Chabot Staging Area, located at the intersection of Redwood Road and Miller Road.

Transportation Settings

The Project site is located approximately 5.4 miles north of I-580 and is accessed via Redwood Road. Redwood Road is an arterial roadway as designated by the Castro Valley Area Plan of the Alameda County General Plan, extending between Jordan Road in the City of Oakland and Grove Way in Castro Valley (Alameda County 2012). Redwood Road serves as a key access route for multiple schools, including Castro Valley High School, Redwood Christian Elementary School, and Proctor Elementary School. Redwood Road generally has 3 lanes in each direction between I-580 and Castro Valley Boulevard; two lanes in each direction between Castro Valley Road and Seven Hills Road; and one lane in each direction north of Seven Hills Road. The posted speed limit is 35 mph.

Average weekday traffic volume on Redwood Road is approximately 17,000 vehicles near Somerset Avenue with 8,800 vehicles traveling northbound and 8,200 vehicles traveling

southbound.[12] Heavy vehicles account for approximately 3.3 percent of the total daily traffic volume.[13] Peak traffic periods are observed between 8 a.m. and 9 a.m. with approximately 1,450 vehicles, and between 5 p.m. and 6 p.m. with approximately 1,400 vehicles. Figure 3-2 presents existing intersection traffic volumes along Redwood Road during these a.m. and p.m. peak hours.

The Bay Area Rapid Transit (BART) Castro Valley Station is located at the northwest corner of Redwood Road and I-580. Two Alameda-Contra Costa Transit District (AC Transit) bus routes operate along sections of Redwood Road with service to the BART station. Route 28 operates along Redwood Road between Seven Hills Road and the BART station every 60 minutes on weekdays. Route 93 operates along Redwood Road between Grove Way and the BART station every 45 minutes on weekdays. The closest bus stop is approximately 4.1 miles south of the Project site, at the intersection of Redwood Road and Seven Hills Road.

Redwood Road features Class II bike lanes on both sides, except for the segment between Castro Valley Boulevard and Seven Hills Road, which is designated as a Class III bike facility with a wide curb lane for shared use with vehicles.[14] According to the 2019 Alameda County Bicycle and Pedestrian Master Plan, this segment is proposed for future Class II bike lanes (Alameda County 2019a). Bicycle counts conducted on Thursday, May 9, 2024, recorded 3 bicyclists during the a.m. peak period and 5 bicyclists during the p.m. peak period along Redwood Road.

South of Camino Alta Mira, Redwood Road generally provides 8-foot-wide sidewalks on both sides, with marked crosswalks and Americans with Disabilities Act (ADA)-accessible curb ramps at intersections. High-visibility crosswalks are located at key locations, including near Proctor Elementary School, Redwood Christian Elementary School, and Castro Valley High School. North of Camino Alta Mira, Redwood Road lacks sidewalks but provides access to various trailheads at the Proctor Staging Area and the Chabot Staging Area.

[12] Traffic counts were collected on Thursday, May 16, 2024, when Redwood Road was closed north of Redwood Canyon Golf Course. Based on historic traffic counts provided by the East Bay Regional Park District, approximately 60 additional daily vehicles travel along Redwood Road when the road is fully open.

[13] Include vehicles in Class 4 and up categories per the Federal Highway Administration's Vehicle Classification.

[14] Bikeways are typically classified as Class I, Class II, or Class III facilities. Class I bikeways are bike paths with exclusive rights-of-way for use by bicyclists, with minimal cross flow by motorized vehicles. Class II bikeways are bike lanes striped within the paved areas of roadways and established for the exclusive use of bicyclists. Class III bikeways are signed bike routes that allow bicycles to share streets with vehicles.

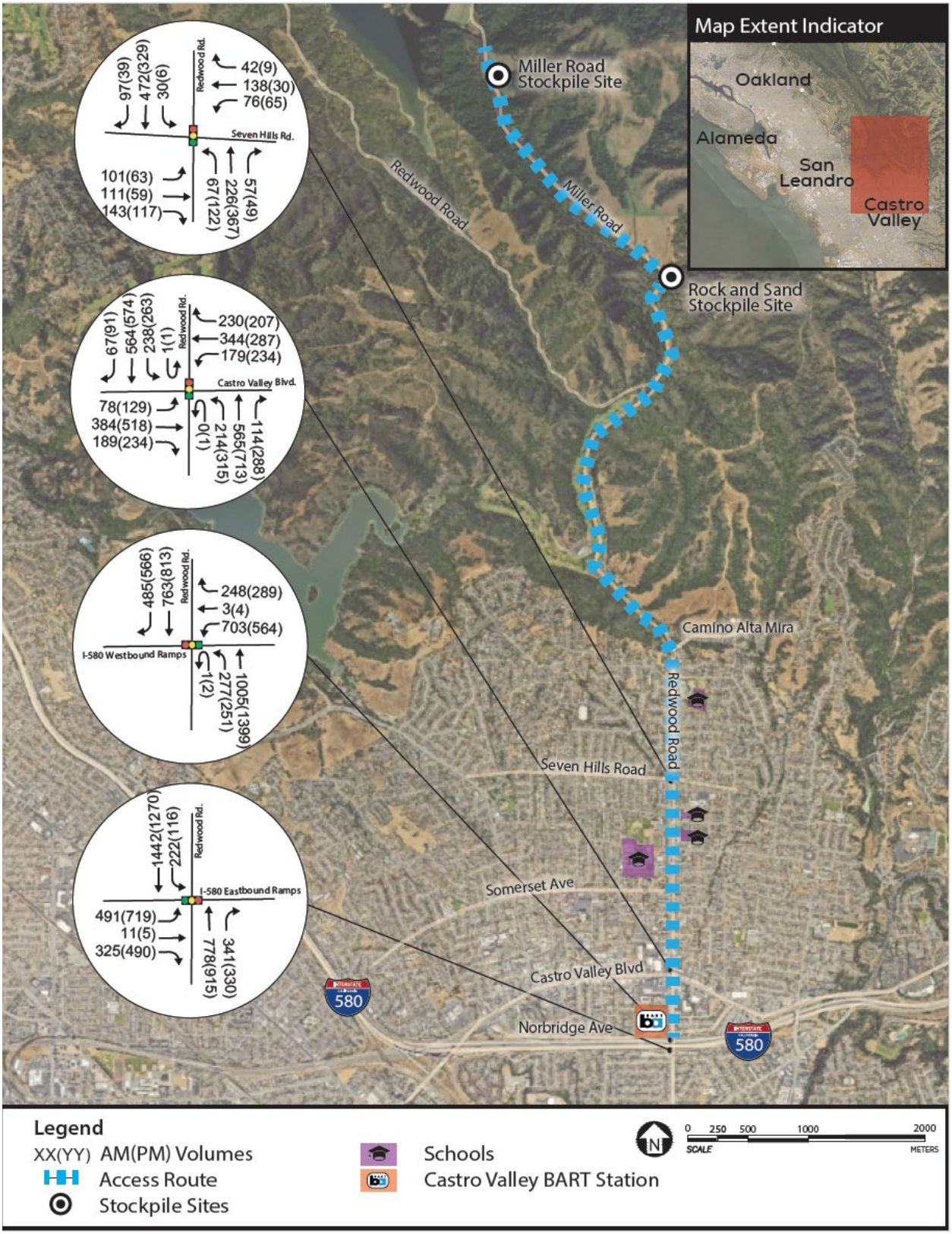

Figure 3-2 Existing Intersection Traffic Volumes during AM and PM Peak Hours

Project Trip Generation

Trip generation for the Project was estimated for each Project component:

- **Import of trench soil to Miller Road stockpile site** – Approximately 11,000 CY of trench soil would be imported annually using 10-CY dump trucks, generating about 1,100 truck roundtrips per year (11,000 CY/10-CY truck). This activity would generally occur every workday, averaging 5 truck roundtrips per day (1,100 trucks/260 days). These trips would generally be expected in the morning hours between 7 a.m. and 12 p.m. with approximately 1 roundtrip during the a.m. peak hour (5 trucks/5 hours) and none during the p.m. peak period. Each roundtrip includes 1 inbound trip and 1 outbound trip. Additionally, 1 worker would travel to the site weekly for maintenance, arriving during the a.m. peak hour and departing during the p.m. peak period.
- **Backfill material delivery to rock and sand stockpile site** – Similarly, approximately 11,000 CY of backfill materials would be delivered annually using 10 CY dump trucks, generating 1,100 truck roundtrips per year (11,000 CY/10 CY truck). This activity would occur biweekly, over approximately 2 days each time, for a total of approximately 52 days per year (26 weeks*2 days). There would be an average of 23 truck roundtrips per day (1,100 trucks/52 days), with 3 roundtrips during both the a.m. and p.m. peak periods (23 trucks/10 hours). No additional worker trips are anticipated as the same worker would maintain both the Miller Road and rock and sand stockpile sites.
- **Off-hauling trench soil from the Miller Road stockpile site** – Up to 50,000 CY of trench soil would be off-hauled at a time, generating approximately 4,200 truck roundtrips using 11 CY end dump trucks and 13 CY double-bottom trucks (50,000 CY/12 CY truck).[15] The off-haul events would be scheduled as needed and are anticipated to occur approximately every 5 years.[16] When an off-haul event takes place, it would span 1 to 3 months, typically during the summer when schools are not in session. These events would generate approximately 70 to 200 truck roundtrips per day, depending on the overall duration of the event each year. For example, there would be an average of 70 daily truck roundtrips if the off-haul event is for the full 50,000 CY spread over 3 months (4,200 trucks/60 days) or up to 200 daily truck roundtrips if occurring over 1 month (4,200 trucks/21 days). For the transportation analysis, 200 daily truck roundtrips are used as the more conservative assumption. Although these trips would occur between 9 a.m. and 4 p.m., which is outside of typical a.m. and p.m. peak periods, a conservative

[15] The analysis assumes that both 11-CY and 13-CY trucks would be used equally and averages them as 12-CY trucks.

[16] While the Project anticipates off-haul events every 5 years with 50,000 CY analyzed, if off-haul events occurred at 1 to 2 year intervals to response to opportunities for beneficial reuse of the off-haul, less than 50,000 CY would be off-hauled per event.

estimate assumes 30 truck roundtrips during both the a.m. and p.m. peak periods (200 trucks/7 hours).[17] Additionally, 4 workers are expected to arrive during the a.m. peak period and depart during the p.m. peak period.

Table 3-10 summarizes the Project trip generation estimates. Overall, the Project is expected to generate 6,400 annual truck roundtrips and 292 worker trips during an active off-haul year. The Project would generate up to 34 truck roundtrips and 5 worker one-way trips during the a.m. and p.m. peak periods. It is noted that there would be up to 4 truck roundtrips and 1 worker trip during the a.m. and p.m. peak periods during the years without off-haul activities.

Table 3-10 Project Trip Generation Estimates by Project Component

Project component	Trip type	Annual trips	Daily trips	AM peak period		PM peak period	
				Inbound	Outbound	Inbound	Outbound
Import of Trench Soil to Miller Road stockpile site	Truck	1,100 roundtrips	5 roundtrips	1 trip	1 trip	-	-
	Worker	52 roundtrips	1 roundtrip	1 trip	-	-	1 trip
Backfill material delivery to Rock and Sand stockpile site	Truck	1,100 roundtrips	23 roundtrips	3 trips	3 trips	3 trips	3 trips
	Worker	-	-	-	-	-	-
Miller Road Off-Haul events	Truck	4,200 roundtrips	70 to 200 roundtrips	30 trips	30 trips	30 trips	30 trips
	Worker	240 roundtrips	4 roundtrips	4 trips	-	-	4 trips
Total	Truck	6,400 roundtrips	98 to 228 roundtrips	34 trips	34 trips	33 trips	33 trips
	Worker	292 roundtrips	5 roundtrips	5 trips	-	-	5 trips

The Project site currently generates daily truck and worker trips related to the import of trench soils and the backfill material delivery resulting in approximately 1,400 annual truck roundtrips and 52 worker roundtrips per year. Additionally, the Project site periodically generated trips for off-haul events, with removals in 2005 and 2019. These off-haul events generated between 6,700 and 9,700 annual truck roundtrips during those years, which is substantially higher than the anticipated truck roundtrips (up to approximately 4,200 truck roundtrips a year) under the Project condition. These existing trips were not credited to ensure the most conservative

[17] While 200 daily trips evenly distributed over a 7-hour period result in approximately 29 trips per hour, a conservative transportation analysis assumes up to 30 trips per hour during each peak period. It is noted that per Project Description, work hours would be reduced to 9 a.m. to 3 p.m. when Castro Valley Union School District schools are in session, typically starting around the second week of August and ending in early June.

estimate for the CEQA analysis. As a worst-case scenario all three Project components (i.e., trench soil import, backfill material delivery, and off-haul events) were assumed to occur simultaneously on any given day.

Project Trip Distribution

All trips generated by the Project are expected to utilize Redwood Road to access the site from I-580. Since the specific destinations and origins of these trips are currently unknown, it is assumed that approximately half of the Project trips would use I-580 East, while the other half would use I-580 West.

a. Less than Significant Impact

Vehicular Circulation

The Castro Valley Area Plan of the Alameda County General Plan establishes the minimum acceptable vehicular circulation level of service (LOS) for Redwood Road as LOS E or better (Policy 6.2-1). LOS serves as a performance metric, describing the average delay experienced by vehicles passing through an intersection. The vehicular circulation was evaluated under 2 scenarios:

- Existing plus Project – Evaluating the current (2024) traffic conditions with the addition of Project-generated trips.
- Future Baseline plus Project – Evaluating future baseline (2030) traffic conditions with the addition of Project-generated trips.

Traffic conditions were analyzed for the a.m. and p.m. peak periods, as these times typically experience higher background traffic volumes. As summarized in Table 3-10 above, the Project would add a total of 34 inbound and 34 outbound truck trips, as well as 5 inbound worker trips during the a.m. peak period. Similarly, 33 inbound and 33 outbound truck trips, along with 5 outbound worker trips, are added during the p.m. peak period. In the analysis, each truck trip was treated as equivalent to 2 passenger car trips, considering that trucks require more time to accelerate, decelerate, and make turns due to their larger size.[18] Table 3-11 presents the LOS and associated delays under the Existing and Existing plus Project conditions. The analysis indicates that, even with the addition of Project trips, all studied intersections would continue to operate within the LOS E threshold during both the a.m. and p.m. peak periods.

Table 3-11 Existing (2024) and Existing Plus Project Intersection Operating Condition

Intersection	Control	Peak period	Existing LOS (Delay)[1]	Existing plus Project LOS (Delay)[1]
	Signal	AM	D (38.6)	D (38.7)

[18] The Highway Capacity Manual (HCM) uses a passenger car equivalent (PCE) as a metric to measure how much a heavy vehicle impacts traffic flow compared to a passenger car. The PCEs ranges from 1.3 for a single unit truck to 1.7 for a large semitrailer on level ground.

Intersection	Control	Peak period	Existing LOS (Delay)[1]	Existing plus Project LOS (Delay)[1]
Redwood Road/ Seven Hills Road		PM	C (22.7)	C (21.6)[2]
Redwood Road/ Castro Valley Road	Signal	AM	D (47.7)	D (48.3)
		PM	D (51.1)	D (51.5)
Redwood Road/ I-580 West Ramps	Signal	AM	D (37.9)	D (43.8)
		PM	B (19.1)	C (20.2)
Redwood Road/ I-580 East Ramps	Signal	AM	C (25.9)	C (26.6)
		PM	B (16.5)	B (17.3)

Notes:
1. Intersection delays are calculated as "seconds of delay per vehicle."
2. Adding a very small number of trips to an approach with shorter delays could improve the intersection average delay "per vehicle" or not cause any change in delays at all.

The 2030 Future Baseline condition reflects the projected timeframe when the Miller Road stockpile site is expected to experience the increase in annual stockpiling up to 11,000 CY. To estimate traffic volumes for this scenario, the 2024 existing background traffic volumes were adjusted using the growth rates projected for the study area by the Alameda Countywide Transportation Model (Alameda County 2019b).[19] Table 3-12 presents the LOS and delay comparisons under both the Future Baseline and Future Baseline plus Project conditions. The analysis indicates that, even with the addition of Project-generated trips, all study intersections are anticipated to continue operating within the LOS E threshold during the a.m. and p.m. peak periods.

Table 3-12 Future Baseline (2030) and Future Baseline Plus Project Intersection Operating Condition

Intersection	Control	Peak Hour	Future Baseline (2030) LOS (Delay)[1]	Future Baseline plus Project LOS (Delay)[1]
Redwood Road/ Seven Hills Road	Signal	AM	D (39.0)	D (41.4)
		PM	C (24.6)	C (23.9)[2]
Redwood Road/ Castro Valley Road	Signal	AM	D (48.6)	D (49.3)
		PM	E (56.0)	E (56.4)
Redwood Road/ I-580 West Ramps	Signal	AM	D (41.5)	D (48.7)
		PM	C (20.5)	C (22.1)

[19] Based on the review of existing development in the area and local plans, the growth rate for the Redwood Road and Seven Hills Road intersection was adjusted to 1 percent per year. The Future Baseline condition also includes approximately 10 additional trips during each peak hour, assuming Redwood Road would be fully open north of Miller Road.

Intersection	Control	Peak Hour	Future Baseline (2030) LOS (Delay)[1]	Future Baseline plus Project LOS (Delay)[1]
Redwood Road/ I-580 East Ramps	Signal	AM	C (28.7)	C (29.4)
		PM	B (17.8)	B (18.7)

Notes:
1. Intersection delays are calculated as "seconds of delay per vehicle."
2. Adding a very small number of trips to an approach with shorter delays could improve the intersection average delay "per vehicle" or not cause any change in delays at all.

Bicycle and Pedestrian Circulation

The Castro Valley Area Plan policies on bicycle and pedestrian circulation emphasize managing vehicular traffic to provide a safe environment for schoolchildren (Policy 6.6-2) and improving traffic enforcement to increase pedestrian safety (Policy 6.6-5).

The trench soil import and backfill material delivery are expected to generate up to 4 truck roundtrips during the a.m. and p.m. peak periods throughout the year. While these trips may coincide with school pick-up and drop-off times, they are not anticipated to adversely affect the safety of children walking or biking to school due to the low volumes and the presence of continuous sidewalks and marked crosswalks near schools. Additionally, all truck drivers would be required to yield to traffic, bicyclists, and pedestrians when traveling to and from the Project site.

Major off-haul events, occurring approximately every 5 years with the potential for every 1 to 2 years, would be coordinated with the Castro Valley Union School District to schedule off-haul activities during summer months when schools are not in session whenever feasible or reduce the hours of the off-haul events if they occurred during school sessions. The Project would not reduce the safety of children walking or biking to school because, as described in Section 2.4.5 of the Project Description, truck trips are required to be scheduled between 9 a.m. and 3 p.m. when schools are open to minimize overlap with school traffic. Therefore, off-haul truck trips are not expected to interfere with school-related traffic.

The Project-generated truck trips are unlikely to reduce pedestrian safety, as continuous sidewalks are available on both sides of Redwood Road, along with marked crosswalks at intersections.

Transit Facilities

The Castro Valley Area Plan includes transit-related policies (Policies 6.4-1 through 6.4-4); however, these policies are primarily aimed at promoting transit use and access for large destinations such as shopping areas, schools, and recreational facilities, and are not directly applicable to the Project. The Project would not displace any existing transit stop or adversely impact transit operations.

Project-generated trips are not expected to degrade intersection operating conditions to an unacceptable LOS. The Project would not reduce the safety of children walking or biking to

school because off-haul events would be scheduled during summer seasons if feasible and truck trips are required to be scheduled between 9 a.m. and 3 p.m. when schools are in session to minimize overlap with school traffic. Pedestrian safety would remain the same due to the presence of continuous sidewalks and marked crosswalks along the haul route. Therefore, the Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, and the impact would be less than significant.

b. Less than Significant Impact

CEQA Guidelines section 15064.3 identifies VMT as the most appropriate metric for assessing transportation impacts. Although Alameda County does not have a specific VMT policy, it contributed to the LCI draft and final VMT guidelines, which implement SB 743 (OPR 2018). Thus, the analysis utilizes LCI's guidelines as published in the Technical Advisory on Evaluating Transportation Impacts in CEQA, which outlines several criteria that jurisdictions may use to identify certain types of projects unlikely to have a significant VMT impact, allowing them to be "screened" from further VMT analysis. One such screening criterion pertains to small projects, which LCI defines as generating fewer than 110 vehicle trips per day, similar to the trips generated by a general office building with a footprint of less than 10,000 square feet, which is categorically exempt.

As shown in Table 3-10, above, the Project is estimated to generate a total of up to 228 truck roundtrips per day. Approximately 5 of these trips are associated with the import of trench soil occurring daily, and approximately 23 trips are associated with backfill material deliveries occurring 52 days a year (i.e., 2 days biweekly). The remaining 200 trips associated with off-haul events would occur daily over a 1 to 3 month period occurring every 5 years or as frequently as every 1 to 2 years as needed. Given the infrequency of the backfill material delivery and off-haul truck trips, the total annual trips generated by the Project are equivalent to approximately 20 roundtrips (40 one-way trips) occurring daily throughout the year.[20] In other words, the Project would generate substantially fewer trips annually than a 10,000-square-foot general office building, which typically generates 110 daily vehicle trips throughout the year. Therefore, the Project is considered a small project, for which the impact on VMT can be presumed to be less than significant.

Moreover, the Project is a public utility service project responding to needs created by development from authorized land uses (e.g., office and residential) permitted by local jurisdictions and maintenance and replacement activities related to the associated infrastructure, some of which is aging. For example, new residential or office developments may occur in areas with aging utility infrastructure and/or lead to increased water usage from

[20] Trench soil import activities generate 5 daily roundtrips throughout the year, and backfill material deliveries generating 23 daily roundtrips for 52 days a year are equivalent to approximately 5 daily roundtrips (=23 trips*52/260 days) throughout the year. Off-haul events generating 200 roundtrips daily for 3 months each year, occurring every approximately 5 years, equate to 10 daily roundtrips per year (=200 daily trips*3/12months/5 years). Combined, import and off-haul activities would amount to approximately 20 daily roundtrips throughout the year.

an influx of occupants. Where existing pipelines may lack the capacity to handle the increased demand, this could lead to more rapid replacement or may require replacement to accommodate new developments. The Project is responsive to development, but due to its nature does not independently generate VMT and can be presumed to have a less than significant impact on VMT.

c. Less than Significant Impact with Mitigation

The trench soil import and backfill material delivery would not present a significant impact due to the low volumes of truck traffic (up to 4 truck roundtrips during peak hours). Redwood Road and Miller Road currently accommodate the movements of these trucks for such activities as well.

During routine off-haul events, the analysis conservatively assumes up to 34 trucks would be traveling along Redwood Road in each direction during the a.m. and p.m. peak periods. Since the off-haul activities occur infrequently, roughly every 5 years during primarily the summer months, local users may not be accustomed to the presence of large trucks when they occur, which could lead to an increase in conflicts. Additionally, the larger vehicles may have difficulty seeing smaller vehicles, bicyclists, and pedestrians, potentially increasing the risk of accidents, resulting in a potentially significant impact. Mitigation Measure TRA-1, which has been incorporated into the Project and is described below, would require contractors to implement safety measures such as installing advance warning signs and reminding and requiring truck drivers to adhere to the safety protocols, which would raise public awareness of truck traffic and encourage safer driving behavior for truck drivers, thereby reducing this potentially significant impact to a less-than-significant level.

d. Less than Significant Impact

As shown in Table 3-12, the Project trips are not anticipated to cause substantial delays along Redwood Road or result in any lane or roadway closures that potentially interfere with emergency access. It is expected that all truck drivers and workers will yield the right-of way to emergency vehicles in accordance with California Vehicle Code 21806. Additionally, all worker parking would be contained within the Project site, ensuring that the site entrance and exit remain unobstructed. Therefore, the Project would have a less than significant impact on emergency access.

Mitigation Measures

TRA-1 Minimize Impacts of Heavy Truck Traffic during Off-Haul Events

Contractors shall enforce the following safety measures to minimize potential safety hazards associated with the increased truck traffic during off-haul events:

- Ensure truck drivers have received written traffic safety requirements focusing on road safety, defensive driving, navigating through school zones, and blind spot monitoring. All drivers shall provide signed acknowledgement of having understood all traffic safety requirements and the consequences of non-compliance. Traffic safety requirements may include:
  - Contractor vehicles shall yield to traffic, bicyclists, and pedestrians at all times.
  - Trucks shall not park or queue along Redwood Road. When trucks are making wide turns at Redwood Road/Miller Road intersection and into the Project site, illuminated signs, a temporary stop sign, or a combination of these methods shall be used to slow approaching traffic.
  - Trucks shall travel along designated routes only.
- Install radar speed feedback signs in each direction on Redwood Road to deter speeding by trucks on haul route.
- Conduct frequent inspections and maintenance of trucks (e.g., brakes, tires, lights) to ensure they are in safe working condition.
- Install advance warning signs and dynamic message signs to alert drivers of upcoming heavy truck traffic along Redwood Road. The signs shall indicate the presence of heavy trucks and the anticipated timeframe.
- Inform the public and local communities about expected truck traffic and safety measures through various channels, such as local media, social media, and community meetings, to provide timely updates and ensure public awareness.
- Prior to any major off-haul events, a visual survey shall be conducted along Redwood Road between I-580 and Miller Road to establish the baseline condition of the roadway. Any damage to the pavement on Redwood Road shall be repaired after each major off-haul event.
- Coordinate with the nearest emergency and sensitive land uses such as police and fire stations, schools, and medical facilities. Notify emergency providers in advance of the timing, location, and duration of off-haul events.
- Monitor the impact of heavy truck traffic and adjust safety measures as needed.

3.5.18 Tribal Cultural Resources

Environmental Impacts	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
18. 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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☒	☐

Discussion

EBMUD has not received any requests from tribes for Project notifications under PRC section 21080.3.1(b)(1).

a. i, ii Less than Significant Impact

As discussed in Section 3.5.5 Cultural Resources, the Project would not require excavation or ground disturbance, and the stockpile site footprints would be limited to the existing sites that have already been highly disturbed. Thus, the Project would not involve activities that would have the potential to result in inadvertent discovery of buried tribal cultural resources. Adherence to applicable laws would prevent significant impacts associated with potential discovery of human remains. As a result, the Project would not be anticipated to cause a substantial adverse change in the significance of a tribal cultural resource, and the impact would be less than significant.

3.5.19 Utilities and Service Systems

Environmental Impacts	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
19. 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?	☐	☐	☐	☒

a. No Impact

The Project would continue the existing trench soil management activities that are ongoing at the stockpile sites. The Project does not include changes to utilities on or off site and would not include or require new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunication facilities. Therefore, there would be no impact associated with relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunication facilities.

b. Less than Significant Impact

During the Project, water would continue to be used for dust control at the stockpile sites and on Miller Road. The Project would not include additional facilities that consume water. Water use for dust control would continue to be minimized in accordance with EBMUD's existing SWPPP for operation of both the Miller Road stockpile site and rock and sand stockpile site and along Miller Road. As required by the SWPPP, water conservation practices would be implemented during all Project activities to avoid causing erosion and the transport of pollutants offsite (EBMUD 2019). Water used for dust control would be managed to ensure that

excessive water is not applied. Because the Project would not substantially increase water demand, EBMUD would have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years, and the impact would be less than significant.

c. No Impact
The Project would not generate wastewater; there would be no impact.

d. No Impact
The Project would entail stockpiling of trench soil generated by EBMUD's ongoing pipeline repair and replacement activities. The Project itself would not involve the generation of solid waste; instead, it aids in managing trench soil from other projects. The Project would involve continued use of the stockpile sites as well as smaller, more frequent off-haul events, which would improve EBMUD's ability to take advantage of opportunities for trench soil to be transferred to end-use locations, and to allow more soil to be reused beneficially as opposed to being disposed at landfills. Thus, the Project would provide a benefit to solid waste goals by supporting beneficial re-use of soil. There would be no impact.

e. No Impact
The Project would comply with all applicable regulations regarding solid waste. There would be no impact.

3.5.20 Wildfire

Environmental Impacts	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
20. 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 with Mitigation Incorporated

Public roads are managed by Alameda County and the County is primarily responsible for managing emergency response protocols and creating evacuation plans. The Project would not change the local roadway circulation pattern in a way that would physically interfere with local emergency response plans. The Project would maintain the gravel surface of Miller Road from Redwood Road to the stockpile site, conduct regular inspections, and manage the installation and maintenance of BMPs and EBMUD's existing SWPPP.

EBMUD would complete a visual survey of the conditions of Miller Road and Redwood Road, managed by Alameda County, before and after soil removal projects to limit damage to roadways as result of the Project. EBMUD would ensure that local traffic circulation would continue to support emergency response and evacuation plans. If obvious damage were to result from soil removal projects, EBMUD would coordinate with Alameda County Public Works for any needed repairs.

At times, the Project may result in vehicle delays of 1 to 2 minutes as equipment enters and exits the Project site via Miller Road and/or Redwood Road. Vehicles and equipment would be parked and staged adjacent to the Project site and off public roads, within designated parking

and staging areas. However, access would continue to be provided for emergency responders to allow for safe emergency access.

As discussed in Section 3.5.17 Transportation, Mitigation Measure TRA-1 requires coordination with the nearest emergency services (such as police and fire stations) and public facilities (such as schools and medical facilities) and notification in advance of the timing, location, and duration of off-haul events. Therefore, the Project would not substantially impair an adopted emergency response plan or emergency evacuation plan, and impact would be less than significant with mitigation.

b. No Impact
The Project would not construct new facilities or structures that would be occupied, which would expose Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. No impact would occur.

c. and d. No Impact
The Project involves the gradual increase in operations at the Miller Road stockpile site and rock and sand stockpile site to support EBMUD's ongoing pipeline repair and replacement activities. However, the Project would not require installation of additional infrastructure or structures to support the operational increase, that could exacerbate fire risk or that would result in temporary or ongoing impacts to the environment. Additionally, as discussed in Section 3.5.7 Geology and Soils and Section 3.5.10 Hydrology and Water Quality, the Project would not 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. No impact would occur.

3.5.21 Mandatory Findings of Significance

Environmental Impacts	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
21. 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?	☐	☒	☐	☐

a. Less than Significant

The Project would result in less than significant impacts related to biological resources, cultural resources, and tribal cultural resources. The Project does not have the potential to substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, reduce the number or restrict the range of a rare or endangered plant or animal, threaten to eliminate a plant or animal community, or eliminate important examples of the major periods of California history or prehistory, as described in the Biological Resources, Cultural Resources, and Tribal Cultural Resources environmental discipline sections of the document. Impacts would be less than significant.

b. No Impact

The CEQA Guidelines section 15130 requires a discussion of the cumulative impacts of a Project. Cumulative impact analysis accounts for the combined impacts associated with 2 or more projects in a given area. No projects were identified near the Project site or off-haul route with an expected construction timeframe of 2030.[21]

[21] Panorama researched projects on the Alameda County Planning Department, BART, Caltrans, and CEQAnet.

Alameda County policies, plans, and ordinances were also reviewed for potential future development. Alameda County is in the process of updating the Castro Valley Central Business District Specific Plan (Specific Plan), which focuses on the Castro Valley's commercial and mixed-use center which includes some parcels that are located along Redwood Road near the I-580. The planning and CEQA review phase of the Specific Plan is scheduled to go until winter of 2026; however, development under the updated Specific Plan could occur along Redwood Road post-2030. If any development occurred along Redwood Road under the Specific Plan, it would likely result in temporary truck traffic that could overlap with the Project off-haul events. Development under the Specific Plan would be subject to the CEQA review and would require traffic control measures if the development impacted traffic along Redwood Road, reducing the impacts to less than significant. Because any future development under the Specific Plan would be required to mitigate traffic impacts during construction and would have the potential to overlap with off-haul events temporarily, the Project would not be anticipated to result in a significant cumulative impact when combined with development under the Specific Plan. Operation of the Project would not combine with anticipated cumulative projects to result in a significant cumulative impact.

c. Less than Significant with Mitigation

The Project has the potential to adversely affect human beings directly and/or indirectly through transportation impacts. With implementation of Mitigation Measure TRA-1, the Project would not cause substantial adverse effects on human beings either directly or indirectly. The impact would be less than significant.

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Appendix A: Mitigation Monitoring and Reporting Program

Mitigation Monitoring and Reporting Program

MMRP Requirements and Use

East Bay Municipal Utility District (EBMUD) prepared an Initial Study and Mitigated Negative Declaration (IS/MND) to identify and evaluate potential environmental impacts associated with the Miller Road Trench Soil Management Project (Project). Mitigation measures were defined in the Initial Study and MND to reduce potentially significant impacts of project construction and operation.

Approval of the project will require implementation and monitoring of all the mitigation measures identified in the IS/MND in compliance with the California Environmental Quality Act (CEQA). The CEQA Guidelines Section 15097(a) requires that:

> "… in order to ensure that the mitigation measures and project revisions identified in the EIR or negative declaration are implemented, the public agency shall adopt a program for monitoring or reporting on the revisions which it has required in the project and the measures it has imposed to mitigate or avoid significant environmental effects. A public agency may delegate reporting or monitoring responsibilities to another public agency or to a private entity which accepts the delegation; however, until mitigation measures have been completed the lead agency remains responsible for ensuring that implementation of the mitigation measures occurs in accordance with the program."

CEQA Guidelines Section 15097(c) defines monitoring and reporting responsibilities of the lead agency.

> "(c) The public agency may choose whether its program will monitor mitigation, report on mitigation, or both. "Reporting" generally consists of a written compliance review that is presented to the decision making body or authorized staff person. A report may be required at various stages during project implementation or upon completion of the mitigation measure. "Monitoring" is generally an ongoing or periodic process of project oversight. There is often no clear distinction between monitoring and reporting and the program best suited to ensuring compliance in any given instance will usually involve elements of both. The choice of program may be guided by the following:
>
> > (1) Reporting is suited to projects which have readily measurable or quantitative mitigation measures or which already involve regular review. For example, a report may be required upon issuance of final occupancy to a project whose mitigation measures were confirmed by building inspection.

> (2) Monitoring is suited to projects with complex mitigation measures, such as wetlands restoration or archeological protection, which may exceed the expertise of the local agency to oversee, are expected to be implemented over a period of time, or require careful implementation to assure compliance.
>
> (3) Reporting and monitoring are suited to all but the most simple projects. Monitoring ensures that project compliance is checked on a regular basis during and, if necessary after, implementation. Reporting ensures that the approving agency is informed of compliance with mitigation requirements."

This Mitigation Monitoring and Reporting Program (MMRP) is intended to facilitate implementation and monitoring of the mitigation measures to ensure that measures are executed. This process protects against the risk of non-compliance.

The purpose of the MMRP is to:

- Summarize the mitigation required for the Miller Road Trench Soil Management Project
- Comply with requirements of CEQA and the CEQA Guidelines
- Clearly define parties responsible for implementing and monitoring the mitigation measures
- Provide a plan for how to organize the measures into a format that can be readily implemented and monitored

MMRP Components

The MMRP provides a summary of all mitigation measures that will be implemented for the Project. The mitigation measure is provided in Table 1. Each impact and mitigation measure is accompanied with identification of:

- Implementation and Timing – the party or parties that will undertake the mitigation measure and timing of implementation, including prior to construction, during construction, post construction, or a combination of construction phases
- Monitoring Responsibility – the monitoring and/or reporting actions to be undertaken to ensure the measure is implemented.

The responsible and involved parties will utilize the MMRP to identify actions that must take place to implement mitigation measures, the time of those actions and the parties responsible for implementing and monitoring the actions.

Impact	Mitigation Measures	Implementation and Timing	Monitoring Responsibility
Impact TRA-C: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	**MM TRA-1 Minimize Impacts of Heavy Truck Traffic during Off-Haul Events** Contractors shall enforce the following safety measures to minimize potential safety hazards associated with the increased truck traffic during off-haul events: • Ensure truck drivers have received written traffic safety requirements focusing on road safety, defensive driving, navigating through school zones, and blind spot monitoring. All drivers shall provide signed acknowledgement of having understood all traffic safety requirements and the consequences of non-compliance. Traffic safety requirements may include: – Contractor vehicles shall yield to traffic, bicyclists, and pedestrians at all times. – Trucks shall not park or queue along Redwood Road. When trucks are making wide turns at Redwood Road/Miller Road intersection and into the Project site, illuminated signs, a temporary stop sign, or a combination of these methods may be used to slow approaching traffic.	**Implementation:** EBMUD and its contractor(s) **Timing:** During Project Implementation	EBMUD

Impact	Mitigation Measures	Implementation and Timing	Monitoring Responsibility
	– Trucks shall travel along designated routes only. • Install radar speed feedback signs in each direction on Redwood Road to deter speeding by trucks on haul route. • Conduct frequent inspections and maintenance of trucks (e.g., brakes, tires, lights) to ensure they are in safe working condition. • Install advance warning signs and dynamic message signs to alert drivers of upcoming heavy truck traffic along Redwood Road. The signs shall indicate the presence of heavy trucks and the anticipated timeframe. • Inform the public and local communities about expected truck traffic and safety measures through various channels, such as local media, social media, and community meetings, to provide timely updates and ensure public awareness. • Prior to any major off-haul events, a visual survey shall be conducted along Redwood Road between I-580 and Miller Road to establish the baseline condition of the roadway. Any damage to the pavement on Redwood Road shall be repaired after each major off-haul event.		

Impact	Mitigation Measures	Implementation and Timing	Monitoring Responsibility
	• Coordinate with the nearest emergency and sensitive land uses such as police and fire stations, schools, and medical facilities. Notify emergency providers in advance of the timing, location, and duration of off-haul events. • Monitor the impact of heavy truck traffic and adjust safety measures as needed.		
Impact WILD-A: Substantially impair an adopted emergency response plan or emergency evacuation plan?	**MM TRA-1**, discussed above.	See above	See above

Appendix B.1: Air Quality and Greenhouse Gas Emissions Calculations

Off-Road Equipment Exhaust Emissions Calculations

Overview

Information about off-road equipment usage, including equipment type, number of equipment, engine tier, and hours of operation, was provided by EBMUD. Exhaust emissions of criteria air pollutants and greenhouse gases (GHGs) were estimated using the methodology from the California Emissions Estimator Model (CalEEMod) version 2022.1.1. The estimated average daily emissions represent a worst-case scenario where stockpile management, import of backfill materials, and an off-haul event would occur simultaneously.

Summary of Off-Road Construction Equipment Usage and Emission Factors

Project Component	Equipment Type	CalEEMod Equipment Category	# of Equipment	Fuel Type	Horse-power	Engine Tier	Load Factor	Frequency	Project Condition (2030)		Emission Factor (g/hp-hr)							Global Warming Potential		
									Hours per Month	Total Hours per Year	ROG	NO_X	PM_{10E}	$PM_{2.5E}$	CO_2	CH_4	N_2O	CO_2	CH_4	N_2O
Trench Soil Import	Cat 336 Excavator	Excavators	1	Diesel	300	Tier 4 Interim	0.38	Weekly	16	192	0.06	1.29	0.01	0.01	527	0.021	0.004	1	25	298
Trench Soil Import	D6 Dozer	Rubber Tired Dozers	1	Diesel	367	Tier 4 Interim	0.4	Weekly	16	192	0.06	1.29	0.01	0.01	532	0.022	0.004	1	25	298
Backfill Material Import/Export	D8 Dozer	Rubber Tired Dozers	1	Diesel	367	Tier 4 Interim	0.4	Biweekly	16	192	0.06	1.29	0.01	0.01	532	0.022	0.004	1	25	298
Miller Road Off-Haul Events	Cat 336 Excavator	Excavators	2	Diesel	300	Tier 4 Interim	0.38	1 month (21 workdays) every year	189	189	0.06	1.29	0.01	0.01	527	0.021	0.004	1	25	298
Miller Road Off-Haul Events	D6 or D8 Dozer	Rubber Tired Dozers	2	Diesel	367	Tier 4 Interim	0.4		189	189	0.06	1.29	0.01	0.01	532	0.022	0.004	1	25	298
Miller Road Off-Haul Events	Water Truck	Off-Highway Trucks	1	Diesel	376	Average	0.38		189	189	0.177	1.09	0.038	0.035	529	0.021	0.004	1	25	298
Miller Road Off-Haul Events	Sweeper	Sweepers/Scrubbers	1	Diesel	36	Average	0.46		189	189	0.622	3.85	0.191	0.176	587	0.024	0.005	1	25	298

Notes

It was conservatively assumed that all off-road equipment would use diesel fuel. CalEEMod default values were used when project-specific information was not available. Project-specific horsepower was obtained from manufacturer specifications was used for excavators, instead of CalEEMod default values. Emission factors were obtained from CalEEMod 2022.1. Global warming potentials for greenhouse gases were obtained from the California Air Resources Board website (https://ww2.arb.ca.gov/ghg-gwps) on September 9, 2024.

Abbreviations

ROG = reactive organic gases; NO_X = nitrogen oxides; PM_{10E} = coarse particulate matter (exhaust); $PM_{2.5E}$ = fine particulate matter (exhaust); CO_2 = carbon dioxide; CH_4 =methane; N_2O =nitrous oxide; g/hp-hr = gram per horsepower-hour

Off-Road Construction Equipment Criteria Air Pollutant and GHG Emissions

Project Component	Annual Emissions								Average Daily Emissions			
	Criteria Air Pollutants (tons/year)				GHGs (metric tons/year)				Criteria Air Pollutants (lbs/day)			
	ROG	NO_X	PM_{10E}	$PM_{2.5E}$	CO_2	CH_4	N_2O	CO_{2e}	ROG	NO_X	PM_{10E}	$PM_{2.5E}$
Trench Soil Import	0.003	0.071	0.001	0.001	26.51	0.0011	0.0002	26.6	0.13	2.74	0.02	0.02
Backfill Material Import/Export	0.002	0.040	0.0003	0.0003	14.98	0.0006	0.0001	15.0	0.07	1.54	0.01	0.01
Miller Road Off-Haul Events	0.014	0.19	0.003	0.003	68.29	0.0028	0.0005	68.5	1.33	17.7	0.3	0.3
Total without Off-Haul Events	**0.01**	**0.11**	**0.001**	**0.001**	**41.49**	**0.0017**	**0.0003**	**41.62**	**0.20**	**4.3**	**0.03**	**0.03**
Total with Off-Haul Events	**0.019**	**0.297**	**0.004**	**0.004**	**109.8**	**0.004**	**0.001**	**110.1**	**1.5**	**22.0**	**0.3**	**0.3**

Assumptions

Work days per year	52	Stockpile Management (one day per week)
Work days per year	52	Import of Backfill Materials (occur biweekly over about 2 days each time)
Work days per event year	21	Miller Road Off-Haul Events (Monday through Friday for 1-month)

Abbreviations

ROG = reactive organic gases; NO_X = nitrogen oxides; PM_{10E} = coarse particulate matter (exhaust); $PM_{2.5E}$ = fine particulate matter (exhaust); CO_2 = carbon dioxide; CH_4 =methane; N_2O =nitrous oxide; lbs = pounds

Equations

Emissions [grams] = emission factor [g/hp-gr] × number of pieces of equipment × horsepower × load factor × hours of annual operation

Unit conversions

Grams per pound	453.92
Pounds per metric ton	2,205
Pounds per ton	2,000

Earthmoving Activity Dust Emissions Calculations

Overview

Information about bulldozing activities was provided by EBMUD. Emissions of fugitive dust were estimated using emission factors from the U.S. Environmental Protection Agency's Compilation of Air Pollutant Emissions Factors (AP-42), Section 11.9 and guidance from the California Emissions Estimator Model (CalEEMod) version 2022.1.

Summary of Earthmoving Activity and Emission Factors

Project Component	Equipment Type	CalEEMod Equipment Category	Activity	# of Equipment	Frequency	Project Condition (2030)		$PM_{2.5D}$ Emission Factor (lbs/hour)		PM_{10D} Emission Factor (lbs/hour)	
						Hours per Month	Total Hours per Year	Uncontrolled	Controlled[1]	Uncontrolled	Controlled[1]
Trench Soil Import	D6 Dozer	Rubber Tired Dozers	Bulldozing	1	Weekly	16	192	0.41	0.16	0.75	0.29
Backfill Material Import/Export	D8 Dozer	Rubber Tired Dozers	Bulldozing	1	Biweekly	16	192				
Miller Road Off-Haul Events	D6 or D8 Dozer	Rubber Tired Dozers	Bulldozing	2	1 month (21 workdays) every year	189	189				

Notes

[1] For the controlled scenario, it was assumed that the exposed areas will be watered twice per day.

Assumptions

Bulldozing EF (lb/hour) = BC*sBa/MBb*BF AP-42 Table 11.9-1

Where:

	$PM_{2.5D}$	PM_{10D}	
Bulldozing Coefficient (BC)	5.7	1.0	AP-42 Table 11.9-1
Bulldozing Constant (Ba)	1.2	1.5	AP-42 Table 11.9-1
Bulldozing Constant (Bb)	1.3	1.4	AP-42 Table 11.9-1
Material Silt Content (s)	6.9	6.9	AP-42 Table 11.9-3
Material moisture content (M)	7.9	7.9	AP-42 Table 11.9-3
Bulldozing Scaling Factor (BF)	0.11	0.75	AP-42 Table 11.9-1
Dust Control Efficiency		61%	Assume watering exposed area twice per day ((SCAQMD CEQA Air Quality Handbook, Table XI-A: Construction and Demolition))

Abbreviations

lbs = pounds; PM_{10D} = coarse particulate matter (dust) ; $PM_{2.5D}$ = fine particulate matter (dust)

Earth Moving $PM_{2.5}$ Dust Emissions

Project Component	Annual PM_{10D} Emissions		Average Daily PM_{10D} Emissions		Annual $PM_{2.5D}$ Emissions		Average Daily $PM_{2.5D}$ Emissions	
	tons/year		lbs/day		tons/year		lbs/day	
	Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled
Trench Soil Import	0.07	0.03	2.78	1.08	0.04	0.02	1.53	0.60
Backfill Material Import/Export	0.07	0.03	2.78	1.08	0.04	0.02	1.53	0.60
Miller Road Off-Haul Events	0.14	0.06	13.55	5.28	0.08	0.03	7.45	2.90
Total without Off-Haul Events	**0.14**	**0.06**	**5.56**	**2.17**	**0.08**	**0.03**	**3.06**	**1.19**
Total with Off-Haul Events	**0.29**	**0.11**	**19.11**	**7.45**	**0.16**	**0.06**	**10.50**	**4.10**

Assumptions

Work days per year	52	Stockpile Management (one day per week)
Work days per year	52	Import of Backfill Materials (occur biweekly over about 2 days each time)
Work days per event year	21	Miller Road Off-Haul Events (Monday through Friday for 1-month)

Abbreviations

lbs = pounds;PM_{10D} = coarse particulate matter (dust) ; $PM_{2.5D}$ = fine particulate matter (dust)

Equations

Bulldozing Emissions = Hours of Operation * Emission Factor

Unit conversions

Pounds per ton 2,000

On-Road Vehicle Emissions Calculations

Overview

Information about project generated vehicle trips and associated vehicle miles travelled (VMT) was provided by EBMUD for the 2030 Project condition. CalEEMod default values were used when project-specific information was not available. To be conservatiEmissions of criteria air pollutants and greenhouse gases (GHGs) were estimated using the California Emissions Estimator Model (CalEEMod) version 2022.1.1.Since routine off-haul evens may begin as early as 2025, year 2025 emission factors were used in this analysis to be conservative.

Summary of On-Road Vehicle Trips

Project Component	Annual Import/Export Amount	Trip Type	Vehicle Type	Roundtrips per Year	One-Way Trips per Year	One-way Trip Distance (miles)	VMT per Year	CalEEMod Input			
								Trip Type	Annual VMT	Percent VMT	Vehicle Classification
Trench Soil Import	11,000 CY	Hauling	10 CY Trucks	1,100	2,200	10	22,000	Hauling	22,000	100.0%	HHDT
Backfill Material Import/Export	11,000 CY	Worker Commute	Worker commute vehicles[2]	52	104	11.7	1,217	Worker Commute	1,217	4.4%	50% LDA, 25% LDT1, 25% LDT2[1]
		Hauling	10 CY Trucks	1,100	2,200	12	26,400	Hauling	26,400	95.6%	HHDT
Miller Road Off-Haul Events	50,000 CY	Worker Commute	Worker commute vehicles	240	480	11.7	5,616	Worker Commute	5,616	4.3%	50% LDA, 25% LDT1, 25% LDT2[1]
		Hauling	11 CY Trucks and 13 CY Trucks	4,200	8,400	15	126,000	Hauling	126,000	95.7%	HHDT

Notes

[1] In accordance with CalEEMod, assume a fleet mix of 50 percent light-duty auto, 25 percent light-duty truck type 1, and 25 percent light-duty truck type 2.

[2] The same worker will maintain both the Miller Road stockpile site and the rock and sand stockpiles site.

On-Road Criteria Air Pollutant and GHG Emissions Summary (Based on CalEEMod Report)

Project Component	Annual Emissions								Average Daily Emissions			
	Criteria Air Pollutants (tons/year)				GHGs (metric tons/year)				Criteria Air Pollutants (lbs/day)			
	ROG	NO_X	PM_{10}	$PM_{2.5}$	CO_2	CH_4	N_2O	CO_{2e}	ROG	NO_X	PM_{10}	$PM_{2.5}$
Trench Soil Import	0.001	0.06	0.011	0.003	36	0.002	0.006	38	0.01	0.43	0.08	0.03
Backfill Material Import/Export	0.001	0.06	0.013	0.004	43	0.003	0.007	45	0.05	2.48	0.51	0.16
Miller Road Off-Haul Events	0.006	0.29	0.063	0.019	204	0.011	0.032	214	0.52	27.90	6.00	1.85
Total	**0.01**	**0.41**	**0.09**	**0.03**	**283**	**0.016**	**0.045**	**297**	**0.6**	**30.8**	**6.6**	**2.0**

Assumptions

Work days per year	260	Trench Soil Import (occur every weekday)
Work days per year	52	Import of Backfill Materials and Stockpile Sites Maintainence (occur biweekly over about 2 days each time)
Work days per event year	21	Miller Road Off-Haul Events (Monday through Friday for 1-month)

Abbreviations

ROG = reactive organic gases; NO_X = nitrogen oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; CO_2 = carbon dioxide; CH_4 =methane; N_2O =nitrous oxide; lbs = pounds

Unit conversions

Pounds per ton	2,000

Miller Rd - Trench Soil Import Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Miller Rd - Trench Soil Import
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.30
Precipitation (days)	7.20
Location	37.76043059928759, -122.09058066800141
County	Alameda
City	Unincorporated
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1408
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
User Defined Recreational	0.00	User Defined Unit	5.90	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

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	0.02	0.01	0.30	0.13	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.02	—	216	216	0.01	0.03	0.47	228
Area	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.02	0.01	0.30	0.13	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.02	0.00	216	216	0.01	0.03	0.47	228
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.02	0.01	0.31	0.14	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.02	—	217	217	0.01	0.03	0.01	227
Area	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.02	0.01	0.31	0.14	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.02	0.00	217	217	0.01	0.03	0.01	227
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.02	0.01	0.31	0.14	< 0.005	< 0.005	0.05	0.06	< 0.005	0.01	0.02	—	217	217	0.01	0.03	0.20	227
Area	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.02	0.01	0.31	0.14	< 0.005	< 0.005	0.05	0.06	< 0.005	0.01	0.02	0.00	217	217	0.01	0.03	0.20	227
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	35.9	35.9	< 0.005	0.01	0.03	37.6
Area	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.00	35.9	35.9	< 0.005	0.01	0.03	37.6

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

4.2. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Recreational	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Recreational	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

User Defined Recreational	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Consum Products	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

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

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

4.7. 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

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	6.03	6.03	6.03	2,200	60.3	60.3	60.3	22,000

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	0.00	0.00	—

5.10.3. Landscape Equipment

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

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)
User Defined Recreational	0.00	204	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
User Defined Recreational	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
User Defined Recreational	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

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

5.15. 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)

8. User Changes to Default Data

Screen	Justification
Land Use	Miller Road stockpile site acreage was obtained from the project description.
Operations: Off-Road Equipment	Off-road equipment exhaust emissions calculations were provided in the Appendix.
Operations: Fleet Mix	Information about project-generated vehicle trips and associated VMT was provided by EBMUD for the 2030 project condition. Fleex mix was calculated based on VMT associated with each vehicle category. Since routine off-haul evens may begin as early as 2025, year 2025 emission factors were used in this analysis to be conservative.

Miller Rd - Backfill Material Import/Export Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Miller Rd - Backfill Material Import/Export
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.30
Precipitation (days)	7.20
Location	37.76043059928759, -122.09058066800141
County	Alameda
City	Unincorporated
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1408
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
User Defined Recreational	0.00	User Defined Unit	5.90	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

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	0.02	0.01	0.34	0.16	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	260	260	0.02	0.04	0.57	273
Area	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.02	0.01	0.34	0.16	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	0.00	260	260	0.02	0.04	0.57	273
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.02	0.01	0.36	0.16	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	260	260	0.02	0.04	0.01	273
Area	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.02	0.01	0.36	0.16	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	0.00	260	260	0.02	0.04	0.01	273
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.02	0.01	0.35	0.16	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	260	260	0.02	0.04	0.25	273
Area	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.02	0.01	0.35	0.16	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	0.00	260	260	0.02	0.04	0.25	273
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	43.0	43.0	< 0.005	0.01	0.04	45.2
Area	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.00	43.0	43.0	< 0.005	0.01	0.04	45.2

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

4.2. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Recreational	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Recreational	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

User Defined Recreational	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Consum Products	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

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

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

4.7. 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

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	6.31	6.31	6.31	2,304	75.7	75.7	75.7	27,617

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	0.00	0.00	—

5.10.3. Landscape Equipment

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

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)
User Defined Recreational	0.00	204	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
User Defined Recreational	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
User Defined Recreational	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

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

5.15. 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)

8. User Changes to Default Data

Screen	Justification
Land Use	Miller Road stockpile site acreage was obtained from the project description.
Operations: Off-Road Equipment	Off-road equipment exhaust emissions calculations were provided in the Appendix.
Operations: Fleet Mix	Information about project-generated vehicle trips and associated VMT was provided by EBMUD for the 2030 project condition. Fleex mix was calculated based on VMT associated with each vehicle category. Since routine off-haul evens may begin as early as 2025, year 2025 emission factors were used in this analysis to be conservative.

Miller Rd - Off-Haul Events Trips Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Miller Rd - Off-Haul Events Trips
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.30
Precipitation (days)	7.20
Location	37.76043059928759, -122.09058066800141
County	Alameda
City	Unincorporated
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1408
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
User Defined Recreational	0.00	User Defined Unit	5.90	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

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	0.10	0.03	1.55	0.69	0.01	0.02	0.33	0.35	0.02	0.09	0.11	—	1,231	1,231	0.07	0.19	2.73	1,293
Area	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.10	0.03	1.55	0.69	0.01	0.02	0.33	0.35	0.02	0.09	0.11	0.00	1,231	1,231	0.07	0.19	2.73	1,293
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.10	0.03	1.64	0.69	0.01	0.02	0.33	0.35	0.02	0.09	0.11	—	1,231	1,231	0.07	0.19	0.07	1,291
Area	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.10	0.03	1.64	0.69	0.01	0.02	0.33	0.35	0.02	0.09	0.11	0.00	1,231	1,231	0.07	0.19	0.07	1,291
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.10	0.03	1.61	0.69	0.01	0.02	0.33	0.35	0.02	0.09	0.11	—	1,231	1,231	0.07	0.19	1.18	1,292
Area	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.10	0.03	1.61	0.69	0.01	0.02	0.33	0.35	0.02	0.09	0.11	0.00	1,231	1,231	0.07	0.19	1.18	1,292
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.02	0.01	0.29	0.13	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	204	204	0.01	0.03	0.20	214
Area	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.02	0.01	0.29	0.13	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	0.00	204	204	0.01	0.03	0.20	214

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

4.2. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Recreational	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Recreational	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

User Defined Recreational	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Consum Products	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Recreational	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

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

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

4.7. 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

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	24.3	24.3	24.3	8,880	361	361	361	131,616

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	0.00	0.00	—

5.10.3. Landscape Equipment

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

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)
User Defined Recreational	0.00	204	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
User Defined Recreational	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
User Defined Recreational	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

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

5.15. 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)

8. User Changes to Default Data

Screen	Justification
Land Use	Miller Road stockpile site acreage was obtained from the project description.
Operations: Off-Road Equipment	—
Operations: Fleet Mix	Information about project-generated vehicle trips and associated VMT was provided by EBMUD for the 2030 project condition. Fleex mix was calculated based on VMT associated with each vehicle category. Since routine off-haul evens may begin as early as 2025, year 2025 emission factors were used in this analysis to be conservative.

Appendix B.2: Health Risk Assessment

On-Road Haul Truck Emission Rates for Air Dispersion Modeling

Scenario	Emission Source Type	PM_{10} EF	$PM_{2.5}$ EF				Maximum Daily One-Way Trip Rate (trips/day)[3]	Length[4] (miles)	Frequency (days/week)	Average Weekday VMT	Emission Rate (g/s)	
		RUNEX[1] (g/mile)	RUNEX[1] (g/mile)	PMTW[1] (g/mile)	PMBW[1] (g/mile)	Resuspended Road Dust[2] (g/mile)					PM_{10}	$PM_{2.5}$
Import of trench soil	Heavy Duty Trucks_Running	0.027	0.026	0.009	0.028	0.07324	10	1.94	5	19.4	0.000006	0.00003
Import of backfill materials							46	1.94	1	17.9	0.000006	0.00003
Off-haul events							400	1.94	5	777	0.00024	0.0012

Notes

[1] EMFAC2021 Emission Rates in SFBAAB for operational year 2025. Since routine off-haul events may begin starting 2025, year 2025 emission factors were used in this analysis to be conservative.

[2] Paved road resuspended dust emission factor was calculated based on U.S. Environmental Protection Agency's Compilation of Air Pollutant Emissions Factors (AP-42), Section 13.2.1 Paved Roads and guidance

[3] Project emissions were estimated for the 2030 Project condition regarding trip generation. According to the transportation analysis of the Project, the import of trench soil would occur every workday. The import of backfill materials would occur biweekly over about 2 days each time through the year (one day per week in average). Off-haul events would occur every five years and last for one to three months per event, with the potential for off-haul events every one to two years to respond to beneficial soil reuse opportunities in the area. Under a worst-case scenario, the off-haul event would off-haul 50,000 CY of material and last for 1 month (21 days), resulting in 400 heavy-duty truck one-way trips per workday.

[4] Assume 1.94-mile line source on the proposed haul truck route for receptors along Redwood Road between I-580 WB On-Off Ramps and Camino Alta Mira.

Abbreviations

EF = Emission Factor
g = Gram
RUNEX = Engine Running Exhaust Emission Factor
PMTW = Tire wear emission factor
PMBW = Brake wear emission factor
VMT = Vehicle miles traveled

Equations

Resuspended Road Dus EF = $k*(sL)^{0.91}*(W)^{1.02}*[1-P/(4N)]*$conversion

Where:
Particle size multiplier (k) = 0.00054 (lbs/VMT, AP-42, Table 13.2.1-1)
Road surface silt loading (sL) = 0.1 (g/m^2)
Average weight all vehicles on road (W) = 2.4 (tons) (CalEEMod guidance)
Days of Precipitation (P) =7.2 (days) (CalEEMod default for the project region)
Day in averaging period (N) = 365 (days)

Truck Running PM_{10} Emission Rate = VMT Rate * RUNEX EF * conversion

Truck Running $PM_{2.5}$ Emission Rate = VMT Rate *(RUNEX EF + PMTW EF + PMBW EF + Resuspended Road Dust EF)* conversion

Unit conversions

1 day = 86400 seconds
1 pound = 453.6 grams

Summary of Dispersion Model Parameters, Assumptions, and Results for DPM and $PM_{2.5}$ Emissions from Haul Trucks during Operation

AERMOD Model Parameters and Assumptions			
Source Type	**Units**	**Value**	**Notes**
Line Source: On-Road Haul Truck Emission			
DPM Emssion Rate - Trench Soil and Backfill Material Import	gram/second	1.16E-05	Exhaust PM_{10} from on-road running emissions
DPM Emssion Rate - Off-haul Events	gram/second	2.43E-04	
$PM_{2.5}$ Emssion Rate - Trench Soil and Backfill Material Import	gram/second	5.85E-05	$PM_{2.5}$ emissions including running exhaust, tire wear, brake wire, and resuspended road dust.
$PM_{2.5}$ Emssion Rate - Off-haul Events	gram/second	1.22E-03	
Average Hours/Work Day	hours/day	7	Assume a 7-hour workday from 9 am to 4 pm, Monday through Friday
Length of Side	meters	13.3	Width of a two-lane road + 6 meter
Line Length	meters	3127	1.94 miles haul route along Redwood Road
Release Height	meters	3.4	AERMOD Haul Road Area Source Calculator
Initial Vertical Dimension	meters	3.2	AERMOD Haul Road Area Source Calculator
AERMOD Model Results			
Sensitive Receptor	**Pollutant**	**Annual Average Concentration**	**Notes**
MEIR at 50 feet - Trench Soil and Backfill Material Import	DPM ($\mu g/m^3$)	0.000045	Maximally exposed individual residence (MEIR) is located as close as 50 feet from the centerline of Redwood Road
	$PM_{2.5}$ ($\mu g/m^3$)	0.000226	
MEIR at 50 feet - Off-Haul Events	DPM ($\mu g/m^3$)	0.000936	
	$PM_{2.5}$ ($\mu g/m^3$)	0.005	

Notes:
DPM = diesel particulate matter
$PM_{2.5}$ = fine particulate matter
$\mu g/m^3$ = micrograms per cubic meter

USEPA, 2021. PM Hot-spot Guidance. EPA-420-B-21-037. October.

PROJECT TITLE:

Miller Road Trench Soil
Haul Route - Truck Emissions

PLOT FILE OF PERIOD VALUES AVERAGED ACROSS 0 YEARS FOR SOURCE GROUP: ALL ug/m^3

Max: 4.03 [ug/m^3] at (581631.63, 4175029.66)

0.04 0.05 0.06 0.08 0.10 0.20 0.40 0.50 0.60 0.80 1.00 2.00 4.00 4.03

COMMENTS: Concentrations based on unit emission rate (1 g/s)	SOURCES: **1**	COMPANY NAME: **Baseline Environmental Consulting**	
	RECEPTORS: **1753**		
	OUTPUT TYPE: **Concentration**	SCALE: 1:23,089 0 0.5 km	
	MAX: **4.03 ug/m^3**		PROJECT NO.: **21215-10**

Summary of Health Risk Assessment at the Maximally Exposed Individual Resident Exposed to DPM
Trench Soil and Backfill Material Import

Health Risk Assessment Parameters and Results						
Inhalation Cancer Risk Assessment	**Units**	**3rd Trimester**	**0-2 Year Infant**	**2-16 Year Child**	**> 16 Year Adult**	**Notes**
DPM Concentration (C)	$\mu g/m^3$	0.000045	0.000045	0.000045	0.000045	AERMOD Annual Average
Daily Breathing Rate (DBR)	L/kg-day	361	1,090	572	261	OEHHA, 2015
Inhalation absorption factor (A)	unitless	1.0	1.0	1.0	1.0	OEHHA, 2015
Exposure Frequency (EF)	unitless	0.96	0.96	0.96	0.96	350 days/365 days in a year (OEHHA, 2015)
Dose Conversion Factor (CF_D)	$mg\text{-}m^3/\mu g\text{-}L$	0.000001	0.000001	0.000001	0.000001	Conversion of µg to mg and L to m^3
Dose (D)	mg/kg/day	0.000000016	0.000000047	0.000000025	0.000000011	$C*DBR*A*EF*CF_D$ (OEHHA, 2015)
Cancer Potency Factor (CPF)	$(mg/kg/day)^{-1}$	1.1	1.1	1.1	1.1	OEHHA, 2015
Age Sensitivity Factor (ASF)	unitless	10	10	3	1	OEHHA, 2015
Annual Exposure Duration (ED)	years	0.25	2.00	14	13.75	30 years of exposure commencing at year 2030.
Averaging Time (AT)	years	70	70	70	70	70 years for residents (OEHHA, 2015)
Fraction of time at home (FAH)	unitless	1.00	1.00	1.00	0.73	OEHHA, 2015
Cancer Risk Conversion Factor (CF)	m^3/L	1000000	1000000	1000000	1000000	Chances per million (OEHHA, 2015)
Cancer Risk at MEIR location	per million	0.0006	0.0148	0.0163	0.0018	D*CPF*ASF*ED/AT*FAH*CF (OEHHA, 2015)
Total Cancer Risk at MEIR location	per million	0.033				
Hazard Index for DPM	**Units**		**Value**			**Notes**
Chronic REL	$\mu g/m^3$	5.0				OEHHA, 2015
Chronic Hazard Index for DPM	unitless	0.00005				At the MEIR along the haul truck route

Notes:

DPM = diesel particulate matter

REL = reference exposure level

$\mu g/m^3$ = micrograms per cubic meter

L/kg-day = liters per kilogram-day

m^3/L = cubic meters per liter

$(mg/kg/day)^{-1}$ = 1/milligrams per kilograms per day

Office of Environmental Health Hazard Assessment (OEHHA), 2015. *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments. February.*

Summary of Health Risk Assessment at the Maximally Exposed Individual Resident Exposed to DPM
Miller Road Off-Haul Events

Health Risk Assessment Parameters and Results						
Inhalation Cancer Risk Assessment	**Units**	**3rd Trimester**	**0-2 Year Infant**	**2-16 Year Child**	**> 16 Year Adult**	**Notes**
DPM Concentration (C)	$\mu g/m^3$	0.000936	0.000936	0.000936	0.000936	AERMOD Annual Average
Daily Breathing Rate (DBR)	L/kg-day	361	1,090	572	261	OEHHA, 2015
Inhalation absorption factor (A)	unitless	1.0	1.0	1.0	1.0	OEHHA, 2015
Exposure Frequency (EF)	unitless	0.96	0.96	0.96	0.96	350 days/365 days in a year (OEHHA, 2015)
Dose Conversion Factor (CF_D)	$mg\text{-}m^3/\mu g\text{-}L$	0.000001	0.000001	0.000001	0.000001	Conversion of µg to mg and L to m^3
Dose (D)	mg/kg/day	0.000000324	0.000000978	0.000000513	0.000000234	$C*DBR*A*EF*CF_D$ (OEHHA, 2015)
Cancer Potency Factor (CPF)	$(mg/kg/day)^{-1}$	1.1	1.1	1.1	1.1	OEHHA, 2015
Age Sensitivity Factor (ASF)	unitless	10	10	3	1	OEHHA, 2015
Annual Exposure Duration (ED)	years	0.08	0.2	1.2	1.2	30 years of exposure commencing at year 2030. Off-haul events would occur approximately every five years with up to 50,000 CY of trench soil off-hauled, but potentially every one to two years if beneficial soil reuse opportunities arise. If off-haul events occurred at one to two year intervals, less than 50,000 CY would be off-hauled per event. To be conservative, it was assumed that the off-haul events would occur every year with 50,000 CY of trench soil off-hauled and last for one-month per event in this analysis.
Averaging Time (AT)	years	70	70	70	70	70 years for residents (OEHHA, 2015)
Fraction of time at home (FAH)	unitless	1.00	1.00	1.00	0.73	OEHHA, 2015
Cancer Risk Conversion Factor (CF)	m^3/L	1000000	1000000	1000000	1000000	Chances per million (OEHHA, 2015)
Cancer Risk at MEIR location	per million	0.00	0.03	0.03	0.003	D*CPF*ASF*ED/AT*FAH*CF (OEHHA, 2015)
Total Cancer Risk at MEIR location	per million	0.061				
Hazard Index for DPM	**Units**		**Value**			**Notes**
Chronic REL	$\mu g/m^3$	5.0				OEHHA, 2015
Chronic Hazard Index for DPM	unitless	0.00094				At the MEIR along the haul truck route

Notes:
DPM = diesel particulate matter
REL = reference exposure level
$\mu g/m^3$ = micrograms per cubic meter
L/kg-day = liters per kilogram-day
m^3/L = cubic meters per liter
$(mg/kg/day)^{-1}$ = 1/milligrams per kilograms per day
Office of Environmental Health Hazard Assessment (OEHHA), 2015. *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments. February.*

Appendix C: Noise Calculations

Noise Calculations for Onsite Activities

Project Component	Noise Generating Equipment[1]	Noise Generating Equipment (USDOT List)[2]	No. Equipment[1]	Acoustical Usage Factor[2]	Maximum Noise Level @ 50 feet (Lmax)[2,3]	Typical Noise Level @ 50 feet (dBA_1)	Ground Absorption Constant (G)	Reference Distance (D_1)	Distance to Receptor (D_2)	Noise Level at Receptor (dBA_2)		Combined Noise Level at Receptor (dBA2)
			Unit:	%	dBA Lmax	dBA Leq	unitless	feet	feet	dBA Leq	dBA Leq	dBA Leq
Trench Soil Import	Cat 336 Excavator	Excavator	1	40	85	81	0.5	50	5,300	30	33	39
	D6 Dozer	Dozer	1	40	85	81	0.5	50	5,300	30		
Backfill Material Import/Export	D8 Dozer	Dozer	1	40	85	81	0.5	50	5,300	30	30	
Miller Road Off-Haul Events	Cat 336 Excavator	Excavator	2	40	85	81	0.5	50	5,300	30	37	
	D6 or D8 Dozer	Dozer	2	40	85	81	0.5	50	5,300	30		
	Water Truck	Flat Bed Truck	1	40	84	80	0.5	50	5,300	29		
	Sweeper	Vacuum Street Sweeper	1	10	80	70	0.5	50	5,300	19		

Notes:

Noise level at the receptor calculated based on the following equation:[4]

$dBA_2 = dBA_1 + 10 * \log_{10}(D_1/D_2)^{2+G}$

Where:

dBA_2 = Noise level at receptor

dBA_1 = Noise level at reference distance

D_1 = Reference distance

D_2 = Receptor distance

G = Ground absorption constant (0 for hard surface, 0.5 for soft surface)

Combined noise levels at receptor calculated for two noisiest equipment using decibel addition:

$L = 10 * \log_{10}(10^{(L_1/10)}+10^{(L_2/10)})$

Where:

L = Combined noise level

L_1 = Noise level for first noisiest piece of equipment

L_2 = Noise level for second noisiest piece of equipment

[1] Off-road equipment list was provided by EBMUD.

[2] U.S. Department of Transportation, 2006. FHWA Highway Construction Noise Handbook, Table 9.1. August.

[3] Federal Transit Administration, 2018. Transit Noise and Vibration Impact Assessment Manual, Table 7-1. September.

[4] California Department of Transportation, 1998. Technical Noise Supplement (TeNS). Equation N-2141.2. October.

Traffic Counts on Redwood Road

Assumptions:

Speed limit : 35 mph

Truck percent for existing conditions: 3.30%

It was assumed that for 2024 existing conditions and future baseline 2030 conditions, heavy-duty trucks account for 3.3% of the daily traffic volume.

Worst case scenario: the project would generate 35 inbound trips, 35 outbound trips, and 5 worker commute one-way trips during AM and PM peak hours

Source:

Traffic volumes at each studied intersections for the 2024 existing condition, the 2030 future Baseline condition, and project-generated vehicle trips during AM and PM peak hours were provided by the transportation consultant.

Traffic Counts during AM and PM Peak Hours

Road Segment		Vehicle Type	Existing (2024)		Existing (2024) plus Project		Future Baseline (2030)		Future Baseline (2030) plus Project	
			AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
Redwood Road	North of Seven Hills Road	Passenger	936	786	941	791	1,007	949	1,012	954
	Between Seven Hills Road and Castro Valley Road		1,346	1,464	1,351	1,469	1,428	1,664	1,433	1,669
	Between Castro Valley Road and I-580 West Ramps		2,092	2,624	2,097	2,629	2,230	2,923	2,235	2,928
	Between I-580 West Ramps and I-580 East Ramps		2,640	2,925	2,643	2,927	2,854	3,141	2,857	3,144
Redwood Road	North of Seven Hills Road	Heavy-duty Trucks	32	27	102	97	34	32	104	102
	Between Seven Hills Road and Castro Valley Road		46	50	116	120	49	57	119	127
	Between Castro Valley Road and I-580 West Ramps		72	90	142	160	76	100	146	170
	Between I-580 West Ramps and I-580 East Ramps		90	100	125	135	98	107	133	142

Truck Percentage

Roadway Segment		Existing (2024)		Existing (2024) plus Project		Future Baseline (2030)		Future Baseline (2030) plus Project	
		AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
Redwood Road	North of Seven Hills Road	3.3%	3.3%	9.8%	10.9%	3.3%	3.3%	9.3%	9.7%
	Between Seven Hills Road and Castro Valley Road	3.3%	3.3%	7.9%	7.6%	3.3%	3.3%	7.7%	7.1%
	Between Castro Valley Road and I-580 West Ramps	3.3%	3.3%	6.3%	5.7%	3.3%	3.3%	6.1%	5.5%
	Between I-580 West Ramps and I-580 East Ramps	3.3%	3.3%	4.5%	4.4%	3.3%	3.3%	4.4%	4.3%

Existing AM

INTID	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
1	101	111	143	76	138	42	67	226	57	30	472	97
2	78	384	189	179	344	230	214	565	114	239	564	67
3				703	3	248	278	1005			763	485
4	491	11	325					778	341	222	1220	

Existing PM

INTID	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
1	63	59	117	65	30	9	122	367	49	6	329	39
2	129	518	234	234	378	207	316	713	288	264	574	91
3				564	4	289	253	1399			813	566
4	719	5	490					915	330	116	1270	

2030 Baseline AM

INTID	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
1	109	120	154	81	146	45	71	251	61	32	501	103
2	95	470	231	179	344	230	220	591	117	252	595	71
3				741	3	266	307	1115			793	504
4	580	13	381					809	355	240	1318	

2030 Baseline PM

INTID	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
1	83	78	154	69	32	10	153	459	61	7	378	44
2	175	701	317	269	434	238	350	789	319	271	600	94
3				571	4	293	276	1528			930	649
4	785	5	535					981	354	124	1301	

Project Trips AM - Worker

INTID	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
1								5				
2								5				
3						2.5		2.5				
4	2.5											

Project Trips PM - Worker

INTID	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
1											5	
2											5	
3											2.5	2.5
4										2.5		

Project Trips AM - Truck

INTID	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
1								35			35	
2								35			35	
3						17.5		17.5			17.5	17.5
4	17.5									17.5		

Project Trips PM - Truck

INTID	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
1								35			35	
2								35			35	
3						17.5		17.5			17.5	17.5
4	17.5									17.5		

Baseline Environmental Consulting **10 October 2024**
Baseline Env **TNM 2.5**

INPUT: TRAFFIC FOR Ldn
PROJECT/CONTRACT: **21215-10**
RUN: **Miller Road Trench Soil Project**

Roadway Name	Points Name	No.	Segment ADT	Autos			MTrucks			HTrucks			Buses			Motorcycles		
				%D	%N	S	%D	%N	S	%D	%N	S	%D	%N	S	%D	%N	S
			veh/24hrs	%	%	mph	%	%	mph	%	%	mph	%	%	mph	%	%	mph
Redwood Rd near Somerset Ave	point1	1	17000	97	97	35	0	0	0	3	3	35	0	0	0	0	0	0
	point2	2																

Baseline Environmental Consulting
Baseline Env

10 October 2024
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: 21215-10
RUN: Miller Road Trench Soil Project
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Ldn	No Barrier		Increase over existing		Type Impact	With Barrier			
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc		Calculated Ldn	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	70.3	66	70.3	10	Snd Lvl	70.3	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Baseline Environmental Consulting 10 October 2024
Baseline Env TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: 21215-10
RUN: Miller Road Trench Soil Project

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
North of Seven Hills Rd-2024 E AM	point1	1	936	35	0	0	32	35	0	0	0	0
	point2	2										

Baseline Environmental Consulting
Baseline Env

10 October 2024
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: 21215-10
RUN: Miller Road Trench Soil Project
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	65.3	66	65.3	10	----	65.3	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Baseline Environmental Consulting 2 October 2024
Baseline Env TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: 21215-10
RUN: Miller Road Trench Soil Project

Roadway Name	Points Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
North of Seven Hills Rd-2024 existing PM	point1	1	786	35	0	0	27	35	0	0	0	0
	point2	2										

Baseline Environmental Consulting
Baseline Env

2 October 2024
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 21215-10
RUN: Miller Road Trench Soil Project
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h		Increase over existing		Type Impact	With Barrier	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc		LAeq1h	Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	64.6	66	64.6	10	----	64.6	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction		
		Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Baseline Environmental Consulting **2 October 2024**
Baseline Env **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **21215-10**
RUN: **Miller Road Trench Soil Project**

Roadway	Points											
Name	**Name**	**No.**	**Segment**									
			Autos		**MTrucks**		**HTrucks**		**Buses**		**Motorcycles**	
			V	**S**	**V**	**S**	**V**	**S**	**V**	**S**	**V**	**S**
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
North of Seven Hills Rd-2024 E+P PM	point1	1	791	35	0	0	97	35	0	0	0	0
	point2	2										

Baseline Environmental Consulting
Baseline Env

2 October 2024
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 21215-10
RUN: Miller Road Trench Soil Project
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	67.5	66	67.5	10	Snd Lvl	67.5	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Baseline Environmental Consulting **2 October 2024**
Baseline Env **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **21215-10**
RUN: **Miller Road Trench Soil Project**

Roadway Name	Points Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
North of Seven Hills Rd-2030 B PM	point1	1	949	35	0	0	32	35	0	0	0	0
	point2	2										

Baseline Environmental Consulting
Baseline Env
2 October 2024
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 21215-10
RUN: Miller Road Trench Soil Project
BARRIER DESIGN: INPUT HEIGHTS
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.
ATMOSPHERICS: 68 deg F, 50% RH

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	65.4	66	65.4	10	----	65.4	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Baseline Environmental Consulting **2 October 2024**

Baseline Env **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes

PROJECT/CONTRACT: **21215-10**

RUN: **Miller Road Trench Soil Project**

Roadway	Points		Segment									
Name	Name	No.	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
North of Seven Hills Rd-2030 B+P PM	point1	1	954	35	0	0	102	35	0	0	0	0
	point2	2										

Baseline Environmental Consulting
Baseline Env

2 October 2024
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 21215-10
RUN: Miller Road Trench Soil Project
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	67.9	66	67.9	10	Snd Lvl	67.9	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Baseline Environmental Consulting				**10 October 2024**											
Baseline Env				**TNM 2.5**											
INPUT: TRAFFIC FOR LAeq1h Volumes															
PROJECT/CONTRACT:	**21215-10**														
RUN:	**Miller Road Trench Soil Project**														
Roadway	**Points**														
Name	**Name**	**No.**	**Segment**												
			Autos		**MTrucks**		**HTrucks**		**Buses**		**Motorcycles**				
			V	**S**	**V**	**S**	**V**	**S**	**V**	**S**	**V**	**S**			
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph			
Between SH and CVR-2024 E AM	point1	1	1346	35	0	0	46	35	0	0	0	0			
	point2	2													

Baseline Environmental Consulting
Baseline Env

10 October 2024
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 21215-10
RUN: Miller Road Trench Soil Project
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	66.9	66	66.9	10	Snd Lvl	66.9	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Baseline Environmental Consulting				**2 October 2024**								
Baseline Env				**TNM 2.5**								
INPUT: TRAFFIC FOR LAeq1h Volumes												
PROJECT/CONTRACT:	**21215-10**											
RUN:	**Miller Road Trench Soil Project**											
Roadway	**Points**											
Name	**Name**	**No.**	**Segment**									
			Autos		**MTrucks**		**HTrucks**		**Buses**		**Motorcycles**	
			V	**S**	**V**	**S**	**V**	**S**	**V**	**S**	**V**	**S**
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Between SH and CVR-2024 E PM	point1	1	1464	35	0	0	50	35	0	0	0	0
	point2	2										

Baseline Environmental Consulting
Baseline Env

2 October 2024
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: 21215-10
RUN: Miller Road Trench Soil Project
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	67.3	66	67.3	10	Snd Lvl	67.3	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Baseline Environmental Consulting **2 October 2024**
Baseline Env **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **21215-10**
RUN: **Miller Road Trench Soil Project**

Roadway Name	Points Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Between SH and CVR-2024 E+P PM	point1	1	1469	35	0	0	120	35	0	0	0	0
	point2	2										

Baseline Environmental Consulting
Baseline Env

2 October 2024
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: 21215-10
RUN: Miller Road Trench Soil Project
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	69.1	66	69.1	10	Snd Lvl	69.1	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Baseline Environmental Consulting **2 October 2024**
Baseline Env **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **21215-10**
RUN: **Miller Road Trench Soil Project**

Roadway	**Points**											
Name	**Name**	**No.**	**Segment**									
			Autos		**MTrucks**		**HTrucks**		**Buses**		**Motorcycles**	
			V	**S**	**V**	**S**	**V**	**S**	**V**	**S**	**V**	**S**
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Between SH and CVR-2030 B PM	point1	1	1664	35	0	0	57	35	0	0	0	0
	point2	2										

Baseline Environmental Consulting
Baseline Env
2 October 2024
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 21215-10
RUN: Miller Road Trench Soil Project
BARRIER DESIGN: INPUT HEIGHTS
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.
ATMOSPHERICS: 68 deg F, 50% RH

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	67.8	66	67.8	10	Snd Lvl	67.8	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Baseline Environmental Consulting **2 October 2024**
Baseline Env **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **21215-10**
RUN: **Miller Road Trench Soil Project**

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Between SH and CVR-2030 B+P PM	point1	1	1669	35	0	0	127	35	0	0	0	0
	point2	2										

Baseline Environmental Consulting
Baseline Env

2 October 2024
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 21215-10
RUN: Miller Road Trench Soil Project
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	69.5	66	69.5	10	Snd Lvl	69.5	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Baseline Environmental Consulting 10 October 2024
Baseline Env TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: 21215-10
RUN: Miller Road Trench Soil Project

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Between CVR & I580W-2024 E AM	point1	1	2092	35	0	0	72	35	0	0	0	0
	point2	2										

Baseline Environmental Consulting
Baseline Env

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TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 21215-10
RUN: Miller Road Trench Soil Project
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	68.8	66	68.8	10	Snd Lvl	68.8	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Baseline Environmental Consulting **2 October 2024**
Baseline Env **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **21215-10**
RUN: **Miller Road Trench Soil Project**

Roadway	Points		Segment									
Name	Name	No.	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Between CV Rd & I580W-2024 E PM	point1	1	2624	35	0	0	90	35	0	0	0	0
	point2	2										

Baseline Environmental Consulting
Baseline Env
2 October 2024
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 21215-10
RUN: Miller Road Trench Soil Project
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	69.8	66	69.8	10	Snd Lvl	69.8	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Baseline Environmental Consulting **2 October 2024**
Baseline Env **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **21215-10**
RUN: **Miller Road Trench Soil Project**

Roadway	Points		Segment									
Name	Name	No.	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Between CV Rd & I580W-2024 E+P PM	point1	1	2629	35	0	0	160	35	0	0	0	0
	point2	2										

Baseline Environmental Consulting
Baseline Env

2 October 2024
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 21215-10
RUN: Miller Road Trench Soil Project
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	70.9	66	70.9	10	Snd Lvl	70.9	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min dB	Noise Reduction Avg dB	Noise Reduction Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Baseline Environmental Consulting **2 October 2024**
Baseline Env **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **21215-10**
RUN: **Miller Road Trench Soil Project**

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Between CV Rd & I580W-2030 B PM	point1	1	2923	35	0	0	100	35	0	0	0	0
	point2	2										

Baseline Environmental Consulting
Baseline Env

2 October 2024
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: 21215-10
RUN: Miller Road Trench Soil Project
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	70.3	66	70.3	10	Snd Lvl	70.3	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Baseline Environmental Consulting **2 October 2024**
Baseline Env **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **21215-10**
RUN: **Miller Road Trench Soil Project**

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Between CV Rd & I580W-2030 B+P PM	point1	1	2928	35	0	0	170	35	0	0	0	0
	point2	2										

Baseline Environmental Consulting
Baseline Env

2 October 2024
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: 21215-10
RUN: Miller Road Trench Soil Project
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	71.3	66	71.3	10	Snd Lvl	71.3	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Baseline Environmental Consulting **10 October 2024**
Baseline Env **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **21215-10**
RUN: **Miller Road Trench Soil Project**

Roadway	Points		Segment									
Name	Name	No.	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Between I580W & I580E -2024 E AM	point1	1	2640	35	0	0	90	35	0	0	0	0
	point2	2										

Baseline Environmental Consulting
Baseline Env

10 October 2024
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: 21215-10
RUN: Miller Road Trench Soil Project
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	69.8	66	69.8	10	Snd Lvl	69.8	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min dB	Noise Reduction Avg dB	Noise Reduction Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Baseline Environmental Consulting **2 October 2024**
Baseline Env **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **21215-10**
RUN: **Miller Road Trench Soil Project**

Roadway	Points		Segment									
Name	Name	No.	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Between I580W and I580E-2024 E PM	point1	1	2925	35	0	0	100	35	0	0	0	0
	point2	2										

Baseline Environmental Consulting
Baseline Env
2 October 2024
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 21215-10
RUN: Miller Road Trench Soil Project
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h		Increase over existing		Type Impact	With Barrier Calculated	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc		LAeq1h	Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	70.3	66	70.3	10	Snd Lvl	70.3	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Baseline Environmental Consulting **2 October 2024**
Baseline Env **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **21215-10**
RUN: **Miller Road Trench Soil Project**

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Between I580W and I580E-2024 E+P PM	point1	1	2927	35	0	0	135	35	0	0	0	0
	point2	2										

Baseline Environmental Consulting
Baseline Env

2 October 2024
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: 21215-10
RUN: Miller Road Trench Soil Project
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h		Increase over existing		Type Impact	With Barrier Calculated	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc		LAeq1h	Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	70.8	66	70.8	10	Snd Lvl	70.8	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Baseline Environmental Consulting **2 October 2024**
Baseline Env **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **21215-10**
RUN: **Miller Road Trench Soil Project**

Roadway	Points		Segment									
Name	Name	No.	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Between I580W and I580E-2030 B PM	point1	1	3141	35	0	0	107	35	0	0	0	0
	point2	2										

Baseline Environmental Consulting
Baseline Env
2 October 2024
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 21215-10
RUN: Miller Road Trench Soil Project
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h		Increase over existing		Type Impact	With Barrier Calculated	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc		LAeq1h	Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	70.6	66	70.6	10	Snd Lvl	70.6	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Baseline Environmental Consulting **2 October 2024**
Baseline Env **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **21215-10**
RUN: **Miller Road Trench Soil Project**

Roadway	Points		Segment									
Name	Name	No.	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Between I580W and I580E-2030 B+P PM	point1	1	3144	35	0	0	142	35	0	0	0	0
	point2	2										

Baseline Environmental Consulting
Baseline Env
2 October 2024
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 21215-10
RUN: Miller Road Trench Soil Project
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	71.1	66	71.1	10	Snd Lvl	71.1	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min dB	Noise Reduction Avg dB	Noise Reduction Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Appendix D Response to Comments

August 2025

Prepared for:
East Bay Municipal Utility District
Water Distribution Planning Division
375 11th Street
Oakland, CA 94607

Prepared by:
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717 Market Street, Suite 400
San Francisco, CA 94103

Table of Contents

APPENDIX D: RESPONSE TO COMMENTS

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1 Introduction to IS/MND

1.1 Project Background

The East Bay Municipal Utility District (EBMUD), acting as the California Environmental Quality Act (CEQA) lead agency, prepared a Draft Initial Study and Mitigated Negative Declaration (MND) for the Miller Road Trench Soil Management Project (Project). The Draft Initial Study and MND was developed to provide the public, as well as responsible agencies and trustee agencies reviewing the Project, with an analysis of the potential effects on the local and regional environment associated with the continued operation of the Project, which supports EBMUD's maintenance and repair of infrastructure that is essential to fulfilling its public mission. The Draft Initial Study and MND evaluated the potential impacts of the proposed Project as modified to incorporate mitigation measures to avoid or mitigate any significant and potentially significant impacts. The Draft Initial Study and MND was circulated for review to allow the public and other agencies to have an opportunity to review the mitigation measures and to determine whether they will sufficiently mitigate any potential environmental impacts.

The Miller Road trench soil stockpile site has been used by EBMUD for managing trench soil since 1975. EBMUD uses this site to temporarily store excavated material generated by pipeline construction and maintenance activities on land that EBMUD owns. The Project involves the continued operation of the Miller Road stockpile site, including import, temporary storage, and periodic removal of trench soil, with the next removal event potentially occurring in 2026. The Project also includes continued operation of the rock and sand stockpile site approximately 1 mile south of the Miller Road soil stockpile site on EBMUD-owned property within the Project site. The Project includes a potential gradual increase in the volume of trench soil transported to the Miller Road site and routine removal of stockpiled trench soil (referred to as *off-haul events*) to accommodate increases in EBMUD's pipeline repair and replacement activities, and an increase in the import and off-haul of backfill materials to and from the rock and sand stockpile site as EBMUD increases its pipeline repair and replacement activities. The storage capacity of the stockpile site is not proposed to increase and will remain at approximately 125,000 cubic yards.

EBMUD provides water service to 20 incorporated cities and 15 unincorporated areas in Alameda and Contra Costa Counties. The water distribution and transmission system is comprised of 6 water treatment plants, 167 potable water reservoirs, 131 pumping plants, over 4,200 miles of potable (treated) water distribution and transmission pipelines, and numerous accessory structures that altogether provide water service to EBMUD's approximately 1.4 million customers. The Project would support EBMUD's efforts to maintain its water system

and proactively replace and rehabilitate critical water system infrastructure. EBMUD's pipeline replacement program focuses on pipelines that are near the end of their useful lives. Currently, EBMUD replaces approximately 25 miles of pipeline per year of its approximately 4,200-mile-long distribution pipeline network. Based on the age of these pipelines, EBMUD estimates that approximately 25 miles of pipeline replacement will be required in 2025 and approximately 30 miles of pipeline will need replacement annually by 2030. The Miller Road stockpile site supports EBMUD's pipeline transmission infrastructure repair and replacement, and EBMUD evaluated a gradual increase in stockpiling and routine removal of soil at the Miller Road stockpile site and its associated rock and sand stockpile site to meet the need associated with the increased pipeline replacement, in the absence of alternative trench soil management practices.

1.2 Environmental Review Process

On March 20, 2025, EBMUD published the Notice of Intent (NOI) to adopt the Draft Initial Study and MND and released the Draft Initial Study and MND for a 30-day review period. On April 17, 2025 the public review period was extended for an additional 30 days to a total of 60 days. EBMUD provided the NOI, with links to the Draft Initial Study and MND, to responsible and trustee agencies concerned with the Project. During the public review period, the Draft Initial Study and MND was available for review on EBMUD's website (www.ebmud.com/millerroad) and at the following locations:

East Bay Municipal Utility District
375 Eleventh Street
Oakland, CA 94607

Castro Valley Library
3600 Northridge Avenue
Castro Valley, CA 94546

The public notice of the NOI was made in accordance with CEQA Guidelines section 15072 by mailing the notice to the last known name and address of all organizations and individuals who previously requested such notice in writing, posting at the EBMUD headquarters at 375 11th Street in Oakland, posting on the EBMUD website and on the NextDoor platform, e-mailing 12,300 residents in the vicinity registered to receive e-mail communications from EBMUD, and direct mailings of more than 1,500 postcards to residences and businesses within 500 feet of the Project site or haul route.

The 30-day public review period began on March 20, 2025, was extended by 30 days on April 17, 2025, and ended on May 19, 2025. EBMUD staff held one virtual public meeting on April 3, 2025, to receive comments on the Draft Initial Study and MND. The public meeting was scheduled approximately halfway through the 60-day public review period to provide the public with adequate time to review the MND to bring any questions and comments to the meeting.

While not required under CEQA, EBMUD made a presentation about the Project and the Draft Initial Study and MND to the Castro Valley Municipal Advisory Council (MAC) on March 24, 2025.

1.3 Organization of this Document

The Final MND consists of the Draft Initial Study and MND and Appendices, including responses to comments. This document includes five chapters: Chapter 1 is the introduction to the Final MND, Chapter 2 presents the responses to comments on the Draft Initial Study and MND, Chapter 3 contains the complete comments, Chapter 4 shows revisions to the Draft Initial Study and MND, and Chapter 5 contains the Final Mitigation Monitoring and Reporting Program.

Each comment received is listed in Table 1-1 and identified by comment title, comment author, and date. Comments include letters, emails, and materials submitted during the comment period. The full text of all written comments is included in Chapter 3, following the responses to comments. Each submittal is identified by either an acronym of the agency or organization name or the last name of the individual commenter (as listed in Table 1-1), and individual comments are labeled in the margin of each submittal by an alphanumeric code consisting of the submittal code followed by a sequential number; the corresponding responses are labeled with the same code. For example, Comment 1 in the comment letter submitted by Alameda County is designated Comment AC-1 and is addressed in Response to Comment AC-1. EBMUD staff also addressed questions and comments from the Castro Valley MAC meeting on March 24, 2025, which the MAC then formally submitted as a comment letter on May 1, 2025.

Table 1-1 Summary of Comments Received on the EBMUD Draft Initial Study and MND

Submittal code prefix	Comment author	Date
Agency comments		
CDFW	California Department of Fish and Wildlife	April 1, 2025
Martinez	Xochiyotl Martinez	April 14, 2025
AC	Alameda County Department of Transportation and Planning	May 19, 2025
MAC Members	Castro Valley MAC Meeting	May 1, 2025
Individual comments		
Anon.	Anonymous	March 15, 2025
White	Ken White	March 21, 2025
Mellon	Frank Mellon	April 17, 2025
Public meeting comments		
Virtual Public Meeting	Stephen Ryken	April 3, 2025

2 Responses to Comments

2.1 Global Responses

2.1.1 Global Response 1: Soil Testing and Management

EBMUD received several comments requesting information on their standard procedures for soil testing or that otherwise expressed concerns regarding potentially contaminated soil at the Miller Road stockpile site and the potential for contaminated soil to reach the EBMUD water reservoir or the nearby environment.

As noted in the Draft Initial Study and MND, Section 3.5.9, impacts due to contamination from the stockpiled soil were found to be less than significant because of the existing EBMUD trench soil practices that prohibit stockpiling of any trench soil suspected to be contaminated at the Miller Road stockpile site; adherence to the existing Stormwater Pollution Prevention Plan (SWPPP) and Best Management Practices (BMPs); and the ongoing and routine maintenance and check of the Miller Road stockpile site. Due to these practices, EBMUD has successfully avoided accepting trench soils at Miller Road that exceed applicable regulatory screening levels for reuse. All trench soils from the Miller Road stockpile have historically been characterized for chemicals of concern prior to reuse and have consistently met the import criteria for reuse projects throughout the Bay Area, most recently at the Alameda Point former Naval Air Station in Alameda and for the Dumbarton Quarry in Fremont. Site-specific import criteria and chemical limits for these reuse locations were established by the California Department of Toxic Substances Control (DTSC) Information Advisory-Clean Imported Fill Materials guidelines and applicable site-specific Regional Screening Limits (RSLs) set by the DTSC and have included applicable site-specific Environmental Screening Levels (ESLs) established by the San Francisco Regional Water Quality Control Board.

EBMUD's existing soil off-haul contract includes numerous general and environmental requirements including a Project Safety and Health Plan, Excavation Safety Plan, Waste Management Plan, Spill Prevention and Response Plan, and Dust Control and Monitoring Plan. The existing requirements ensure the operations of the stockpile site do not result in significant impacts.

The following in-depth discussion provides a summary of EBMUD's trench soil sampling and testing practices from the pre-excavation investigation to the removal of stockpiled soil (off-haul) from the Miller Road stockpile site. Prior to trench soil excavation, EBMUD develops a project-specific health and safety and waste management plan.

Trench Soil Investigation Prior to Excavation. As part of EBMUD's mission to manage natural resources and protect the environment, all trench soil generated by EBMUD are reviewed by EBMUD's Regulatory Compliance Office, Environmental Compliance (ECS) and Workplace Health & Safety (WHS) Sections. EBMUD develops a project-specific health & safety and waste management plan prior to trench soil excavation. The review process includes confirming if the trench soil generated will be excavated from Areas of Concern (AOCs) such as, but not limited to, industrial areas, current and former clean-up sites, areas with land use restrictions, and areas immediately adjacent to older freeways (where there is an increased potential for lead contamination of soil). As part of determining whether trench soil will be generated from an AOC, a desktop review is conducted by querying environmental databases. Environmental databases reviewed for each project include: EBMUD's defined former Industrial Zones, California's (CA) Department of Toxic Substances Control (EnviroStor), CA Regional Water Quality Control Board (GeoTracker), Alameda County Environmental Health Department Local - Oversight Program (LOP), CA Integrated Waste Management Board, and the United States Environmental Protection Agency Superfund.

Any project that is located within the former industrial area of EBMUD service sectors, or potentially affected by any other AOC, is not permitted for temporarily stockpiling at the Miller Road stockpile site and follows the procedures below for trench soil characterization and disposal.

Trench Soil Waste Characterization and Disposal of Soil from AOC. EBMUD's ECS staff determine the trench soil management, waste characterization, and disposal requirements after reviewing the environmental records. All projects within an AOC require trench soil to be characterized for disposal at an appropriately permitted landfill in accordance with the disposal facilities waste characterization requirements. Pipeline replacement and new water main installation projects include in-situ samples collected within the water main and services alignments in the streets to produce a representative waste profile. Trench soil from AOCs excavated by EBMUD Area Service Centers during small-scale pipeline and lateral service installations are stockpiled in contaminated soil bins at EBMUD Area Service Centers and characterized for waste. All trench soil and groundwater samples collected are then analyzed at an Environmental Laboratory Accreditation Program (ELAP)-certified laboratory. The results of the laboratory analysis of soil (and groundwater) samples are reviewed to determine the appropriate waste management and disposal practices. Typically, non-hazardous soil is disposed of at a Class II or III landfill, such as Keller Canyon Landfill in Pittsburg, CA. Trench soil characterized as hazardous waste is segregated and sent to a Class I hazardous waste disposal facility, such as Clean Harbors' Buttonwillows, or Waste Managements' Kettleman Hills Hazardous Waste Facility.

Soil Permitted for Temporary Stocking at the Miller Road stockpile site. Trench soil excavated from outside of an AOC is permitted for temporary stockpiling at the Miller Road stockpile site, but only if there is no evidence of potential contamination, such as odors or staining. EBMUD staff are trained to identify potentially contaminated soil, or any other recognized environmental conditions, during excavation.

Sampling of Soil Before Off-haul. Trench soil temporarily stockpiled at the Miller Road stockpile site is generated from outside AOCs and is characterized for reuse at local development projects. Prior to an off-haul event for beneficial reuse, the soil is sampled and analyzed at an ELAP laboratory in accordance with the reuse projects' site or soil management plan that is approved by the appropriate regulatory oversight agency. The analytical results are compared against the import criteria of the reuse location to ensure the soil is acceptable.

Stockpile Site Management. The Miller Road stockpile site is managed in accordance with California's General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (CGP), State Water Resources Control Board (State Water Board) Order No. 2022-0057-DWQ (National Pollutant Discharge Elimination System [NPDES] No. CAS000002). The site is managed in accordance with a SWPPP designed by a Qualified SWPPP Developer (QSD) to comply with the CGP. The Miller Road stockpile site is inspected at least weekly by Qualified SWPPP Practitioners (QSPs) or other QSP Delegates in accordance with the CGP and SWPPPs. Sediment control BMPs are utilized at the Miller Road stockpile site and during inspections to prevent or reduce the discharge of pollutants from stormwater runoff. BMPs include management practices and structural controls such as preservation of existing vegetation, performing soil compaction, stabilization of nonactive disturbed areas, grading to minimize steep slopes, permanent stabilization of areas after final completion of Project activities, and the use of fiber rolls.

To ensure the integrity and effectiveness of BMPs, inspections are performed prior to, during, and after qualified storm events (forecasted to be 0.5 inches or more within a 24-hour period). During extended rain events with a forecast of 0.25 inches or more in the subsequent 24-hour period, BMPs are visually inspected daily except under adverse weather conditions (e.g., winds above 40 miles per hour) that could cause an unsafe work environment.

Stormwater sampling and analysis are components of the SWPPP and implemented in accordance with the CGP requirements. Stormwater samples from each discharge compliance point are analyzed for turbidity and pH. Exceedances require corrective action and assessment of sediment control BMPs. All monitoring and samples, including exceedances and corrective actions, are documented in the CGP ad hoc reports submitted to the State Water Board.

If any failures or other shortcomings are identified, maintenance and repair are required within 72 hours of identification. Corrective actions may include the design and implementation of new BMP alternatives as necessary to control stockpile sediment discharge. Repairs are required to be completed prior to the next forecasted precipitation event. The SWPPP QSD is responsible for verifying that all BMP maintenance and repairs are appropriately implemented.

2.1.2 Global Response 2: Transportation and Safety

EBMUD received several comments regarding transportation impacts to Miller Road and Redwood Road, including concerns due to increased truck presence as a result of the Project and associated increase in traffic and questions about implementation of Mitigation Measure (MM) TRA-1, which is set forth in the Draft Initial Study and MND and included as part of the

Project, as well as specific requirements included in the mitigation measure such as whether qualified professionals would oversee key aspects of the mitigation. Commenters indicated they were concerned about the impact of heavy truck traffic on Redwood Road and how the presence of these trucks would impact roadway integrity. Commenters expressed concern regarding pedestrian safety, particularly in relation to nearby schools.

General Concerns regarding traffic on Redwood Road. The Draft Initial Study and MND Section 3.5.17 analyzed a worst-case transportation scenario that assumed the highest daily truck trips that could occur under the Project to provide a conservative analysis of potential impacts. MM TRA-1 is incorporated into the Project to minimize the impacts of heavy truck traffic during off-haul events. In a year when an off-haul event occurs, the Project would generate a maximum of approximately 6,400 truck roundtrips and 292 worker commute roundtrips annually. These values include the assumption that 228 truck roundtrips and 5 worker commute roundtrips would occur daily during off-hauls events. The actual truck trips generated by the Project are estimated to be less than these estimates. As noted in the Draft Initial Study and MND, Section 2.4.5, truck trips during off-haul events would be limited to occur between the hours of 9 a.m. and 4 p.m. on weekdays, which is outside typical peak traffic periods. The analysis used the Castro Valley Area Plan of the Alameda County General Plan to establish minimum acceptable vehicular circulation level of service (LOS) for Redwood Road as LOS E or better. As defined in the Draft Initial Study and MND, LOS is a performance metric used to describe the average delay experienced by vehicles passing through an intersection. In the analysis, each truck trip was treated as equivalent to 2 passenger car trips, considering that trucks require more time to accelerate, decelerate, and make turns due to their larger size. This value is consistent with the Highway Capacity Manual passenger car equivalent (PCE) metric used to measure how much a heavy vehicle impacts traffic flow compared to a passenger car. As stated in Section 3.5.17 of the Draft Initial Study and MND, the PCE typically ranges from 1.3 for a single unit truck to 1.7 for a large semitrailer on level ground. The conservative analysis indicates that, even with the addition of Project-generated trips, all study intersections are anticipated to continue operating within the LOS E threshold during the a.m. and p.m. peak periods.

Impacts to Public Roadways. As noted in the Draft Initial Study and MND, the average weekday traffic volume on Redwood Road currently is 17,000 vehicles (8,800 traveling northbound and 8,200 traveling southbound) of which 3.3 percent are heavy vehicles, or approximately 560 daily heavy vehicles. During regular operations up to 28 truck roundtrips are conducted to and from the Miller Road site daily, which is well within the expected use of the roadway and would not degrade the roadway beyond the effects of existing regular wear and tear; therefore, it would not be expected to require a repair commitment, as mentioned in the Alameda County Comment AC-3.

EBMUD conservatively assumed between 70 and 200 daily truck trips could occur during off-haul events. This increase in daily traffic on Redwood Road would still remain within the existing parameters for which the road is built. Recognizing that some additional wear and tear could occur due to the increased presence of trucks during the off-haul events, MM TRA-1

includes the requirement that EBMUD conduct a visual survey along Redwood Road between I-580 and Miller Road to establish the baseline condition of the roadway. Any damage to the pavement on Redwood Road shall be repaired after each major off-haul event. In compliance with MM TRA-1, EBMUD would employ a qualified videographer to conduct a pre-construction site survey to document site conditions before an off-haul event. After completion of the work, a post construction site survey would be conducted in the same area, which would be reviewed by EBMUD, and EBMUD engineer(s) and/or contractor(s) to develop a list of restoration requirements to be completed by the contractor. EBMUD would provide a designated representative to coordinate with Alameda County Public Works to obtain encroachment permits for the repairs and ensure site restoration is completed. MM TRA-1 has been updated as shown in Section 4 below.

Public Safety Concerns near Schools. As noted in the Draft Initial Study and MND, the off-haul events would generally be limited to the summer season and would occur between 9 a.m. and 4 p.m. The Project is not restricted to the summer season to allow EBMUD to support beneficial reuse opportunities should they arise outside of summer months. Examples of direct haul to beneficial end use sites include the Dumbarton Quarry in Fremont which is being filled to be turned into a regional park owned by East Bay Regional Park District. If off-haul events were to occur outside of the summer season and during the school year, the Project truck trips are required to be scheduled between 9 a.m. and 3 p.m. to minimize overlap with school traffic. Additionally, at all times, all truck drivers would be required to yield to traffic, bicyclists, and pedestrians when traveling to and from the Project site. Commenters requested changes to MM TRA-1 so that the Project would include additional safety requirements, such as a signed acknowledgement of traffic safety requirements by drivers, and monitoring and enforcement metrics to ensure pedestrian safety, among other requests, such as the request for crossing guards on appropriate roadways. In response to the comments, MM TRA-1 has been revised to include additional surveying requirements to monitor site conditions throughout the life of the Project and safety measures, as shown in Section 4. EBMUD would coordinate with Alameda County Department of Transportation, Castro Valley Unified School District, California Highway Patrol, East Bay Regional Park District, and the Sheriff's Department, throughout the life of the Project to ensure pedestrian safety. Additionally, EBMUD would coordinate with Alameda County and Castro Valley Unified School District regarding the request for crossing guards and is willing to pay for additional crossing guard hours in the event that the Project activities occur while school is in session.

2.1.3 Global Response 3: Long-term Trench Soil Management Program and CEQA Process

Several commenters requested that EBMUD consider alternative trench soil management practices instead of the continued use of the Miller Road site for trench soil management. Commenters also stated that EBMUD should have prepared an Environmental Impact Report (EIR) as the appropriate CEQA documentation so that alternatives would be examined. The Draft Initial Study and MND were prepared in accordance with CEQA and the CEQA Guidelines. In accordance with CEQA Guidelines Section 15063, EBMUD conducted an initial

study to determine if the Project may have a significant effect on the environment. Because the initial study determined that there was no substantial evidence that the Project would have a significant effect on the environment, EBMUD determined that an MND was the appropriate document under CEQA, rather than an EIR (See Pub. Res. Code Section 21082.2(d)). It should be noted that the existence of public controversy over the environmental effects of a project shall not require preparation of an EIR if there is no substantial evidence in light of the whole record before the lead agency that the project may have a significant effect on the environment (See Pub. Res. Code Section 21082.2(b)).

While an alternatives analysis is not required for an MND, EBMUD has proactively evaluated alternative trench soil management practices in its 2020 Update to the Trench Soils Master Plan and has begun implementing these practices where feasible. EBMUD's primary strategy for reducing reliance on temporary stockpile sites like Miller Road site is direct hauling of trench soil to beneficial reuse locations. Native slurry backfill (NSB) and trenchless construction methods are also being pursued as supplemental approaches, but these are expected to remain a smaller portion of the trench soil management portfolio in the near term as explained in detail below. These alternative strategies for managing trench soils support a long-term goal of pursuing sustainable and cost-effective practices for maintaining the water system, and EBMUD recognizes that many of these strategies can also assist in addressing community desires. It should be noted that many of these alternative trench soil management practices are not available when emergency pipeline repairs occur outside of traditional work hours or during extreme weather events.

Direct Hauling to Beneficial Reuse Sites. EBMUD is pursuing a long-term strategy to minimize the need to use temporary storage sites by directly hauling trench soil to permanent beneficial reuse sites or landfills. For example, since January 2024, EBMUD has directly hauled approximately 15,000 cubic yards of soil to the Dumbarton Quarry site in Fremont, which is being reclaimed as a future East Bay Regional Park District campground. This effort, coordinated through EBMUD's trench soil management contractor, avoids the need for temporary stockpiling and secondary off-haul of the soils that are directly hauled to the Dumbarton Quarry site, thereby reducing truck trips, emissions, and impacts to communities near the stockpile sites.

In addition to Dumbarton Quarry, EBMUD has finalized a contract for hauling to a second reuse site in Pleasanton, which will further increase direct haul capacity and geographic flexibility. EBMUD's goal is to develop a portfolio of several active beneficial reuse sites to allow for flexibility in the management of trench soils based on construction timing, geography, and site availability.

On-Site Reuse of Trench Soil (Native Slurry Backfill). EBMUD has completed several pilot projects to recycle trench soil using NSB, a method that reuses excavated trench soil by conditioning it with water and/or additives to meet strength and compaction requirements. These efforts aim to reduce disposal volumes and associated transportation needs.

The pilot projects have yielded mixed results. While technically feasible, NSB presented challenges including variable compaction strength, significant dust generation during soil preparation, and the need for a nearby staging area to condition the soil. In addition, several cities do not currently permit NSB for backfill, limiting its geographic applicability until regulatory and logistical issues can be resolved.

Despite these constraints, EBMUD is planning a new NSB pilot that will utilize a nearby staging area for soil amendment and mixing. If successful, a larger project will be considered in 2026. EBMUD continues to view NSB as a viable supplement to other trench soil management methods, especially where project conditions, staging space, and local regulations allow. At present, however, this method of managing trench soils cannot replace other strategies.

Trenchless Construction Methods. Trenchless pipeline installation methods, including cured-in-place pipe (CIPP), pipe bursting, and horizontal directional drilling, reduce the need for open trenching, thereby minimizing trench soil generation. CIPP is currently the most compatible method with EBMUD's standards, as it avoids the use of plastic pipeline and is ideal for locations where pipeline diameter and alignment remain unchanged. While trenchless methods are not feasible in all locations due to utility congestion, shallow cover, or service lateral configurations, this remains a valuable tool in EBMUD's overall strategy to reduce trench soil generation.

EBMUD remains committed to minimizing environmental impacts and improving sustainability through implementation of its trench soil management strategies. The Draft Initial Study and MND provides a conservative analysis of potential increased use of the Miller Road site as pipeline repair and replacement needs increase to ensure a thorough environmental analysis across a range of scenarios. However, with direct hauling as the primary alternative method of trench soil management and supplemental use of NSB and trenchless techniques, EBMUD's future reliance on the Miller Road site, and its other temporary soil stockpile sites, could decline significantly over time, consistent with the District's objectives for environmental stewardship.

2.1.4 Global Response 4: Additional Measures for Off-haul Events

Several commenters mentioned concerns about EBMUD's previous off-haul events. EBMUD acknowledges the concerns that were expressed regarding prior off-haul events, including the Briones off-haul in 2018 and the Miller Road off-haul in 2019. These experiences directly informed improvements that were successfully implemented during more recent off-haul events at the Briones temporary soil stockpile site in 2022 and 2024, which significantly eliminated or reduced impacts.

The Miller Road Project incorporates a number of measures to improve environmental performance and address public concerns, including:

Restricted Off-Haul Hours. Off-haul activities have been scheduled during more limited time windows to reduce disruption to neighborhoods and schools.

On-Site Oversight. EBMUD construction inspectors will be present on-site during all off-haul operations to monitor and enforce safety and environmental protocols. This requirement is currently in place and will be used during any off-haul event.

Enhanced Contractual Requirements. The agreements with EBMUD's off-haul contractor will include enforceable provisions related to vehicle idling, dust control, load covering, speed limits, and truck queuing. Violations may result in warnings, driver suspension, and/or permanent removal from the site.

Dust and Stormwater Controls. EBMUD adheres to an active SWPPP, including regular inspection and implementation of BMPs such as water spraying, use of erosion control materials, and covering of stockpiles and truck loads.

Street Sweeping. Street sweeping will be conducted at least weekly during active off-haul events and increased as needed to maintain clean travel routes.

These measures have been added to the Project Description in Section 4.2 below.

2.2 Responses to Agency Comments

2.2.1 California Department of Fish and Wildlife (CDFW)

Response to Comment CDFW-1

The comment requests detailed design plans be provided to show where the additional 4,000 cubic yards of soil that would be generated by the increase in pipeline replacement will be stored and what measures would be implemented to ensure stability within the existing stockpile site footprint. The comment states that the current stockpile site has reached its maximum recommended slope of 3H:1V, as outlined in the 1998 geotechnical investigation report, and states that further soil placement without proper planning could compromise slope stability. The commenter requests that the MND address how soil stability would be maintained as trench soil imports may increase by up to 57% annually by 2030, without expanding the footprint. The commenter also references the stockpile site's proximity to San Leandro Creek and that there are current signs of erosion beyond the berm into the riparian zone. The commenter requests a more thorough assessment of potential creek impacts and clarification on whether a Lake and Streambed Alteration (LSA) Agreement would be sought.

EBMUD acknowledges the CDFW jurisdiction under Section 1600 et seq. of the California Fish and Game Code. No discharge of trench soil into San Leandro Creek or the adjacent riparian zone is proposed. EBMUD implements a SWPPP at the Miller Road stockpile site, which includes BMPs to prevent sediment or runoff from entering nearby water bodies, including San Leandro Creek.

The existing stockpile site has operated since 1975, and EBMUD does not propose any expansion beyond the existing footprint. While the volume of trench soil imports may increase

over time, site management practices—including periodic off-haul of soil—are implemented as needed to maintain slope stability and capacity within the existing site boundaries. This practice will continue, with the result that even though the amount of soil brought to the site as a result of increased pipeline replacements could increase, there will be no increase in the footprint or overall capacity. EBMUD conducts quarterly aerial surveys and annual topographic surveys at the Miller Road stockpile site to measure and ensure the appropriate slope stability and ensure that all soil is placed within the existing boundaries.

EBMUD monitors the site at least weekly and more frequently as conditions such as precipitation events warrant. The inspections by EBMUD's trench soil management contractor include evaluation and maintenance of slope geometry, BMP maintenance, and evaluation of site access conditions to ensure the continued safe and environmentally responsible operation of the site. QSP also visit and evaluate the site as described in Global Response 1. The entire site, including any bare soil, is monitored and maintained.

Any future activities that may impact the bed, bank, or channel of San Leandro Creek will be coordinated with CDFW, and EBMUD will obtain an LSA Agreement if such activities are proposed. Currently, EBMUD proposes no such activities.

Response to Comment CDFW-2

The comment recommends early coordination with CDFW's Habitat Conservation Program and Conservation Engineering Branch to review and analyze the Project elements that may impact fish and wildlife resources. The commenter states that engineering drawings and design specification planning sheets should be shared with CDFW during the initial design phase, prior to finalizing design selection, and again at a minimum of 30 percent design, continuing through the permitting process to ensure proper review.

The Miller Road soil stockpile site has been in continuous operation since 1975, and the proposed Project does not involve new construction or major design changes that would trigger traditional design phases (e.g., initial, 30 percent, or final design milestones). The continued use of the site will follow existing stockpile operational practices that have been implemented in recent years and would not change the footprint, the maximum amount of soil stored at the site nor the existing slope, design requirements, or site boundaries. EBMUD welcomes the opportunity to coordinate with CDFW's Habitat Conservation Program and Conservation Engineering Branch to review the ongoing operations and address any concerns related to potential impacts on fish and wildlife resources.

EBMUD is committed to continued compliance with all State environmental regulations. EBMUD will avoid impacts on fish and wildlife resources by ensuring the Project remains within the existing footprint which is not habitat for fish and wildlife.

Response to Comment CDFW-3

The comment states that CDFW requires a Lake and Streambed Alteration (LSA) Notification to CDFW, as required under Fish and Game Code section 1600 et seq., for any activities that may impact rivers, streams, lakes, or associated riparian habitats. This includes actions that could

alter natural flow, disturb the lake or stream bed, channel, or banks, or deposit material where it could enter these water bodies.

CDFW jurisdiction over rivers, streams, lakes and association riparian habitats and the need for notification under Fish and Game Code section 1600 prior to any discharge of fill material to a stream or lake is noted. As noted in the Draft Initial Study and MND, Section 3.5.4, there is no riparian habitat or other sensitive natural communities present within the Project site and no state or federally protected wetlands within the Project site. Section 3.5.4 has been revised to further clarify and additionally, there are no jurisdictional creeks or other jurisdictional drainages on the Project site. Ground-disturbing activities associated with the Project would be limited to the stockpile sites, where ground cover consists of dirt and small gravel piles that are predominantly devoid of vegetation with occasional patches of weedy vegetation. Existing paved roads are used for the off-haul events and regular work. EBMUD would not discharge any soil materials to rivers, streams, lakes, or associated riparian habitat. A LSA Agreement is therefore, not required.

Response to Comment CDFW-4

The comment states that the Project area contains habitat features and states that measures to avoid and minimize impacts to the federally threatened Alameda whipsnake can be taken, due to the believed presence of suitable habitat within the Project area. The comment states that a 30-day focused drift-fence funnel trapping survey during peak activity (typically April–May) can adequately assess presence or absence. Additionally, the comment requests the Project implement protections against potential direct and indirect take, such as limiting soil and rock disturbance, managing truck traffic, and preventing the introduction of non-native invasive plant species through the careful selection and handling of erosion control and construction materials.

As noted in the Draft Initial Study and MND, the area around the Project site is known Alameda whipsnake habitat and focused trappings are not needed to assess presence or absence. EBMUD conducted trappings for Alameda whipsnake east of the Miller Road site in 2018 and continues to record any sitings of the whipsnake through its current existing processes. Alameda whipsnake habitat consists of mixed chaparral, coastal scrub, annual grassland with rock piles and oak woodland habitats. Rock piles are an important habitat feature for Alameda whipsnakes because they provide the snake with coverage from predators. Less frequently Alameda whipsnake will live in rural environments such as agriculture, silviculture, and aquaculture. However, the Project site is a disturbed soil stockpile that does not have rock piles or other areas for the Alameda whipsnake to find coverage. Under the existing soil removal requirements, soil off-haul events require surveys and fencing for the duration of the off-haul event to ensure EBMUD meets the requirements in its approved Habitat Conservation Plan (HCP). The Draft Initial Study and MND, Section 3.5.4, has been revised to provide more detail regarding the existing requirements which protect against potential direct and indirect take. EBMUD records of the Miller Road site dating from 1992 show that EBMUD has not had take of the Alameda whipsnake since the monitoring began. The Project would continue to require protections for species and would not be anticipated to result in direct or

indirect take of the Alameda whipsnake. Additionally, EBMUD will consider each off-haul event independently prior to conducting the work and will determine if there is the potential for take, and if so, would coordinate with CDFW for any permit required.

Response to Comment CDFW-5

The comment requests a detailed habitat assessment be performed by a qualified biologist familiar with the Alameda whipsnake's ecology to identify all suitable basking, burrowing, dispersal, overwintering, and foraging habitats within the Project area and surrounding lands. The comment requests that this assessment be conducted to guide the establishment of ecologically appropriate avoidance buffers.

See Response to Comment CDFW-4.

Response to Comment CDFW-6

The comment requests that within 24 hours of any initial ground disturbance or vegetation clearing, a CDFW-approved biologist experienced in identifying Alameda whipsnake conduct clearance surveys and monitoring within 100 feet of the Project site. The comment requests the biologist examine all potential shelter and movement areas, including rock outcrops and mammal burrows, and inspect disturbed soil for signs of the species within 30 minutes of disturbance, if feasible. The commenter states that daily clearance surveys and regular monitoring should occur throughout construction whenever activities pose a risk of take to Alameda whipsnake.

As noted in the Draft Initial Study and MND, Section 3.5.4, and the Response to Comment CDFW-4, while the Project area contains Alameda whipsnake habitat, the Project site itself does not contain Alameda whipsnake habitat. There are no rock outcrops or mammal burrows on the site. As there is no suitable habitat for Alameda whipsnake on the site and the Project does not involve vegetation clearing, Alameda whipsnake clearance surveys are not needed. However, as noted in Response to Comment CDFW-4, fencing and clearance surveys are required prior to off-haul events and meet the existing HCP which requires that sensitive area proposed for HCP covered activities be surveyed by EBMUD biologists or other qualified biologists within 30 days prior to the start of a project and that any covered species features identified during surveys be flagged as areas to avoid and that the covered activities be conducted to minimize disturbance to any sensitive areas.

Response to Comment CDFW-7

The comment requests the MND include effective and feasible compensatory mitigation measures to offset any permanent and temporary impacts to Alameda whipsnake and its habitat. The commenter recommends a minimum 3:1 conservation-to-loss ratio for permanent impacts and a 1:1 ratio for temporary impacts.

As noted in the Draft Initial Study and MND, Section 3.5.4, the Project site does not contain Alameda whipsnake habitat and the Project would not affect Alameda whipsnake habitat. Therefore, compensatory mitigation for impacts on Alameda whipsnake habitat loss is not appropriate for the Project.

Response to Comment CDFW-8

The comment requests the Project applicant consult with the CDFW to determine the need for an Incidental Take Permit (ITP) pursuant to Fish and Game Code Section 2081(b) before beginning any Project activities. The comment recommends EBMUD apply for an ITP to address potential impacts to the Alameda whipsnake.

See Response to Comment CDFW-4. EBMUD has a Low Effect East Bay HCP, and the HCP describes BMPs and measures to address impacts to species.

Response to Comment CDFW-9

The comment requests the MND include a thorough analysis of potential impacts to Crotch's bumble bee, a candidate species under CESA, as they believe the Project area falls within the Crotch's bumble bee known range and contains grassland that may serve as nesting and foraging habitat. The comment asserts that earthmoving activities and truck traffic could result in direct mortality, habitat loss, and reduced reproductive success for this species. Given its ecological importance as a pollinator and legal protections under California Fish and Game Code Section 2080, the comment requests the Project should include avoidance, minimization, and mitigation measures to prevent unauthorized take.

The Draft Initial Study and MND Table 3-5 in Section 3.5.4, Biological Resources, includes a list of special status species with potential to occur on the Project site and does not include Crotch's bumble bee. While the greater Project location is within Crotch's bumble bee's range, the Project site is a disturbed soil stockpile site. Crotch's bumble bee nests are often located underground in abandoned rodent nests, or above ground in tufts of grass, old bird nests, rock piles, or cavities in dead trees. As noted in the Draft Initial Study and MND, Section 3.5.4, the Project site is predominantly devoid of vegetation with occasional patches of weedy vegetation and does not contain burrows, brush and rock piles, or old bird nests, or cavities, for Crotch's bumble bee nesting. While bumble bees may occasionally cross the Project site, due to the ongoing level of weekly maintenance, it would not contain habitat for Crotch's bumble bee nor areas for nesting. The Project site also does not contain nectar sources for Crotch's bumble bee. As a result, the Project would not impact Crotch's bumble bee.

Response to Comment CDFW-10

The comment requests a habitat assessment be performed for Crotch's bumble bee by a qualified entomologist familiar with the species' life history and ecological needs. The comment requests the assessment identify all suitable nesting, overwintering, and foraging habitats within and around the Project area, including features such as bare ground, thatched grasses, rodent burrows, brush and rock piles, and fallen logs. Overwintering habitat should also be evaluated, including disturbed soil and leaf litter. The comment states that the survey should be conducted during the peak bloom period for floral resources used by the species, following CDFW's guidance in the *Survey Considerations for CESA Candidate Bumble Bee Species*.

Refer to Response to Comment CDFW-9. The Project site does not contain habitat for Crotch's bumble bee due to the disturbed nature of the site.

Response to Comment CDFW-11

The comment requests that if suitable Crotch's bumble bee habitat is present within the Project area, a pre-construction survey plan would be developed and submitted to CDFW for review as a mitigation measure. The comment states that surveys should be conducted annually during the active colony period (April through August) and peak bloom by a qualified entomologist familiar with the species. The comment notes that if any CESA candidate bumble bees will be captured or handled, the surveyor must obtain a 2081(a) Memorandum of Understanding (MOU) from CDFW.

As noted in the Draft Initial Study and MND, Section 3.5.4, the Project site is predominantly devoid of vegetation with occasional patches of weedy vegetation and does not contain burrows, brush and rock piles, or other habitat suitable for Crotch's bumble bee nesting. While bumble bees may occasionally cross the Project site, due to the ongoing level of weekly maintenance, it would not contain habitat for Crotch's bumble bee. It is not necessary to conduct annual surveys of Crotch's bumble bee as the site conditions could not support a colony of Crotch's bumble bee due to the absence of nectar sources and nesting habitat at the Project site.

Response to Comment CDFW-12

The comment requests that if Crotch's bumble bee are detected during pre-construction surveys, a species-specific avoidance plan would be developed and submitted to CDFW for review before any ground disturbance or vegetation removal activities. If full avoidance is not feasible, the comment requests the MND state that the Project Proponent will apply for take authorization through an ITP.

As noted in the Draft Initial Study and MND, Section 3.5.4 the Project site does not contain habitat for Crotch's bumble bee due to the disturbed nature of the site. As such, a species-specific avoidance plan is not needed.

Response to Comment CDFW-13

The comment requests that the Project minimize impacts to bumble bees by avoiding herbicide application and mowing during bloom periods, otherwise the Project should obtain take authorization under an ITP.

The Project does not include herbicide application or mowing. Language has been added to the Draft Initial Study and MND as noted in Section 4.2, below, to clarify this.

Response to Comment CDFW-14

The comment requests that the MND include compensatory mitigation for all loss of suitable Crotch's bumble bee habitat. The comment requests that floral resources should be replaced at a 3:1 ratio for permanent impacts and, where possible, replanted near their original location. If active nests are identified and floral resources cannot be restored within 600 feet, they should be planted within 1.5 kilometers of the nest, centrally located to support multiple colonies if needed. The comment states that all mitigation lands should be protected in perpetuity under a conservation easement, with a funded endowment to support long-term management.

The Project is located on a disturbed soil stockpile site and would include use of graveled and paved access roads. There would be no loss of suitable Crotch's bumble bee habitat due to the Project. As noted in the Draft Initial Study and MND, Section 3.5.4, no floral resources would be impacted by the Project other than occasional weed species. Because the Project would not affect suitable habitat for Crotch's bumble bee, habitat compensation would not be required.

Response to Comment CDFW-15

The comment requests that the draft MND evaluate and mitigate impacts to wildlife connectivity from increased truck traffic on Miller Road, which the commenter believes may disrupt movement corridors and increase mortality for species such as the Alameda whipsnake, western pond turtle, and American badger. The commenter requests that design modifications and compensatory mitigation be included in the MND to reduce these impacts, using supporting data from the California Bay Area Linkage Network and California Natural Diversity Database (CNDDB). The commenter requests the MND also assesses compliance with AB 1889 and recommends relevant local policy integration.

As stated in the Draft Initial Study and MND Section 3.5.4, Biological Resources, the Project stockpile sites are isolated areas within the landscape of EBMUD watershed land; the sites are occupied by stockpiles and already experience regular use as trench soil is deposited, as rock and sand are delivered and picked up, and from previous off-hauls. The sites do not serve as important regional wildlife corridors and truck traffic along roads to and from the sites would not be expected to significantly impact wildlife movement. No wildlife mortality has occurred from regular use as trench soil is deposited, as rock and sand are delivered and picked up, nor from previous off-haul events. EBMUD already monitors its lands as part of ongoing watershed management operations.

The Project would not change the boundaries of the stockpile sites or construct new facilities (e.g., fences, roadways) that could pose an impediment to wildlife movement. The Project will continue the use of Miller Road, which has also been used for previous off-haul events. The use of Miller Road for off-haul events under the Project would be less than with the previous off-haul events.

Response to Comment CDFW-16

The comment requests the Project perform in-depth pre-construction studies of existing wildlife corridors used in and around the Project area to assess potential impacts and inform design modifications. The comment states that pre-construction data should guide the development of biologically feasible movement corridor improvements, and post-construction monitoring should evaluate their effectiveness. The comment requests the monitoring results are analyzed, summarized in reports, and shared with CDFW and other relevant agencies, as well as posted to the Project webpage.

See Response to Comment CDFW-15. The Project will continue the use of Miller Road, which has also been used for previous off-haul events. No wildlife mortality has occurred from regular use as trench soil is deposited, as rock and sand are delivered and picked up, nor from previous

off-haul events. EBMUD already monitors its lands as part of ongoing watershed management operations.

Response to Comment CDFW-17
The comment requests that the MND evaluate and avoid impacts to on-site wildlife corridors and connectivity features. The comment requests the Project coordinate with CDFW to incorporate design measures, such as undercrossings, fencing, and signage, to reduce barriers to wildlife movement. The comment requests pre- and post-construction monitoring be conducted to assess the effectiveness of these measures.

See Response to Comment CDFW-15.

Response to Comment CDFW-18
The comment requests the MND include off-site compensatory mitigation to fully offset unavoidable impacts to wildlife corridors if on-site redesigns are insufficient. The comment requests the analysis identify feasible off-site locations for constructing or enhancing wildlife crossings.

See Response to Comment CDFW-15. The Project will continue the use of Miller Road, which has also been used for previous off-haul events. No wildlife mortality has occurred from regular use as trench soil is deposited, as rock and sand are delivered and picked up, nor from previous off-haul events.

2.2.2 Xochiyotl Martinez

Response to Comment Martinez-1
The comment requests analytical data on soil testing and the conceptual site model, including surface and groundwater information. The comment requests a copy of the existing SWPPP and BMPs.

Please refer to Global Response 1 for a description of EBMUD's soil testing program and stockpile management. A sample of the soil testing results from 2022 has been included as Attachment 1 to this document, Appendix D. The existing SWPPP and associated BMPs are available on the EBMUD website at https://www.ebmud.com/millerroad.

2.2.3 Alameda County Department of Transportation and Planning (AC)

Response to Comment AC-1
The comment expresses concern regarding dust mitigation measures to control dust on Miller Road and Redwood Road, and the impact of dust on neighboring residential areas and open spaces. The comment requests clarification be included in the Project regarding what dust control measures would be implemented on Redwood Road and requests inclusion of a measure to keep trucks covered.

As discussed in Section 3.5.3, Air Quality, of the Draft Initial Study and MND, the Project would adhere to EBMUD's existing SWPPP, which includes BMPs for wind erosion control, requiring watering exposed soil and unpaved areas and limiting vehicle speeds on unpaved areas for dust control. A water truck and a sweeper/vacuum truck will be used during the off-haul events for dust control throughout the life of the Project. Additionally, EBMUD requires all off-haul trucks to be covered with the covers fastened, as part of their standard practices. This clarification has been added to Section 2.4, Project Description as noted in Section 4.2 below and includes revisions which would reduce any dust potential from trucks on Redwood Road.

Response to Comment AC-2

The comment expresses a concern that haul routes may pass near schools hosting summer sessions based on historic information. The comment requests including a formal mitigation measure that restricts hauling outside of when school is in session through coordination with the Castro Valley Unified School District. The commenter also requests that the mitigation measure outline how these restrictions will be enforced and what penalties will applied if violated.

EBMUD acknowledges the commenter's concern regarding school children's safety. Please refer to Global Response 2, Traffic and Safety, Public Safety Concerns Near Schools. As stated in MM TRA-1, EBMUD would coordinate any off-haul event with the Alameda County Department of Transportation and, if an off-haul event is scheduled while school is in session, EBMUD would coordinate with Alameda County and with Castro Valley Unified School District regarding the need for additional crossing guards, which would be funded by EBMUD.

Response to Comment AC-3

The comment requests that Alameda County be granted explicit authority to modify or revoke use of the haul route if safety, dust, noise, or roadway degradation issues arise during Project operations. The comment requests that a Traffic Control and Transportation Plan be implemented for all County roads included in the haul route, and that EBMUD work with the County Counsel's office on a haul route agreement to document pre- and post-operation roadway conditions and include requirements for EBMUD to repair any damaged roadways throughout the life of the Project. The commenter also requests that the agreement include a performance or permit bond as a condition of permit issuance.

Please refer to Global Response 2 regarding the limited hours of off-haul events to minimize adverse effects on public health and safety and the conservative nature of the analysis and estimated truck trips involved. EBMUD will coordinate both the off-haul event timing and route with Alameda County. EBMUD will prepare a Traffic Signage Plan and will work with the County to address any concerns that arise. Please refer to Global Response 2 regarding repair to damaged roadways from off-haul events. The Alameda County authority to revoke access to County roads and modify access for specific activities is governed by the California Vehicle Code provisions and Alameda County Code. As noted above and in the Draft Initial Study and MND, EBMUD will respond to any County or community concerns that arise during

an off-haul event and has instituted measures to address noise and dust issues along the haul routes.

Response to Comment AC-4

The comment requests clarification on the difference in trips between the historic, existing, and proposed truck trips under the Project be detailed in the Project Description. Additionally, the commenter requested additional information regarding the proposed timeframe of activities and life of the Project be detailed in the Project Description.

The Draft Initial Study and MND includes details of the historic, existing, and proposed truck trips in Table 2-1 on pages 2-5 and 2-6 of the Draft Initial Study and MND. The historic and existing annual trips associated with operations and off-haul events are shown in Table 2-1. Section 2.4.3 of the Draft Initial Study and MND describes proposed changes to off-haul events. As noted in the Draft Initial Study and MND, the proposed off-haul event truck trips are conservative because EBMUD is actively working to reduce the need to stockpile soils through measures such as recycling soil on site if feasible and direct hauling to beneficial uses, see Section 4.2.1 below.

Response to Comment AC-5

The comment states that the proper environmental document is an EIR to study cumulative impacts, project alternatives, and give the option to adopt the environmentally superior alternative.

Please refer to Global Response 3. The Draft Initial Study and MND were prepared in accordance with CEQA and the CEQA Guidelines. In accordance with CEQA Guidelines Section 15063, EBMUD conducted an initial study to determine if the Project may have a significant effect on the environment. Because the initial study determined that there was no substantial evidence that the Project with the incorporation of the mitigation would have a significant effect on the environment, EBMUD determined that an MND was the appropriate document under CEQA, rather than an EIR. As noted above, EBMUD is pursuing alternative trench soil management methods. Discontinuing the use of the site would have direct and indirect impacts which may be significant. EBMUD's stockpile program requires an off-haul site in Alameda County, and it is not feasible to take soil from pipeline repair and replacement projects from the south of EBMUD's service area to other counties, such as Contra Costa County. Immediately discontinuing use of the site could impact pipeline repair in Alameda County. Longer haul distances would create environmental and financial impacts due to the increased air quality emissions, traffic impacts, and greenhouse gas emission due to added distances, as well as the added costs of time spent in travel, added fuel, and added wear and tear on vehicles. Please refer to Global Response 3 for a discussion of alternative trench soil management practices that EBMUD is implementing and will continue to explore.

2.2.4 Castro Valley Municipal Advisory Council (MAC) Meeting – Member Martinez

Response to Comment MAC Member Martinez-1
The commenter requests analytical data on soil testing and the conceptual site model, including surface and groundwater information. The commenter also requests a copy of the SWPPP and EBMUD BMPs.

Please refer to Global Response 1 regarding soil testing and management. A sample of the soil testing results from 2023 has been included as Attachment 1 to this Appendix. Additionally, EBMUD adheres to an existing SWPPP which is available for review on the EBMUD website at https://www.ebmud.com/millerroad

2.2.5 MAC Meeting – Member Fiebig

Response to Comment MAC Member Fiebig-1
The commenter outlines several concerns and recommendations for the Project, including specified operational requirements and monitoring and oversight measures. The commenter requests an immediate remediation plan involving cleanup and soil removal, stormwater compliance review, and reevaluation of zoning and permit alignment. The commenter proposes operational restrictions, including limiting operations to 3 hours per day, limiting the number of daily truck trips, and contamination control measures. The commenter expresses their belief in the need for independent third-party monitoring of soil and air quality, environmental review, and water quality testing, along with quarterly and annual public reporting. The commenter urges the need for a public health assessment due to the site's proximity to public uses, including golf courses and parks, and water quality testing due to proximity to drinking water areas. The commenter also recommends financial assurances for cleanup, liability assessments for damages, and full site closure with permanent restrictions in the event of noncompliance. An emergency response plan is also suggested. The commenter also states that an EIR should be required.

As discussed in Global Response 1, EBMUD conducts a review of construction sites to ensure that soils are not from a potentially contaminated area. Additionally, field staff is trained in recognizing potential contamination onsite and any suspected contaminated soil is characterized and taken to appropriate disposal sites. Therefore, the Project does not include storage of contaminated soils. As a result, the Project will not affect recreational or drinking water resources. EBMUD, as a water purveyor maintains its lands to protect drinking water quality. Since the Project site would not store any contaminated soil or other hazardous materials, the Project would not trigger pollution control liabilities or an emergency response plan.

The comment requests a re-evaluation of the zoning of the site. Zoning is discussed in the Draft Initial Study and MND Section 3.5.2, Agriculture and Forestry, and Section 3.5.11, Land Use and Planning. Both sections note that the land is zoned for Agriculture and that public utility uses

are considered a conditionally permissible use in areas zoned for agriculture. The Project has features in common with allowable uses and the uses, which directly support the repair and maintenance of EBMUD's transmission infrastructure in the area are similar and compatible with the RM designation.

Regarding the commenter's proposed operational restrictions such as significantly limiting truck trips, having only three designated hours of operation each day, as well as contamination control measures, as noted in the Draft Initial Study and MND Section 2.4, Proposed Project, EBMUD is proposing to limit truck trips and hours of operation during off-haul events and would further coordinate with Alameda County prior to each off-haul event to ensure limits are appropriate for the conditions at the time. Please refer to Global Response 1 regarding existing and ongoing contamination control measures and Global Response 4 regarding implementation of improvements to the off-haul events.

Regarding the need for independent third-party monitoring of soil and air quality and a public health assessment, environmental review, and water quality testing, along with quarterly and annual public reporting, EBMUD is a public agency, and is responsible for monitoring all its soil stockpile sites and water quality. The Miller Road stockpile site SWPPP includes monitoring and sampling locations (see Figure 2 and Sections 7.6 and 7.7 of the SWPPP). Monitoring locations are added or revised if changes at the Miller Road stockpile site affect the appropriateness of the monitoring sites. In addition to monitoring of the site, EBMUD conducts water quality testing for all water in the East Bay watersheds, including the Upper San Leandro Reservoir, and tests water samples from its drinking water daily and the information is made publicly available on the EBMUD website.

Regarding the recommendations for financial assurances for cleanup, damages, or other purposes, two general environmental services contractors in the employ of EBMUD, along with their subcontractors, are available for on-call services during an emergency response. The contractors are required to be insured for general and pollution liability, among others, with a minimum $2-million limit for each occurrence and aggregate. The contractor managing the Miller Road site and responsible for off-haul is also required to be insured in the same manner for general and pollution liability as a condition of the GSA. Global Response 4 addresses EBMUD oversight requirements and enhanced contractual requirements. An Emergency Response Plan is part of the required plans under the existing off-haul contract.

The Draft Initial Study and MND was determined to be the appropriate document under CEQA. See Global Response 3 for more details on the CEQA process.

2.2.6 MAC Meeting – Member Davis

Response to Comment MAC Member Davis-1

The commenter raises questions about the MND's evaluation of potential transportation impacts, focusing on the mitigation measure incorporated into the Project to address potential issues with truck traffic and public safety. The commenter notes their belief that a key

intersection (Redwood Road and Castro Valley Place) was omitted, and states that there is a lack of clarity on how safety protocols would be enforced or monitored. They also question whether qualified professionals would be overseeing key aspects like inspections, signage placement, and pavement condition assessments. The commenter requests specifics on the division of responsibilities, timelines, and methods for implementation, including pre- and post-project road assessments, traffic monitoring, public notification timelines, and driver safety training verification. The commenter also stresses the need for better-defined safety and mitigation strategies to ensure public and environmental safety.

Please refer to Global Response 2 and the clarifications set forth in Section 4 below. Quantitative analysis of traffic conditions and the Project impact on roadway circulation and associated impact on safety are included in the Draft Initial Study and MND (refer to pages 3-68 through 3-70). MM TRA-1 includes measures to ensure public and environmental safety, such as the use of signage, coordination with the surrounding communities, maintenance and inspection requirements for vehicles, and training truck drivers on safety measures. Regarding the intersection of Redwood Road and Castro Valley Place, Castro Valley Place does not appear to be a road along Redwood Road. Castro Valley Marketplace is a food hall and is located at the intersection of Redwood Road and Castro Valley Boulevard which was one of the intersections studied in the Draft Initial Study and MND, see Figure 3-2 in Section 3.5.17, Transportation. Note, the Draft Initial Study and MND called Castro Valley Boulevard, Castro Valley Road in error. However, as shown on Figure 3-2 of the Draft Initial Study and MND, the intersection and all studies were for Castro Valley Boulevard and the revisions to the Draft Initial Study and MND are included in Section 4.2 below.

2.2.7 MAC Meeting – Member Thomas

Response to Comment MAC Member Thomas-1

The commenter expresses concern about school traffic congestion on Redwood Road, predominately between the hours of 7:00 a.m. to 9:00 a.m. and 2:00 p.m. to 4:00 p.m., and strongly opposes truck operations during those hours. The commenter emphasizes the safety risks near schools, particularly Proctor Elementary, and calls for EBMUD to fund crossing guards to prevent accidents. The commenter also questions the logistics of the enforcement of truck limits, the plan for repairing road damage, and general responsibilities. The commenter urges clear, written commitments from EBMUD regarding truck restrictions, safety measures, and road maintenance plans.

Please refer to Global Response 2 regarding EBMUD's written commitments related to limiting off-haul events during the school year and addressing school traffic and safety, including through crossing guards, avoiding road damage and general responsibilities as well as revisions to MM TRA-1 in Section 4.2 below. Consistent with CEQA, EBMUD would prepare and implement a Mitigation Monitoring and Reporting Plan as part of the Project that would ensure the implementation of and compliance with the mitigation measure. Additionally, as noted in MM TRA-1, EBMUD must coordinate with Alameda County Department of Transportation,

and the County and Castro Valley Unified School District during the school year, prior to any off-haul event.

EBMUD acknowledges the commenter's request that trucks not be allowed on Redwood Road between 7:00 a.m. and 9:00 a.m. and 2:00 p.m. and 4:00 p.m. As described in the Draft Initial Study and MND, the off-haul events would generally be scheduled during the summer when school is not in session and would be occurring outside of typical a.m. and p.m. peak periods. To ensure that EBMUD can meet public utility service needs and have the flexibility to implement the alternative trench soil management measures desired by other commenters, strict limits on truck traffic between 2:00 p.m. and 4:00 p.m. in the summer is not consistent with other goals to minimize impacts and promote efficiency.

2.2.8 MAC Meeting – Member Davini

Response to Comment MAC Member Davini-1

The commenter states a desire to see an environmental analysis comparing and contrasting alternative trench soil management procedures, including alternatives focused on native slurry backfill, a trenchless process, and a direct haul. The commenter also stresses the need for coordinated traffic enforcement involving Castro Valley, California Highway Patrol, East Bay Regional Park District, and the Sheriff's Department, given the potential traffic impacts to Castro Valley.

As noted in Global Response 3, as part of its ongoing program to manage trench soil generated by its critical repair and replacement projects, EBMUD already is piloting and pursuing a variety of options to manage its trench soil which include use of native slurry backfill to reuse excavated soil in the trench where feasible, trenchless installations where feasible, and direct haul to beneficial end use sites, when available.

Please refer to Global Response 2 regarding traffic enforcement and coordination and revisions to MM TRA-1 in Section 4.2.5 below.

2.2.9 MAC Meeting – Member Mulgrew

Response to Comment MAC Member Mulgrew-1

The commenter strongly objects to EBMUD serving as the lead agency for the MND, stating that there is bias and a failure to consider key environmental factors such as air quality, geology, hazardous materials, and hydrology. The commenter states that the MND downplays significant impacts related to the transportation and storage of potentially contaminated materials and lacks sufficient testing and traffic management procedures. The commenter references off-haul events in 2017 as basis for their distrust in EBMUD's handling of the Project. The commenter requests the preparation of an EIR.

CEQA Guidelines Section 15051 establishes the criteria for identifying the lead agency for a CEQA analysis, stating that where two or more public agencies will be involved with a project, the agency that will be carrying out the project is the appropriate lead agency. EBMUD owns

the site and is engaged in ongoing use of the site to support the repair and maintenance of its distribution and transmission infrastructure and will be responsible for carrying out the Project. EBMUD is the appropriate lead agency under CEQA, and EBMUD has been coordinating with the Alameda County Planning Department in the development of the Draft Initial Study and MND, including working with the County on the development of the Project Description. EBMUD hired an independent contractor, Panorama Environmental (Panorama), to prepare the Draft Initial Study and MND. Panorama staff are expert CEQA practitioners and followed CEQA regulations when drafting the documents, consulting with EBMUD staff to ensure a thorough understanding of EBMUD's programs, goals, and procedures. Panorama used established CEQA criteria and thresholds and conservative assumptions when calculating impacts to ensure that quantitative assessments of the impacts were defensible and accurate. The impacts for all resources did not downplay the significance of any impacts and is based on a rigorous analysis. The Draft Initial Study and MND was determined to be the appropriate document under CEQA, rather than an EIR, because the initial study determined that the Project does not have significant impacts even when using conservative Project assumptions. Please refer to Global Response 3 for further details on the CEQA process.

EBMUD acknowledges the commenter's concerns regarding past off-haul activities and potential environmental impacts. The Draft Initial Study and MND analyzes the Project as proposed rather than previous events, and as noted, the Project includes measures to address issues that have been raised during prior off-haul events. EBMUD has used lessons learned from previous off-haul events and input received from the community, to make improvements to the proposed future off-haul events, as described in Global Response 4.

2.2.10 MAC Meeting – Member Moore

Response to Comment MAC Member Moore-1

The commenter raises concerns regarding the Project's compatibility with the property's Resource Management land use designation and zoning, which the comment states does not permit the Project's proposed use. The commenter criticizes the MND for not analyzing alternatives. The commenter requests a full EIR be performed by a third party. Additional concerns of the commenter include the lack of pre-hauling soil testing for contaminants like metals and requests third-party oversight to ensure compliance throughout the Project.

The Project is consistent with the Alameda County General Plan policies for Resource Management lands and is a use that may be permitted in accordance with the zoning designation as discussed on pages 3-49 and 3-50 of the Draft Initial Study and MND.

Please refer to Global Response 3 regarding alternative trench soil management measures that EBMUD is pursuing. Global Response 3 also includes information on the CEQA process. As noted in response to MAC Member Mulgrew-1 above, after preparing the initial study, it was determined that an MND was appropriate under CEQA and there was no need to prepare an EIR. Please refer to Global Response 1 regarding the soil testing that EBMUD conducts to ensure that any contaminated soil is taken to a proper facility for disposal. EBMUD includes on-

site oversight and enhanced contractual requirements for all off-haul events as noted in Global Response 4 regarding implementation of improvements to off-haul events.

2.3 Responses to Individual Comments

2.3.1 Anonymous

Response to Comment Anon.-1
The comment urges EBMUD to process and reuse soil on-site to avoid hauling and potential contamination near Lake Chabot. The commenter calls for on-site soil testing for toxins and urges the proper disposal of any hazardous materials. The commenter also raises concerns about road damage from heavy truck traffic and urges EBMUD to avoid polluting the watershed and degrading local infrastructure.

Please refer to Global Response 1 regarding soil testing and management. Please refer to Global Response 2 regarding road damage.

2.3.2 Ken White

Response to Comment White-1
The commenter expresses concern over using the proposed site for gravel and soil storage, citing the fragile landscape and watershed, risk of land and water contamination, and inadequate infrastructure in Castro Valley to handle increased truck traffic. They urge reconsideration of the proposal and suggest alternative locations such as Winton Avenue in Hayward or Oyster Bay in San Leandro.

As stated in the Draft Initial Study and MND Section 3.5.4, Biological Resources, the Project stockpile sites are isolated areas within the landscape of EBMUD watershed land; the sites are occupied by stockpiles and already experience regular use as trench soil is deposited, and as rock and sand is delivered and picked up. The sites do not serve as important regional habitat. The Project does not increase the risk of land and water contamination because the Project would not increase the overall amount of soil stored at the Project site, and as noted in the Draft Initial Study and MND, the Project abides by an existing SWPPP and BMPs that reduce the risk of land and water contamination. This includes regular soil testing and appropriate management as detailed in Global Response 1. Please refer to Global Response 2 regarding truck traffic.

Winton Avenue in Hayward is a heavily built-up street that does not have availability for soil storage. The only areas not built up are within the Hayward Regional Shoreline. Oyster Bay Regional Shoreline is already being used as part of the beneficial reuse program.

2.3.3 Frank Mellon

Response to Comment Mellon-1
The commenter criticizes EBMUD for not using on-site recycling and argues on-site recycling would reduce the need for heavy transport on Redwood Road.

EBMUD is working to further reduce the need for off-site soil stockpiling by implementing alternative trench soil management practices, including recycling of trench soil onsite. Please refer to Global Response 3 for a description of the alternative trench soil management methods that EBMUD is pursuing and the efforts at measures to recycle or reuse trench soil onsite.

2.4 Response to Public Comment Meetings

2.4.1 Virtual Public Meeting – Stephen Ryken

Response to Comment Virtual Public Meeting Stephen Ryken
The commenter asked about the final destination for soil removed from the Miller Road site. The commenter also asked why if the off-hauled soil is not contaminated, it could not be used as a native backfill concurrent with pipeline work.

Soil removed from the Miller Road site is taken to beneficial reuse sites which are available at the time of the off-haul project. Soil from the latest off-haul event was beneficially reused at the Dumbarton Quarry (Fremont), Conco Company (Martinez), and Oyster Bay Regional Shoreline (San Leandro). EBMUD also transferred approximately 2,000 cubic yards of soil from the Miller Road site to Alameda County for the Redwood Road landslide repair project in fall of 2024.

EBMUD has evaluated reuse of the native backfill on-site, as described in Global Response 3.

3 Comment Letters

The comment letters and other submittals received regarding the Draft Initial Study and MND are included in this chapter.

CDFW

State of California – Natural Resources Agency
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GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

April 10, 2025

Gus Cicala, Senior Civil Engineer
East Bay Municipal Utility District
375 11th Street, M/S 704
Oakland, CA 94607
Gus.Cicala@ebmud.com

Subject: EBMUD Miller Road Trench Soil Management Project, SCH No. 2025030937, Draft Initial Study Mitigated Negative Declaration, Alameda County

Dear Gus Cicala:

The California Department of Fish and Wildlife (CDFW) has reviewed East Bay Municipal Utility District's (Lead Agency) Draft Initial Study Mitigated Negative Declaration (IS/MND) EBMUD Miller Road Trench Soil Management Project (Project) pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.[1]

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect fish and wildlife resources of the State. Please be advised, by law, CDFW may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW is providing the East Bay Municipal Utility District, as the Lead Agency, with specific detail about the scope and content of the environmental information related to CDFW's area of statutory responsibility that must be included in the MND (See Cal. Code Regs., tit. 14, § 15082, subd. (b)).

CDFW ROLE

CDFW is California's **Trustee Agency** for fish and wildlife resources and holds those resources in trust by statute for all the people of the State. (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a).) CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. (*Id.*, § 1802.) For purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW is also submitting comments as a **Responsible Agency** under CEQA. (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381.) CDFW expects that it may need to exercise regulatory authority over the Project pursuant to the Fish and Game Code. For example, the Project may be subject to CDFW's Lake and Streambed Alteration (LSA) regulatory authority, if the Project impacts the bed, channel or bank of any river, stream or lake within the State (Fish & G. Code, § 1600 et seq.). Likewise, to the extent the Project may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), the project proponent may seek related take authorization as provided by the Fish and Game Code.

REGULATORY REQUIREMENTS

California Endangered Species Act

A CESA Incidental Take Permit (ITP) must be obtained from CDFW if the Project has the potential to result in "take" of plants or animals listed under CESA, either during

[1] CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

construction or over the life of the Project. Under CESA, "take" means "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." (Fish & G. Code, § 86.) CDFW's issuance of an ITP is subject to CEQA and to facilitate permit issuance, any project modifications and mitigation measures must be incorporated into the CEQA document analysis, discussion, and mitigation monitoring and reporting program. If the Project will impact CESA listed species, early consultation is encouraged, as significant modification to the Project and mitigation measures may be required in order to obtain a CESA Permit.

CEQA requires a mandatory finding of significance if a project is likely to substantially impact threatened or endangered species. Pub. Resources Code, §§ 21001, subd. (c) & 21083; CEQA Guidelines, §§ 15380, 15064 & 15065.) In addition, pursuant to CEQA, the Lead Agency cannot approve a project unless all impacts to the environment are avoided or mitigated to less-than-significant levels, or the Lead Agency makes and supports Findings Of Overriding Consideration (FOC) for impacts that remain significant despite the implementation of all feasible mitigation. FOC under CEQA, however, do not eliminate the Project proponent's obligation to comply with the Fish and Game Code.

Lake and Streambed Alteration

CDFW requires an LSA Notification, pursuant to Fish and Game Code section 1600 et seq., for Project activities affecting river, lakes or streams and associated riparian habitat. Notification is required for any activity that may substantially divert or obstruct the natural flow; change or use material from the bed, channel, or bank (including associated riparian or wetland resources); or deposit or dispose of material where it may pass into a river, lake, or stream. Work within ephemeral streams, drainage ditches, washes, watercourses with a subsurface flow, and floodplains is generally subject to notification requirements. In addition, infrastructure installed beneath such aquatic features, such as through hydraulic directional drilling, is also generally subject to notification requirements. Therefore, any impact to the mainstems, tributaries, or floodplains or associated riparian habitat caused by the proposed Project will likely require an LSA Notification. CDFW may not execute a final LSA Agreement until it has considered the final MND and complied with its responsibilities as a responsible agency under CEQA.

Migratory Birds and Raptors

CDFW has authority over actions that may result in the disturbance or destruction of active bird nest sites or the unauthorized take of birds. Fish and Game Code sections protecting birds, their eggs, and nests include section 3503 (regarding unlawful take, possession, or needless destruction of the nests or eggs of any bird), section 3503.5 (regarding the take, possession, or destruction of any birds-of-prey or their nests or eggs), and section 3513 (regarding unlawful take of any migratory nongame bird). Migratory birds are also protected under the federal Migratory Bird Treaty Act.

PROJECT DESCRIPTION AND LOCATION SUMMARY

Proponent: East Bay Municipal Utility District

Objective: EBMUD's Miller Road Trench Soil Management Program (Program) involves the continued operation of the Miller Road trench soil stockpile and rock and sand stockpile sites; this includes the import, temporary storage, and periodic removal (off-haul events) of clean soil, rock, and sand to support the replacement of aging pipelines.

Based on projected pipeline improvements required to address EBMUD's aging infrastructure, EBMUD estimates annual pipeline replacement will increase from 20 to 25 miles per year to approximately 30 miles per year by 2030. There is a need to increase the stockpiling and storage of materials to support this increase in pipeline replacement needs.

This program involves the continued operation of the Miller Road stockpile site, including import, temporary storage, and periodic removal of trench soil. The program also includes continued operation of the rock and sand stockpile site approximately one mile south of the Miller Road soil stockpile site on EBMUD-owned property within the project site. Materials from the rock and sand stockpile site are used to backfill trenches from the pipeline construction and maintenance activities. Continued operation of the rock and sand stockpile site includes import, temporary storage, and removal of these backfill materials. The program includes a gradual increase in the volume of trench soil stockpiled at the Miller Road site, routine removal of stockpiled trench soil (referred to as off-haul events), and an increase in the import and off-haul of backfill materials to and from the rock and sand stockpile site. The Project includes three primary components: 1) an increase in import of trench soil to the Miller Road stockpile site; 2) an increase in the import and off-haul of backfill materials at the rock and sand stockpile site; and 3) implementation of smaller off-haul events at regular intervals (estimated at every five years with the potential of off-hauls everyone to two years to respond to opportunities for beneficial soil reuse in the area to remove stockpiled soils at the Miller Road stockpile site.

Location: County of Alameda.

Timeframe: 2025 - 2030

CDFW COMMENTS

CDFW offers the comments and recommendations below to assist the Lead Agency in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources. Editorial comments or other suggestions may also be included to improve the document.

COMMENT 1: Project Design and Coordination

The draft IS/MND does not provide detailed design plans to show where the additional 4,000 cubic yards (CY) of soil will be stored and the controls that would be in place to provide stability in the existing footprint. The current soil stockpile is kept at a 3H:1V, which is the maximum slope recommended under the 1998 geotechnical investigation report.

Based on generation rate estimation methods and current and projected pipeline replacement rates, the current average annual import of trench soil of approximately 7,000 CY is anticipated to increase to approximately 11,000 CY by 2030. The draft IS/MND notes that the footprint is not expected to increase. The draft IS/MND should provide more details on design characteristics of the stockpile that will continue to provide soil stabilization while volume increases by as much as 57 percent annually.

The draft IS/MND notes that Project activities at the Miller Road stockpile site would occur approximately 50 feet from the San Leandro Creek and associated riparian zone, however there is an approximately 3-foot-tall earthen berm separating the creek from the stockpile site to prevent potential runoff into the creek. Based on current aerial photography, the project currently encroaches into the riparian zone even with the three-foot berm, and bare soil exists on the streamside of the berm, indicating erosion. Additional soil and truck traffic could result in additional impacts to San Leandro Creek and its wildlife. However, the draft IS/MND does not indicate that a LSA Agreement will be sought.

Recommended Mitigation Measure #1: Design Coordination

CDFW-2

Early coordination with CDFW's Habitat Conservation Program and Conservation Engineering Branch is recommended to provide review and analysis of any Project elements with the potential to impact fish and wildlife resources. CDFW's Conservation

Engineering Branch should be provided engineered drawings and design specification planning sheets during the initial design process, prior to design selection and re-initiating design consultation at 30 percent design at minimum and through the permitting process for review.

CDFW-2, Cont.

Recommended Mitigation Measure #2: Lake and Streambed Alteration Agreement

CDFW requires a LSA Notification, pursuant to Fish and Game Code section 1600 et seq., for Project activities affecting river, lakes or streams and associated riparian habitat. Notification is required for any activity that may substantially divert or obstruct the natural flow; change or use material from the bed, channel, or bank (including associated riparian or wetland resources); or deposit or dispose of material where it may pass into a river, lake, or stream. Any impact to the mainstems, tributaries, or floodplains or associated riparian habitat caused by the proposed Project will likely require an LSA Notification.

CDFW-3

COMMENT 2: Alameda Whipsnake

The Project area contains habitat features (scrub intermixed with woodland and small patches of grassland) in close proximity to Alameda whipsnake (*Masticophis lateralis euryxanthus*) sightings. Additionally, Alameda whipsnake can move substantial distances within home ranges which have been reported to encompass between at least 1.9-8.7 hectares depending on sex and length of tracking (Swaim 1994; USFWS 2002).

Furthermore, throughout the year, Alameda whipsnake may be present but difficult to detect in a given area due to their secretive behavior. During their inactive season (roughly November through February/March, dependent on weather conditions), Alameda whipsnakes will use rodent burrows or crevices in rock outcrops for brumation (Hammerson 1979; Swaim 1994; USFWS 2002). During their active season (roughly February/March through October, dependent on weather conditions; Swaim 1994; USFWS 2002; Alvarez et al. 2021), Alameda whipsnake will utilize rodent burrows and other refugia (e.g., rocks, rock outcrops, logs, vegetation piles, or cracks between cement foundation and native substrate) to oviposit, thermoregulate, estivate and/or evade potential threats including people.

CDFW-4

Alameda whipsnakes will also use vegetation structure (e.g., shrubs or other similar vegetation), rocks and open soil to bask on the ground or within the shrub layer (Swaim and McGinnis 1992; Swaim 1994; Miller and Alvarez 2016; Alvarez and Murphy 2022). Alameda whipsnake have also been observed on a few documented occasions in trees (e.g. 15 feet up, Shafer and Hein 2005 in Alvarez and Murphy 2022).

Analysis of existing data has found that a minimum of 30-days focused drift-fence funnel trapping during peak activity (typically April-May, though dependent on weather conditions) may be necessary to assess presence/ absence of this species (Richmond et al. 2015). For these reasons, single-day visual surveys are not adequate to detect or determine absence from a location for this species.

Take of Alameda whipsnake at the site may occur directly or indirectly through being injured or killed from increased truck traffic, through soil and rock moving activities and due to erosion control materials. Non-native plant species may be introduced through transport of seeds inadvertently in contaminated dirt or erosion control materials (e.g., straw), disturbance to the ground which can favor germination and colonization by opportunistic non-native invasive species, or directly by introduction of horticultural varietals during construction and operation.

Recommended Mitigation Measure #3: Habitat Assessment and Buffers

CDFW-5

A detailed habitat assessment shall be conducted by a qualified biologist knowledgeable of the life history and ecological requirements of Alameda whipsnake.

The habitat assessment shall be used to determine ecologically appropriate avoidance buffers. The habitat assessment shall include all suitable basking, burrowing, dispersal, overwintering, and foraging habitats within the Project area and surrounding areas. This can include but is not limited to burrows and other refugia (e.g., rocks, rock outcrops, logs, vegetation piles, or cracks between cement foundation and native substrate).

CDFW-5, Cont.

Recommended Mitigation Measure #4: Clearance Surveys

No more than 24 hours prior to the date of initial ground disturbance and vegetation clearing, a CDFW-approved biologist with experience in the identification of the Alameda whipsnake will conduct clearance surveys and monitoring within 100 feet of the project site. The biologist will investigate all areas that could be used by Alameda whipsnakes for sheltering, movement, and other essential behaviors. This includes an adequate examination of rock outcroppings and mammal burrows. Safety permitting, the approved biologist will investigate areas of disturbed soil for signs of the listed species within 30 minutes following the initial disturbance of that given area. The biologist will conduct clearance surveys at the beginning of each day and regularly throughout the workday when construction activities are occurring that may result in take of Alameda whipsnake.

CDFW-6

Recommended Mitigation Measure #5: Compensatory Mitigation

The draft IS/MND should include effective and feasible compensatory mitigation measures to offset all permanent and temporary impacts of the Project on Alameda whipsnake and its habitat. To ensure impacts to Alameda whipsnake are mitigated to less-than-significant levels, CDFW recommends inclusion of compensatory mitigation at a minimum of a 3:1 mitigation ratio (conservation to loss) for permanent impacts to habitat, and a 1:1 ratio for temporary impacts to the species' habitats. CDFW recommends that priority for conserved lands be given to on-site locations. Conservation lands should be placed under a conservation easement, an endowment should be funded for managing the lands for the benefit of the conserved species in perpetuity, and a long-term management plan should be prepared and implemented by a land manager. The Grantee of the conservation easement should be an entity that has gone through the due diligence process for approval by CDFW to hold or manage conservation lands.

CDFW-7

Recommended Mitigation Measure #6: Take Permit

CDFW recommends that the Project applicant consult with CDFW on the necessity to obtain an ITP pursuant to Fish and Game Code Section 2081(b) prior to Project implementation. The Project Proponent should apply for an ITP to cover impacts of the Project to Alameda whipsnake. Through the ITP, CDFW will work with the Project Proponent to develop adequate measures to minimize and mitigate potential for take of this species due to Project activities

CDFW-8

COMMENT 3: Crotch's Bumble Bee

Crotch's bumble bee (*Bombus crotchii*) are candidate species under CESA (CEQA Guidelines, §15380, subds. (c)(1)). The draft IS/MND does not adequately address whether the proposed Project could result in impacts to Crotch's bumble bee. Crotch's bumble bee occurrences have been documented within Alameda County to the east and west of the Project area. The Project location is within the Crotch's bumble bee range (https://wildlife.ca.gov/Conservation/CESA) and grassland within and adjacent to the Project area may contain potential habitat for Crotch's bumble bee.

CDFW-9

The proposed Project includes earth moving and truck traffic that will occur within and adjacent to ruderal grass and herbaceous vegetation that may be potential Crotch's bumble bee nesting and foraging habitat.

Direct mortality through crushing or filling of active bee colonies and hibernating bee cavities, reduced reproductive success, loss of suitable breeding and foraging habitats, loss of native vegetation that may support essential foraging habitat.

CDFW-9, Cont.

Bumble bees are critically important because they pollinate a wide range of plants over the lifecycles of their colonies, which typically live longer than most native solitary bee species. As a candidate species, unauthorized take of this species pursuant to CESA is a violation of California Fish and Game Code section 2080 et seq.

Recommended Mitigation Measure #7: Habitat Assessment

A habitat assessment shall be conducted by a qualified entomologist knowledgeable with the life history and ecological requirements of Crotch's bumble bee. The habitat assessment shall include all suitable nesting, overwintering, and foraging habitats within the Project area and surrounding areas. Potential nest habitat (February through October) could include that of other *Bombus* species such as bare ground, thatched grasses, abandoned rodent burrows or bird nests, brush piles, rock piles, and fallen logs. Overwintering habitat (November through January) could include that of other *Bombus* species such as soft and disturbed soil or under leaf litter or other debris. The habitat assessment shall be conducted during peak bloom period for floral resources on which Crotch's bumble bee feed. Further guidance on habitat surveys can be found within *Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species* (https://wildlife.ca.gov/Conservation/CESA).

CDFW-10

Recommended Mitigation Measure #8: Survey Plan

If Crotch's bumble bee habitat is present within the Project area, the Project should include a pre-construction survey plan as a mitigation measure. The survey plan should be submitted to CDFW for review. Surveys should be conducted by a qualified entomologist familiar with the behavior and life history of Crotch's bumble bee. If CESA candidate bumble bee will be captured or handled, surveyors should obtain a 2081(a) Memorandum of Understanding (MOU) from CDFW.

CDFW-11

Surveys should be conducted during the colony active period (i.e. April through August) and when floral resources are in peak bloom. Bumble bees move nests sites each year, therefore, surveys should be conducted each year that Project work activities will occur. Further guidance on presence surveys can be found within Survey Considerations for CESA Candidate Bumble Bee Species (https://wildlife.ca.gov/Conservation/CESA).

Recommended Mitigation Measure #9: Crotch's Bumble Bee Avoidance or Take Authorization

If Crotch's bumble bee are detected during pre-construction surveys, a Crotch's bumble bee avoidance plan should be developed and provided to CDFW for review prior to work activities involving ground disturbance or vegetation removal.

CDFW-12

If full take avoidance is not feasible, CDFW strongly recommends that the draft IS/MND state that the Project proponent will apply to CDFW for take authorization under an ITP.

Recommended Mitigation Measure #10: Herbicide Application

To minimize impacts to bumble bees, avoid the bloom periods for herbicide application and mowing activities. If this is not possible, CDFW recommends that the Project obtain take authorization under an ITP, pursuant to Fish and Game Code section 2081 subdivision (b).

CDFW-13

Recommended Mitigation Measure #11: Compensatory Mitigation

CDFW recommends that the draft IS/MND include compensatory mitigation for the loss of all suitable Crotch's bumble bee habitat. Bumble bee floral resources should be mitigated at a 3:1 ratio for permanent impacts in the absence of information regarding

CDFW-14

the compensatory mitigation site. Floral resources should be replaced as close to their original location as is feasible. If active Crotch's bumble bee nests have been identified and floral resources cannot be replaced within 600 feet of their original location, floral resources should be planted in the most centrally available location relative to identified nests. This location should be no more than 4,900 feet (1.5-kilometers) from any identified nest. Replaced floral resources may be split into multiple patches to meet distance requirements for multiple nests. The draft IS/MND should state that mitigation lands will be protected in perpetuity under a conservation easement with an endowment established for long-term management of the lands.

CDFW-14, Cont

COMMENT #3: Wildlife Movement and Connectivity

CDFW-15

The draft IS/MND notes an increase in the number of trucks using Miller Road from 700 to 1,100 roundtrips per year. Increased traffic could impact wildlife connectivity and movement across Miller Road and result in increased mortality as well as increased avoidance of nearby habitat.

Implementation of the proposed Project could prevent, decline, or otherwise alter use of existing wildlife movement corridors for a number of species. The Project could impact wildlife connectivity in the region, and the ability of wildlife to safely move across roads and between habitats. The Project could result in direct mortality, reduced reproductive success, reduced frequency of care for young resulting in reduced health or vigor of young, forcing wildlife into movement paths and areas that could increase their vulnerability to vehicle strikes and predation, and reduction in genetic exchange affecting intra-species diversity. Isolation of subpopulations limits the genetic exchange of populations and increases the risk of local extirpation.

The draft IS/MND should consider the impact of the project on connectivity and implement design strategies to address these impacts. Species where connectivity impacts could occur due to the Project can be evaluated with the California Bay Area Linkage Network data in BIOS, with potential impacts to western pond turtle (*Emys marmorata*), Alameda whipsnake, and American badger (*Taxidea taxus*). In particular, California Natural Diversity Database (CNDDB) records include both western pond turtle and Alameda whipsnake on both sides of Miller Road, suggesting connectivity across the road.

Maintaining connectivity though these linkages is critical to ensure current and future wildlife populations' abilities to move and adapt to a changing climate and habitat conditions. As part of this, CDFW recommends the draft IS/MND assess compliance with AB1889 and provide recommendations for local policy integration.

CDFW does not have sufficient detail to determine if the proposed mitigation measures will be sufficient to offset wildlife movement and connectivity impacts. CDFW has ascertained that there is potential to reduce impacts of the Project on wildlife movement through Project infrastructure and component redesign, as well as compensatory mitigation measures for impacts that cannot be completely avoided that were not identified within the draft IS/MND.

Recommended Mitigation Measure #12: Analysis and Monitoring of Wildlife Corridors

CDFW-16

CDFW recommends in-depth studies on existing use of wildlife corridors within the Project area and surrounding areas in order to evaluate extent of future impacts of the Project on wildlife connectivity, and to provide a basis for infrastructure and Project component redesign. Data collection methods should enable detection of species that have been found to utilize the existing movement corridors, including species mentioned in the comment above.

Pre-construction study results should be used to develop biologically feasible movement corridor improvements. Post-construction monitoring should assess use of wildlife movement corridors.

CDFW-16, Cont.

CDFW recommends that monitoring data be analyzed, summarized, and results discussed in reports that may be posted to the Project webpage and be submitted to CDFW and other agencies or organizations that have a duty or interest in the effectiveness of wildlife movement corridors.

Recommended Mitigation Measure #13: Infrastructure and Project Component Redesign

CDFW recommends that on-site features that contribute to habitat connectivity should be evaluated and implemented. Aspects of the Project that could create physical barriers to wildlife movement, including direct or indirect Project-related activities, should be identified, and addressed in the draft IS/MND. CDFW recommends the Project avoid developing and encroaching onto wildlife corridors, essential connectivity blocks, critical wildlife passage areas, or potential linkage areas.

CDFW-17

CDFW recommends coordination with regional CDFW and Conservation Engineering staff on the design of connectivity minimization measures including, but not limited to wildlife passage undercrossings, directional fencing to prevent animals from crossing roads to reduce wildlife-vehicle strikes, removal of accumulated sediment that may block undercrossings, removal of vegetation debris, control of invasive plant species, signage to alert truck drivers of wildlife crossings, and education and training on wildlife crossing minimization.

The recommended movement studies should be used to determine locations for design modifications that support the maximum movement and connectivity for impacted species. CDFW recommends thorough monitoring of wildlife crossings both before and after construction to assess their effectiveness. This monitoring should include the use of camera traps, track beds, and other methods.

Recommended Mitigation Measure #14: Compensatory Mitigation

Off-site compensatory mitigation should be implemented to completely offset unavoidable impacts if Project infrastructure redesigns, and other measures to avoid significant impacts to existing wildlife corridors within the Project area do not fully avoid impacts to wildlife corridors. The draft IS/MND should include an analysis of beneficial and feasible wildlife movement corridors and/or crossings at off-site locations that could be improved or constructed, to improve wildlife connectivity.

CDFW-18

Fish and Game Code Section 1955 et seq. (Senate Bill 790) allows the CDFW to approve compensatory mitigation credits for projects that improve wildlife connectivity. These actions should lead to measurable improvements in aquatic or terrestrial habitat connectivity, wildlife migration, recolonization, and breeding opportunities, especially where these are hindered by infrastructure or habitat fragmentation and may include building road overpasses or underpasses. The Project may be able to provide additional value for wildlife connectivity, depending on the design.

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to prepare subsequent CEQA documents or to make supplemental environmental determinations. (Pub. Resources Code, § 21003, subd. (d) & (e).) Accordingly, please report any special-status species and natural communities detected during Project surveys to CNDDB. The CNDDB field survey form can be filled out and submitted online here: https://wildlife.ca.gov/Data/CNDDB/Submitting-Data. The types of information reported

to CNDDB can be found here: https://www.wildlife.ca.gov/Data/CNDDB/Plants-and-Animals.

ENVIRONMENTAL DOCUMENT FILING FEES

CDFW anticipates that the proposed Project, will have an impact on fish and/or wildlife, and assessment of environmental document filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the environmental document filing fee is required in order for the underlying project approval to be operative, vested, and final. (See Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089.)

CONCLUSION

CDFW appreciates the opportunity to comment on the draft IS/MND to assist the Lead Agency in identifying and mitigating Project impacts on biological resources.

Questions regarding this letter or further coordination should be directed to Marcus Griswold, Senior Environmental Scientist (Specialist), at (707) 815-6451 or Marcus.Griswold@wildlife.ca.gov.

Sincerely,

DocuSigned by:
Erin Chappell
B77E0A6211EF496...
Erin Chappell
Regional Manager
Bay Delta Region

Attachments: Attachment 1: Special-Status Species and Commercially/Recreationally Important Species

ec: Office of Planning and Research, State Clearinghouse, Sacramento
Craig Weightman, CDFW Bay Delta Region – Craig.Weightman@wildlife.ca.gov
Jason Faridi, CDFW Bay Delta Region – Jason.Faridi@wildlife.ca.gov

REFERENCES

Alvarez, J.A., D.S. Jansen, C. Shaffer, and J. DiDonato. 2021. Observations on the phenology of the threatened Alameda whipsnake. *California Fish and Wildlife Special CESA ISSUE:*258-263

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ATTACHMENT 1: Special-Status Species

Species	Status
Fish and Invertebrates	
Crotch's bumble bee (*Bombus crotchii*)	State candidate (SC)
Birds	
burrowing owl (*Athene cunicularia)*	SC
loggerhead shrike (*Lanius ludovicianus*)	SSC
Mammals	
American badger (*Taxidea taxus*)	SSC
pallid bat (*Antrozous pallidus*)	SSC
San Joaquin kit fox (*Vulpes macrotis mutica*)	Federally Endangered (FE), ST
Townsend's big-eared bat (*Corynorhinus townsendii*)	SSC
Reptiles and Amphibians	
Alameda whipsnake (*Masticophis lateralis euryxanthus*)	FT, ST
California red-legged frog (*Rana draytonii*)	FT, SSC
western pond turtle (*Emys marmorata*)	Proposed FT, SSC

Martinez

[redacted]

From: Cicala, Gus <gus.cicala@ebmud.com>
Sent: Thursday, April 17, 2025 2:33 PM
To: Emily Capello
Cc: Kate Thompson; Rehnstrom, David; Lee, Lon; Richardson, Andrew
Subject: FW: Miller Road Draft ISMND

FYI

Gus Cicala, P.E.
Senior Civil Engineer | Maintenance & Construction Engineering
office.510.287.1264 | cell.510.963.1799 | gus.cicala@ebmud.com
EAST BAY MUNICIPAL UTILITY D

From: Martinez, Xochiyotl, Castro Valley MAC <[redacted]>
Sent: Monday, April 14, 2025 2:51 PM
To: Cicala, Gus <gus.cicala@ebmud.com>
Subject: Re: Miller Road Draft ISMND

You don't often get email from [redacted]. Learn why this is important

Please also send the existing SWPPP and BMPs, thank you.

Xochi Martínez, M.S.
Castro Valley Municipal Advisory Council
Consejo Consultivo Municipal de Castro Valley

From: Martinez, Xochiyotl, Castro Valley MAC[redacted]>
Sent: Monday, April 14, 2025 13:16
To: gus.cicala@ebmud.com <gus.cicala@ebmud.com>
Subject: Miller Road Draft ISMND

Hi Gus,

At the last MAC meeting regarding this matter, I had requested analytical data for soil (and surface/groundwater if available). Could your ask your consultant send me that data as it is not included in the report? Ideally, I would also like to take a look at the Conceptual Site Model for this study, if possible. This part would help very much with fully understanding the Health Risk Assessment. Thank you in advance.

Xochi Martínez, M.S.
Castro Valley Municipal Advisory Council
Consejo Consultivo Municipal de Castro Valley

Martinez-1

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Alameda County

From: Orduna, Rodrigo, CDA [redacted]>
Sent: Monday, May 19, 2025 11:48 AM
To: Cicala, Gus <gus.cicala@ebmud.com>
Cc: Lee, Lon [redacted]>; Gonzalez, Rolando <[redacted]>
Subject: Comments from Alameda County staff on EBMUD Trench Soil Stockpiling Project on Miller Road

Greetings, Gus.

Below are the comments from Alameda County staff on EBMUD's Trench Soil Stockpiling Project on Miller Road.

Comments from the Alameda County Public Works Agency, Department of Transportation:

We appreciate the opportunity to comment on the Draft Initial Study/Mitigated Negative Declaration (IS/MND) for the Miller Road Trench Soil Management Project. We have several concerns regarding potential impacts that we believe warrant further clarification or additional mitigation measures:

AC-1

- While the document mentions dust control on Miller Road, there is no specific commitment to dust mitigation on Redwood Road, which is also part of the haul route and passes near residential areas and public open spaces. Dust generated by trucks could impact public health and air quality, especially during dry summer months. We request the following:
-
    - Clarification on whether Redwood Road will receive dust control measures, such as water trucks or street sweeping.

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AC-1, Cont.

- A requirement that trucks be covered and soil kept moist, if needed, to minimize dust dispersion from loads.

- The IS/MND states that off-haul events will occur in summer when schools are not in session. However, there is no enforceable guarantee or oversight provided. This is a critical issue, as portions of the haul route may pass near schools or areas with children. The Castro Valley Unified School District (CVUSD) may use the Castro Valley High School campus for summer sessions, as they did in 2024 for their middle and high school students.

AC-2

  - Please include a mitigation measure or condition that formally restricts hauling to dates when school is not in session, verified through coordination with the Castro Valley Unified School District.

  - Also clarify how this restriction will be enforced and what penalties or changes would apply if it is not followed.

AC-3

- As the haul route includes public roads, it is important that Alameda County retains the authority to modify or revoke use of the haul route should safety, dust, noise, or road degradation issues arise once the project is underway.

  - A Traffic Control and Transportation Plan for Redwood Road and any other County roadways included in the haul route should be put in place for the duration of EBMUD operations.

  - We request that the County be explicitly granted authority to require adjustments to the haul route if impacts exceed expectations or if community complaints warrant reevaluation.

- The IS/MND acknowledges that project-related truck traffic may damage Redwood Road and includes a commitment (Mitigation Measure TRA-1) for EBMUD to conduct a visual survey of the roadway before major off-haul events and repair any damage afterward. While this is an important step, it is essential that:

  - The condition assessment be conducted in coordination with Alameda County.

  - The repair commitment extend to all phases of the project, not just "major" off-haul events, as ongoing daily truck traffic could also degrade the roadway.

  - A separate haul route agreement, including documentation of pre- and post-operation roadway conditions and a binding agreement (to be drafted and submitted to County Counsel's Office for review and approval prior to execution), must ensure that damage related to project operations is repaired accordingly and in a timely manner.

  - Alameda County retain the authority to require additional repairs or modify haul routes if degradation becomes a safety or maintenance concern.

  - A performance or permit bond be required as a condition for issuance of the road encroachment permit.

Amber Lo, P.E. | Deputy Director
Department of Transportation
Alameda County Public Works Agency
399 Elmhurst Street, Hayward, CA 94544
[redacted]

Comments from the Alameda County Planning Department:

On the project description section:

- Clarify the difference in trips between historic, existing, and proposed truck trips.
- Clarify the proposed time frame for the proposed activity. How long past the year 2030 with this project continue?

AC-4

Overall scope of environmental document:

The proper environmental document is for an EIR to study cumulative impacts, potential project alternatives, and give option to adopt the environmentally superior alternative.

AC-5

Regards,

Rodrigo

Rodrigo Orduña, *AICP*, he/him
Assistant Planning Director
Alameda County Planning Department
Community Development Agency

[redacted]

224 West Winton Avenue, Suite 111
Hayward, CA 94544
http://www.acgov.org/cda

For Planning Department inquiries please call (510) 670-5400 or email planninginfo@acgov.org

To reach the Code Enforcement Division please call (510) 670 5460 or email planningcode.enforcement@acgov.org

General Plan and Zoning Information is now available via the Public Access Map (PAM)

Anonymous

From: SHS SeeHearSmell <[redacted]>
Sent: Friday, March 14, 2025 11:26 AM
To: Miller Road <miller.road@ebmud.com>
Cc: SHS SeeHearSmell <[redacted]>
Subject: Miller Road MND Comments

You don't often get email from [redacted]. Learn why this is important

EBMUD needs to process the soil as they go: dig up, grind up, and put back into the ditch. NO HAULING. NO toxic waste deposited near DRINK WATER reservoirs and watershed lands. The Miller Road region runs/flows/seeps into the Lake Chabot … which is the reserve water supply. DO NOT pollute !!

If there is sewer leakage near the water pipes then the ground up soil (used as fill on site) could go through a UV in the process.

EBMUD/contractor crews can TEST the soil as it goes. Can test for heavy metals. That is simple tests like for lead. BUT if in the trench, then also any nearby soil (just to the side of the ditch) will simply contaminate any import backfill. If there truly is toxic waste, then like a cancer, have to totally remove and take to a class "A" toxic waste disposal site - and NOT simple move to next to the areas of drinking water reservoir(s).

ANON-1

Dig the trench, grind soil on site. use as the backfill. NO HAULING No disposal hauling no need for import backfill. Buried UNDER the roadway is the best place for the soil.

Think of the HEAVY TRUCK TRAFFIC on Redwood road - through town.
This truck traffic WILL bust up the roads with thousands of heavy trucks … up and down the roads … for YEARS.

WHO is going to PAY for the roads to be re-built, and when ?

EBMUD needs FIRE the EBMUD employees that came up with this plan !

DO NOT POLLUTE the watershed.

DO NOT DESTROY the ROADS … nor leave the road "soiled" from spillage, truck-tire soil & mud … pot holes, road-edges crumbled, etc.

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Tax payer
EBMUD water user

Do Not retaliate

White

From: Ken White <[redacted]>
Sent: Friday, March 21, 2025 11:31 AM
To: Miller Road <miller.road@ebmud.com>
Subject: Miller Road MND Comments

You don't often get email from [redacted]. Learn why this is important

I know the area very well. I find it hard to believe that there isn't a better place to store gravel and soil.
First, this is a fragile landscape and watershed.
Second, this introduces contamination to both the land and water.
Third, Castro Valley does not have the infrastructure to support truck traffic. Redwood road is virtually unusable on a regular day because of traffic.

I urge to reconsider this proposal and consider other locations. For example, the far end of Winton Ave. in Hayward or Oyster Bay in San Leandro.

Thanks

Ken

White-1

1

Mellon

From: Fgm . [redacted]
Sent: Sunday, April 13, 2025 8:11 PM
To: Miller Road <miller.road@ebmud.com>
Subject: Miller Road MND Comments

You don't often get email from fgm@frankmellon.com. Learn why this is important

I am writing to express my concern about failure of EBMUD to consider on site recycling of the materials to be transported up and down Redwood Road in Castro Valley. For way too many years EBMUD has been failing to do onsite recycling of the kind of materials covered in this project. Why can't EBMUD recycle on site? And don't use the tired, many years old excuse that the counties and cities won't permit it. Other companies recycle on site where they are doing construction - Granite Rock and Teichert as prime examples.

Mellon-1

The heavy transporting that is being prescribed by EBMUD would not be necessary with recycling on the construction site - find ways to process the spoils materials more efficiently. Use resources wisely.

Frank Mellon
[redacted]

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MAC Meeting

ALAMEDA COUNTY COMMUNITY DEVELOPMENT AGENCY

PLANNING DEPARTMENT

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May 01, 2025

Gus Cicala, P.E.
Senior Civil Engineer, Maintenance & Construction Engineering
East Bay Municipal Utility District
gus.cicala@ebmud.com

RE: Recommendations from the Castro Valley Municipal Advisory Council hearing of April 28, 2025, on the East Bay Municipal Utility District's Miller Rd trench soil project Draft Initial Study / Mitigated Negative Declaration; and

Resolution recommending the Council's Opposition to the East Bay Municipal Utility District's Miller Rd trench soil project as the project is described in the Draft Initial Study / Mitigated Negative Declaration.

Greetings, Mr. Cicala.

This letter is to provide you with the following recommendations from the Castro Valley Municipal Advisory Council's hearing of April 28, 2025:

Vote to forward to the East Bay Municipal Utility District the comments from the Castro Valley Municipal Advisory Council to the East Bay Municipal Utility District's Draft Initial Study and Mitigated Negative Declaration for the Miller Road Trench Soil Management

Vote to recommend that the East Bay Municipal Utility District no longer operate a Trench Soil Stockpiling and Off-Haul Operation at the Miller Road site as described in the Draft Initial Study and Mitigated Negative Declaration.

At the hearing, the Castro Valley MAC voted unanimously as per the two attached documents regarding East Bay MUD's IS / MND for the Miller Road site.

Please let the Alameda County Planning Department know East Bay MUD's proposed next steps on this project.

Regards,

Rodrigo Orduña, AICP
Deputy Planning Director

CC: Rolando Gonzalez, Community Affairs Representative, EBMUD, rolando.gonzalez@ebmud.com
Albert Lopez, Alameda County Planning Director

COMMENTS FROM CASTRO VALLEY MUNICIPAL ADVISORY COUNCIL MEMBERS AS ADOPTED AT THE APRIL 28, 2025, CASTRO VALLEY MAC HEARING

CASTRO VALLEY MAC VOTE ON ADOPTING THE COUNCIL'S COMMENTS made at their April 14, 2025, public hearing, on the East Bay MUD Draft Initial Study / Mitigated Negative Declaration for the Miller Road site trench-soil storage proposal, on a 2,072.73-acre property located at 17292 Redwood Road, corner with Miller Road, Castro Valley area of unincorporated Alameda County, with County Assessor's Parcel Numbers: 085-0450-001-00, 085-1000-001-00, 085-1000-002-00, and 085-0400-002-02.

Comments from member Martinez:

I have requested the following a couple of times with no response. I included one more bullet at the end:

- Any and all analytical data for soil, groundwater, surface water, and stormwater.
- Copy of the existing SWPPP and corresponding BMPs.
- Existing Conceptual Site Model (CSM) for Health Risk Assessment
    - They need to clarify whether the existing risk assessment is for human only, or does it or will it include ecological or even recreational.
- Manifests for hazardous waste transport and disposal under RCRA.

MAC Meeting Martinez-1

Comments at the hearing:

I just wanted to reiterate the request that I had during the last meeting about this project, and that is specific elements that I was requesting including analytical soil and any water data, whether that will have effects to the surface water, or groundwater, or storm water, anything of that sort. That was requested, and from the response at the hearing, it looks like it was going to be provided, but I have not seen it. I would also like to see a copy of the existing SWPPP Report and the corresponding best management practices that are included in that report. I think it's really important to understand how sediment and erosion in those areas are being managed. And also in the current report that was handed to us a few days ago. There is an inclusion for a health risk assessment. So I would imagine that there is an existing conceptual site model for this risk assessment. And so, if there is something like that in existence, I would like to see that as well. Now, with regard to the risk assessment itself, it looks like it's just a human risk assessment. So I'm wondering if this is, in fact, only a human risk assessment, and if it does include anything ecological.

Comments from member Fiebig:

Additional Safeguard & Action Points to Consider for EBMUD

1. Immediate Remediation Plan:
    - Require the company to submit a site cleanup and soil removal plan with deadlines.
    - Have the site reviewed for stormwater runoff compliance (could impact reservoir).
2. Permit & Zoning Review:
    - Re-examine whether the current use aligns with the original zoning or land use approval.
    - If out of compliance, issue a notice of violation or initiate revocation proceedings.

MAC Meeting Fiebig-1

COMMENTS FROM CASTRO VALLEY MUNICIPAL ADVISORY COUNCIL MEMBERS AS ADOPTED AT THE APRIL 28, 2025, CASTRO VALLEY MAC HEARING

3. Operational Restrictions:
   - Limit truck trips to a reasonable number per day (e.g., 10 max).
   - Designate hours of operation (e.g., no weekends or school pick up or drop off hours, 11am–2pm).
   - Require trucks to be covered and washed before leaving the site.

4. Monitoring & Oversight:
   - Impose independent third-party monitoring of soil and air
   - Soil Testing & Environmental Review by third-party:
     - Require an EIR, Phase 1 and 2 (Environmental Impact Report).
     - Consider water quality testing due to proximity to a public drinking reservoir.
   - Require quarterly reporting to the board for accountability.
   - Install air quality monitors on-site and nearby and possibly in the areas trucks are carrying soil.

5. Community Health Assessment:
   - Consider a public health risk assessment if contaminated soil has been in open piles near public use (golf course and park) or the reservoir.

6. Liability & Cost Recovery:
   - Determine whether the agency should be held responsible for road damage or environmental harm.
   - Require a performance bond or financial assurance to cover future cleanup or remediation.

7. Closure as Last Resort:
   - If the agency is non-compliant or negligent, recommend full closure and restoration of the site.
   - Consider placing permanent usage restrictions on the land (e.g., no future storage or dumping)

8. In addition (future): The soil should be taken to another location and not here as they require their independent contractors to do.

MAC Meeting Fiebig-1, Cont.

<u>Comments at the hearing:</u>

The items of concern for me: Item 1: require an immediate redemption plan from the company to submit a site cleanup and soil removal plan with deadlines. Have the site reviewed for stormwater runoff compliance because it could impact the reservoir. Item 2: Permit and zoning review: Reexamine whether their current use aligns with original zoning or land use approval. If out of compliance, issue a notice of violation or initiate revocation proceedings. Item 3. Operational restrictions: limit trips to a reasonable number per day; for an example, maybe 10. Designate hours of operation, no weekends or school pickup, or drop off hours. Maybe it's 11 to 2. Require trucks to be covered and washed before leaving the site to not spread contamination. Item 4. Monitoring and oversight: Impose independent 3rd party monitoring of soil and air quality, testing and environmental review by a 3rd party. Require an EIR, not the study they wanted. Conduct Phase 1 and Phase 2 analysis of the site. Consider water quality testing due to the closeness of the public drinking water reservoir. Require quarterly reporting to the board for accountability. Install quality monitors on site and nearby, and possibly in the areas that the trucks are carrying soil to see if the air quality is being compromised. Item number 5. Community health assessment: Consider a public health assessment. If

MAC Meeting Fiebig-1, Cont.

contaminated soil has been in open piles near public use, like the golf course, park, reservoir, etc. Item 6. Liability and cost recovery: Determine whether the agency should be held responsible for road damage or environmental harm. Require a performance bond or financial assurance to cover future cleanup or remediation. Item 7. Closure as a last resort: If the agent is noncompliant or negligent, recommend full closure and restoration of the site. Consider placing a permanent usage restriction on the land, so there's no further storage or dumping. And in addition, the soil should be taken to another location, and not here, as they require their independent contractors to do. which would make sense because they require that dumping be done somewhere else.

We should have an emergency plan response if there was a release or a problem or something. Maybe they should have a plan in place so they could fix it quickly. I mentioned a quarterly report to us, but maybe also an annual report with the community involved or with community response, and maybe that would happen quarterly as well.

Comments from member Davis:

MAC Meeting Davis-1

Identify the professional traffic engineer who prepared the analysis in the Transportation Section.

3.5.17 Transportation Mitigation Measures:

All drivers shall provide **and carry with them** signed acknowledgement of having understood all traffic safety requirements.
Define who is going to monitor and enforce this requirement.

Define what a illuminated sign is and how it shall be used. Who will determine where it shall be installed?

Define what a temporary STOP sign is and how it will be used. STOP signs are to STOP traffic, not to slow approaching traffic.

Where are the radar speed feedback signs going to be installed? How many locations? County Traffic Engineer shall determine locations.

All inspections of vehicles shall be conducted by the CHP on an annual basis.

Who is going to determine the locations and quantity of advance warning signs and dynamic message signs?

Define what timely updates mean? When?

Register professional Civil Engineer shall conduct the visual survey and determine the Pavement Condition Index (PCI for Redwood Road between Miller and I-580.

Redwood Rd between Miller Road and CV Blvd shall be swept daily after each haul date.

Install Traffic Classifiers between the Golf Course and Miller Road to monitor the speeds and classifications of vehicles.

Comments at the hearing:

Questions and comments are mostly in the transportation section. One of the things I have seen at the intersections that they analyzed: one that seems to be missing, that should be Redwood Road and

Castro Valley Place. They did talk about passenger vehicle equivalents to a truck, but I didn't really see where they applied that, so perhaps that could be clarified because it may affect the level of service at some of the intersections. Most of my comments are dealing with the mitigation measures. One comment. They I mean, they put the trench soil import and back fill material would not present a significant impact due to the low volumes. But then, when they're talking about the haul off events that could, in fact, be a significant impact. They say local users may not be accustomed to the presence of large trucks when they occur, which could lead to an increase in conflicts. Larger vehicles may have difficulty seeing vehicles, bicyclists, pedestrians potentially increasing the risk of accidents resulting in potentially significant impact. Then they talk about implementing safety measures, such as installing advance warning signs and reminding and requiring truck drivers to adhere to the safety protocols. I don't know how they're going to do this, I think that needs to be clarified somewhat. The actual specific mitigation measures under TRA-1 says: Ensure truck drivers receive written safety requirements, focusing on road safety, defensive driving, and navigating through school zones. How is this going to be implemented, and how are they going to monitor? Are they going to require each of the drivers to carry some sort of certification that, in fact, they have met all the requirements for dealing with road, safety, and defensive driving, etc. They say they're going to sign an acknowledgment. But again, anybody can pretty much sign an acknowledgement. I don't know how you find out, in fact, whether or not they did this. Then it says contractor vehicles shall yield to a traffic bicyclist and pedestrians. Well, that's state law. Truck traffic parks or queues along Redwood. The document stated that trucks, when they are making wide turns at Redwood and Miller intersection, and into the project site will have illuminated signs. "A temporary stop sign or combination methods shall be used to slow approaching traffic." What is an illuminated sign? Is that a changeable message board or some sort of device like that? What is a temporary stop sign? Where are they going to be locating this temporary stop sign? Are they just going to be doing it through flaggers? It doesn't really define how they're going to deal with this. "Install radar speed feedback signs in each direction on Redwood Road". Where? "Conduct frequent inspections and maintenance of trucks." Who is going to conduct these inspections? And how are we going to monitor and keep records if, in fact, they're all in compliance? "Install, advance, warning signs and dynamic message signs to alert drivers of upcoming traffic." Again. I'd like to know where, in fact, those are going to be located. "Inform the public and local communities about expected truck traffic and safety measures through various channels, such as local media, social media and community meetings to provide timely updates and ensure public awareness." What is the definition of timely? Is it 24 hours in advance? Is it 72 hours in advance? Often emergency services request at least 24, and many times they ask for a greater time period. Then "prior to any major haul off events, a visual survey shall be conducted along Redwood Road between I-580 and Miller Road to establish the baseline." Who is going to conduct this; is a licensed civil engineer going to be conducting this? Are they just going to be doing a visual study with no records of that? Or are they going to be actually taking a video of it so they'd have an actual record of the conditions prior to the haul-off? They say any damage to the pavement on Redwood Road shall be repaired after each major haul-out event. What timeframe are they going to do those repairs? "Coordinate with the nearest emergency and sensitive land uses such as police, and fire; notify emergency providers in advance of the timing, location, duration." Again, it gets back to how much in advance are they going tell them. "Monitor the impact of heavy truck traffic and adjust safety measures as needed." Who is doing this is East Bay mud. Doing this? Do they have a registered traffic engineer doing this work? And it sort of goes into my whole comment of the transportation section. Was this section actually done by a registered engineer? They need to define specifically what they're going to be doing.

There are traffic classifier counters out there that can actually determine the types of vehicles that are traveling along the street. I think that's something that we might want to have implemented once the trucks are past Proctor Road, probably between Proctor Road and the golf course. There would be a station classifying the traffic. You can monitor specifically how many trucks are going in and out.

MAC Meeting Davis-1, Cont.

COMMENTS FROM CASTRO VALLEY MUNICIPAL ADVISORY COUNCIL MEMBERS AS ADOPTED AT THE APRIL 28, 2025, CASTRO VALLEY MAC HEARING

One thing we talked about last time that I didn't see in the report was street sweeping. They said they were going to street sweep in their presentation between Miller Road and I-580. We did not really talk about that. We can determine the condition of a roadway. We call it a pavement condition index, a PCI. And I think that's something that you have a professional doing, an inspection to determine what the PCI is at the beginning scenario, and then, later on, you can look and subsequently evaluate the PCIs to determine any sort of deterioration. When we talked about the trucks being monitored, I think that we need to have them inspected by the CHP. The drivers need to carry not only their documentation that the truck being certified is safe, but also that the truck driver acknowledges all the other things such as trainings that they said that they would do. Also, they need to define time periods. I'm also interested in the MND report: They talk about reductions that they're doing to reduce from a potential impact to a less than significant impact. One example: such as installing advanced warning signs and reminding and requiring truck drivers to adhere to the safety protocols which would raise public awareness of truck traffic and encourage safer driving behavior for truck delays, thereby reducing this potentially significant impact to a less than significant impact. I don't understand how that could be by merely posting signs.

MAC Meeting Davis-1, Cont.

Comments from member Thomas:

Comments at the hearing:

My concern is school traffic. We have school traffic between 7 am and 9 am. And between 2 pm and 4 pm. Proctor and Redwood Road are completely packed. Near the high school between Heyer and Redwood Road is completely busy. I'm going to say no trucks on Redwood Road between 7 am and 9 am, and 2 pm and 4 pm. We have enough traffic. We know that Redwood Road and Heyer is used all the time, and are already really busy during that time. So during that time I say no East Bay MUD trucks; they can work their way around it. And who's going to repair the damages? When we asked that to East Bay MUD staff last time, they didn't have an answer. It's good to put all that in writing that they will repair the damages. But is there a plan? How and when and who specifically will to do the damage repairs on Redwood Road? If there are damages. There should be a crossing guard paid for by East Bay MUD when their trucks are going through. There should be crossing guards out there saying that the trucks are coming through, because we don't want a bad accident, especially near Proctor Elementary. The crosswalks have been known to be not friendly to pedestrians. So, they should look into that and pay for extra crossing guards. And then who's doing the enforcement on how many trucks are going through Redwood Road in a day. They say 70 trucks. It could be more. Who enforces that? There should be a limit on how many trucks go through Redwood Road every day.

MAC Meeting Thomas-1

Comments from member Davini:

Comments at the hearing:

I think one of the biggest missing components of the CEQA analysis is alternative scenarios analysis. East Bay MUD had a slide in their presentation labeled Alternative Trench Soil Management Practices and acknowledged the inefficiency of double-handling the off-haul material as well as the import material for the new backfill. They came up with three different recommendations, a native slurry backfill, a trenchless process, and a direct haul, which I think is probably the most practical. I would like to see an environmental analysis comparing and contrasting alternative trench management procedures as opposed to continuing to use the Miller Road site.

MAC Meeting Davini-1

I just want to add that this is not just a CHP, East Bay Regional Parks, Sheriff's Department, enforcement issue. We should be involved in this process as is impacting Castro Valley. The traffic

MAC Meeting Davini-1, Cont.

COMMENTS FROM CASTRO VALLEY MUNICIPAL ADVISORY COUNCIL MEMBERS AS ADOPTED AT THE APRIL 28, 2025, CASTRO VALLEY MAC HEARING

impacts on Castro Valley, trucks going through Redwood Road, and we don't know the count. If you're enforcing traffic guidelines. All 3 agencies should be involved.

Comments from vice-chair Mulgrew:

Comments on East Bay Municipal Utility District (EBMUD) Mitigated Negative Declaration (MND) for the Miller Road (Castro Valley) Project

Bill Mulgrew, Vice Chair, Castro Valley Municipal Advisory Council

MAC Meeting Mulgrew-1

To begin with, EBMUD should not have been the Lead Agency in the preparation of the MND. The bias there is patently wrong, and it shows in the MND where EBMUD has only indicated "Transportation" and "Wildfire" as Environmental Factors to be considered in the report. Completely ignored are Air Quality, Geology and Soils, Hazards and Hazardous Materials, and Hydrology and Water Resources all of which are impacted by this proposed project.

The project proposes transporting of contaminated materials (pieces of pipe, asphalt, etc.) from trenches created to replace leaking and deteriorating pipes, storing those contaminated materials at the Miller Rd site and then transporting them again the be used as trench backfill.

EBMUD attempted the same off-load in 2017 with horrible results and impacts to the people, motorists and streets of Castro Valley. There is no reason to believe EBMUD would proceed differently, especially given the token attention paid to Environmental Factors in the MND.

On-site testing for bio-hazards needs to be done at every trench site, prior to trucks being loaded. Testing of delivered soils need to be conducted at Miller Rd.

There is insufficient attention paid to the proposed resourcing of the transport management. Traffic management and vehicle controls are very weak.

Ground water testing needs to be done at Miller Rd for bio-hazards and contaminants and to assess the contamination already leeching in from the stored materials.

In all, the MND is a disservice to the project and the Castro Valley Community. To be transparent, health-conscious and community-focused, EBMUD needs to commission a full Environmental Impact Report.

Comments at the hearing:

I don't believe East Bay MUD should have been the lead agency in the preparation of this MND. It has biases and is patently wrong, and it shows in the MND where East Bay MUD has only indicated transportation and wildfire as having less than significant impacts in the environmental factors. They completely ignored or understated our air quality, geology and soils, hazards and hazardous materials, hydrology and water resources, all of which, I believe, are going to be severely impacted by this project. The project itself proposes transporting of contaminated materials, potentially contaminated materials, pieces of pipe, asphalt, roadway, etc. from trenches created to replace leaking and deteriorating pipes, and then storing those potentially contaminated materials at the Miller Road site and then transporting them again to be used as backfill. East Bay MUD attempted this very similar kind of offload in 2017, with horrible results and impacts to the people, the motorists, and the streets of Castro Valley, and I have no reason to believe that East Bay MUD would proceed differently given the token attention paid to the environmental factors in this MND. I believe that on-site testing for

MAC Meeting Mulgrew-1, Cont.

biohazards needs to be done at trench sites prior to trucks being loaded. Testing of delivered soils needs to be conducted at Miller Road. As councilmember, Davis rightly pointed out, there's very insufficient attention paid to potential contamination at the source. The transportation management, traffic management and vehicle controls are extremely weak. Groundwater testing needs to be done as councilmember Martinez pointed out at the Miller Road site for biohazards and contaminants, and to assess any contamination that may be already leaching into the groundwater or ground from the stored materials. This MND is a disservice to the project and to the Castro Valley community. To be transparent, health-conscious, and community focused, East Bay MUD needs to commission a full Environmental Impact Report.

Comments from chair Moore:

MAC Meeting Moore-1

(EBMUD) Mitigated Negative Declaration (MND)

1. the zoning does not fit the use (Ag resource management) it's not allowed
2. they need to provide a complete EIR with alternatives
3. they need to complete a lab report on each location they are hauling from
4. they did not address the possible damage to Redwood Road (they need to put up a bond for repair)
5. weekly air quality testing, ground water testing, soil testing
6. lacking a plan for the off haul at a later date
7. Will the soils that are being hauled in have metal from the pipe
8. They need a county approved over site body to ensure compliance

Comments at the hearing:

One of the issues I have on this entire report is, you're really dealing with Ag land that has a Resource Management designation. And to the best of my knowledge, that is not permitted as a use for this piece of property. I did not see it addressed in the report. And then once again, the report didn't offer any alternatives. It was, this is "our way or the highway", and that was particularly disturbing to me. When you look at an Environmental Impact Report, or I would think some sort of an MND, you would look at it and say, there's an alternative somewhere along the line, and this didn't provide that. I would really encourage a full blown EIR and not done by them, but by a 3rd party, so we can have some feeling of comfort that all issues were addressed. There were issues of testing, but the issues of testing were done, I believe, at the Miller Rd location and not at pre-hauling. And if you're hauling from different locations, I'd like to see testing done prior to the hauling. I was concerned also whether the materials hauled would have metals in them, because I understand that metals can only be left in a location in a pile of dirt for a certain amount of time. I didn't see anything addressing any of that. And then regardless of what happens at the end. We need a 3rd party to oversee compliance.

COMMENTS FROM CASTRO VALLEY MUNICIPAL ADVISORY COUNCIL MEMBERS AS ADOPTED AT THE APRIL 28, 2025, CASTRO VALLEY MAC HEARING

PROJECT INFORMATION AVAILABILITY

The East Bay MUD Miller Road Trench Soil Management Project description website is located here: https://www.ebmud.com/about-us/construction-and-maintenance/construction-my-neighborhood/miller-road-trench-soils.

The State Clearinghouse page (CEQA Clearinghouse website) for this Draft Initial Study / Mitigated Negative Declaration, with project SCH Number 2025030937, can be reviewed on the internet at the following webpage: https://ceqanet.opr.ca.gov/2025030937.

The Draft IS/MND was released for public review and comment by East Bay MUD on March 20, 2025, for a thirty-day public review period, which was subsequently extended to expire on Monday, May 19, 2025. The public is encouraged to provide your comments on the Draft IS

According to East Bay MUD, written comments will be accepted through May 19, 2025, and should be sent to East Bay MUD's street address or email address as follows:

East Bay Municipal Utility District
Gus Cicala, Senior Civil Engineer
375 11th Street, M/S 704
Oakland, CA 94607
miller.road@ebmud.com
Phone: 510-287-0140

CASTRO VALLEY MAC VOTE ON FORWARDING THE COMMENTS TO EAST BAY MUD

The Castro Valley MAC members made a motion, seconded, and cast a vote to forward the comments hereinabove as made by the Castro Valley Municipal Advisory Council, on the East Bay MUD Draft Initial Study / Mitigated Negative Declaration for the Miller Road site trench-soil storage proposal, on a 2,072.73-acre property, located at 17292 Redwood Road, corner with Miller Road, Castro Valley area of unincorporated Alameda County, with County Assessor's Parcel Numbers: 085-0450-001-00, 085-1000-001-00, 085-1000-002-00, and 085-0400-002-02.

The motion was introduced by Councilmember Davis, seconded by Councilmember Thomas, and passed and adopted this 28th day of April, 2025, by the following vote:

Members of the Council:

AYES: vice-chair Mulgrew, Davini, Davis, Fiebig, and Thomas

NOES:

ABSENT: chair Moore, Martinez

ATTEST: Rodrigo Orduña, *AICP*, Deputy Planning Director

The Castro Valley Municipal Advisory Council

RESOLUTION OF THE CASTRO VALLEY MUNICIPAL ADVISORY COUNCIL ADOPTED ON MONDAY, APRIL 28, 2025

Resolution of the Castro Valley Municipal Advisory Council Expressing the Council's Dissatisfaction with the East Bay Municipal Utility District's "Miller Road Trench Soil Management Project" and Authorizing the Planning Director to Take any Subsequent Actions Necessary to Effectuate Opposition to the Project

WHEREAS, the East Bay Municipal Utility District (EBMUD) filed an Initial Study/Mitigated Negative Declaration in anticipation of applying for a conditional use permit with the County of Alameda for a project, known as the "Miller Road Trench Soil Management Project", which would result in the transport, deposit and off-loading of significant volumes of soil extracted from pipeline repair and construction work into the site located at Miller Road; and

WHEREAS, based on information available to the public, EBMUD states that the Miller Road site is 90 percent filled, and pipeline excavation is projected to increase through the year 2030, requiring major off-load from the Miller Road site; and

WHEREAS, significant volumes of heavily loaded trucks carrying such soils would need to travel through the center of Castro Valley to carry out the project, resulting in substantive negative impacts to the community; and

WHEREAS, among the various roads within Castro Valley that would be negatively impacted by the project, potential impacts Redwood Road would be particularly acute, due to potential dangers to the thousands of school children, pedestrians, hikers, bicyclists, and vehicle operators who regularly travel along this road on a regular basis; and

WHEREAS, Redwood Road is the dominant North/South thoroughfare in Castro Valley, and is narrow and winding in nature at its northern points, and has recently undergone significant repair due to storm damage; and

WHEREAS, the proposed truck route that is associated with EBMUD's proposed project would bisect the downtown area crossing through Castro Valley's busiest intersection at Redwood Road and Castro Valley Boulevard, making public ingress and egress from the area more difficult and dangerous; and

WHEREAS, based on information available to the public, the Project proposes hauling untested, potentially contaminated pipeline materials through commercial areas and residential neighborhoods, past three schools and a public golf course; and

WHEREAS, the previous EBMUD project to offload soil from Miller Road in 2019 created disruptions of traffic, caused unmitigated damage to Castro Valley roads and streets, and resulted in potentially contaminated dust, dirt, rocks, gravel and fragments of pipe being spread along the route from uncovered trucks; and

WHEREAS, EBMUD is currently operating without a Conditional Use Permit in 2023 for operation of the Miller Road site; and

WHEREAS, the Castro Valley Municipal Advisory Council being informed by residents and community groups, has continually opposed on-going use of the Miller Road site and planned large-scale off-loading projects.

NOW, THEREFORE, BE IT RESOLVED, the Castro Valley Municipal Advisory Council does not support EBMUD's proposed "Miller Road Trench Soil Management Project" as described in the Initial Study/Mitigated Negative Declaration and urges the Alameda County Planning Director to take any and all steps necessary to communicate this dissatisfaction to EBMUD and to the Alameda County Board of Supervisors.

Introduced by Councilmember Davis, seconded by Councilmember Thomas, and passed and adopted this 28th day of April, 2025, by the following vote:

Members of the Council:

AYES: vice-chair Mulgrew, Davini, Davis, Fiebig, and Thomas

NOES:

ABSENT: chair Moore, Martinez

ATTEST: Rodrigo Orduña, *AICP*, Deputy Planning Director

Virtual Public Meeting

Stephen Ryken

What is the final destination for trench spoils removed from the Miller Site? If these off-hauled materials are not contaminated, why not use them as a native backfill concurrent with pipeline work?

4 Draft Initial Study and MND Revisions

4.1 Introduction

This chapter presents revisions that have been made to the Draft Initial Study and MND text. These revisions provide corrections, additions, or clarifications as requested by specific comments. The text revisions are organized by section. The underlined text represents language that has been added to the Draft Initial Study and MND.

4.2 Revisions

4.2.1 Draft Initial Study and MND Section 2.3.1, Miller Road Stockpile Site

The text on page 2-3 is revised as follows:

> Historically, trench soil has been removed from the Miller Road stockpile site on an as-needed basis. Soil is removed using 11 CY end dump trucks or 13 CY double-bottom trucks. The most recent off-haul event occurred in 2019. Prior to that, an off-haul event occurred in 2005.
>
> Since 2020, EBMUD has proactively evaluated alternative trench soil management practices and has begun implementing these practices where feasible. EBMUD's primary strategy for reducing reliance on temporary stockpile sites like Miller Road site is direct hauling of trench soil to beneficial reuse locations. Native slurry backfill (NSB) and trenchless construction methods are also being pursued as supplemental approaches, but these are expected to remain a smaller portion of the trench soil management portfolio in the near term. These alternative strategies for managing trench soils support a long-term goal of pursuing sustainable and cost-effective practices for maintaining the water system.
>
> Additionally, EBMUD incorporated improvements to its off-haul events that are now part of the standard practices for EBMUD's stockpiling program and include restricting off-haul hours to reduce disruption to neighborhoods and schools; having EBMUD construction inspectors present on-site during all off-haul operations to monitor and enforce safety and environmental protocols; including enforceable provisions related to vehicle idling, dust control, load covering, speed limits, and truck queuing in any agreements with off-haul contractors with specified results for violations; adhering to the active SWPPP and associated BMPS; and regular street sweeping during off-haul events to maintain clean travel routes.

4.2.2 Draft Initial Study and MND Section 2.4, Project Description

The text on page 2-7 is revised as follows:

> In addition, all off-haul trucks would be required to be properly covered, with the covers fastened. A water truck would be used daily on Miller Road to reduce dust from soil removal trucks.

4.2.3 Draft Initial Study and MND Section 3.5.4, Biological Resources

The text on page 3-25 is revised as follows:

> No riparian habitat, ~~or~~ other sensitive natural communities, jurisdictional creeks, or other jurisdictional drainages are present within the Project site where ground cover consists of dirt and gravel piles that are predominantly devoid of vegetation with occasional patches of weedy vegetation.

The text on page 3-23 is revised as follows:

> The Project site is located within USFWS-designated critical habitat for Alameda whipsnake. EBMUD conducted trapping for Alameda whipsnake in 2018 west of the Project site and identified numerous individuals. Alameda whipsnake habitat consists of mixed chaparral, coastal scrub, annual grassland with rock piles and oak woodland habitats. Rock piles are an important habitat feature for Alameda whipsnakes because they provide the snake with coverage from predators. Less frequently Alameda whipsnake will live in rural environments such as agriculture, silviculture, and aquaculture. The site is a disturbed soil stockpile that does not have rock piles or other areas for the Alameda whipsnake to find coverage and is not itself considered habitat.

The text on page 3-24 is revised as follows:

> Ground-disturbing activities would be limited to the stockpile sites, where ground cover consists of dirt and gravel piles that are predominantly devoid of vegetation with occasional patches of weedy vegetation. The Project does not include any use of herbicides or mowing either on the Project site or in the nearby vegetation. Tiburon buckwheat, dotseed plantain, and milkweed may occur in disturbed areas. Dotseed plantain and milkweed are known host plants for bay checkerspot butterfly and monarch butterfly, respectively. Weeds could also provide some limited habitat to sensitive bee species. Due to the existing and ongoing level of disturbance at the Project site these species are unlikely to be present. Similarly, although Tiburon buckwheat can establish on gravelly substrate, the ongoing disturbance at both stockpile sites is expected to preclude the species' ability to occupy the Project site. Therefore, the Project would not result in impacts to special-status plants or host plants for special-status butterfly species. The limited weeds available would not provide habitat for sensitive bee species other than stopover between available nearby habitat.

The text on page 3-25 is revised as follows:

> In compliance with HCP requirements, EBMUD implements HCP best management practices (BMPs) and avoidance and minimization measures (AMMs) as part of the Trench Spoils Storage and Removal Program within the watershed, including Erosion Control (3.2.1.4), Operation of Farm Machinery (3.2.5.1), and Vehicular Access of Watershed Roads (3.2.9.1). BMPs include environmental training and educational materials regarding covered species identification, specifically California red-legged frog, Alameda whipsnake, Western pond turtle, stop work if encountering a covered species, including environmental awareness training for EBMUD staff and contractor, restricted access along watershed roads, adherence to posted speed limits which are 15 mile per hour on watershed roads, and implementation and routine inspection and maintenance of erosion control devices at stockpile sites. Although the HCP specifically provides coverage for impacts to California red-legged frog, western pond turtle, and Alameda whipsnake, implementation of these measures also minimizes potential impacts to other special-status wildlife species. Specifically, EBMUD already requires their contractor to purchase and install wildlife exclusion fencing around the stockpile area at Miller Road prior to any off-haul event and requires that they maintain the fencing for at least the duration of the soil removal project. EBMUD requires that the fencing be E-Fence by ERTEC Systems or equal and requires that the EBMUD engineer approve the fencing prior to installation. Because the Project would not ~~result~~ expand or modify stockpile sites or access roads, the Project site is not considered habitat, and would be required to implement HCP avoidance and minimization measures to reduce impacts to special-status species and their habitat, the impact would be less than significant.

4.2.4 Draft Initial Study and MND Section 3.5.13 Noise

The text in Table 3-7 on page 3-54 is revised as follows:

Table 3-1 Existing (2024) Traffic Noise Levels along Redwood Road during AM and PM Peak Hours

	Road segment	Traffic noise levels (dBA Leq at 50 feet from centerline)	
		AM peak	PM peak
Redwood Road	North of Seven Hills Road	65.3	64.6
	Between Seven Hills Road and Castro Valley Blvd. ~~Road~~	66.9	67.3
	Between Castro Valley Blvd. ~~Road~~ and I-580 West Ramps	68.8	69.8
	Between I-580 West Ramps and I-580 East Ramps	69.8	70.3

The text in Table 3-9 on page 3-58 is revised as follows:

Table 3-2 Traffic Noise Levels along Redwood Road during PM Peak Hours

Road segment	Traffic noise levels (dBA L_{eq} at 50 feet from centerline)					
	Existing (2024)	Existing plus Project (2024)	Estimated increase (2024)	Future baseline (2030)	Future baseline plus Project (2030)	Estimated increase (2030)
Redwood Road North of Seven Hills Road	64.6	67.5	2.9	65.4	67.9	2.5
Redwood Road Between Seven Hills Road and Castro Valley Blvd. ~~Road~~	67.3	69.1	1.8	67.8	69.5	1.7
Redwood Road Between Castro Valley Blvd. ~~Road~~ and I-580 West Ramps	69.8	70.9	1.1	70.3	71.3	1
Redwood Road Between I-580 West Ramps and I-580 East Ramps	70.3	70.8	0.5	70.6	71.1	0.5
Threshold	--	--	3	--	--	3
Exceed threshold?	--	--	No	--	--	No

4.2.5 Draft Initial Study and MND Section 3.5.17

The text on page 3-63 is revised as follows:

> Redwood Road generally has 3 lanes in each direction between I-580 and Castro Valley Boulevard; two lanes in each direction between Castro Valley Boulevard ~~Road~~ and Seven Hills Road; and one lane in each direction north of Seven Hills Road. The posted speed limit is 35 mph.

The text in Table 3-11 on page 3-69 is revised as follows:

Table 3-3 Existing (2024) and Existing Plus Project Intersection Operating Condition

Intersection	Control	Peak period	Existing LOS (Delay)[1]	Existing plus Project LOS (Delay)[1]
Redwood Road/ Seven Hills Road	Signal	AM	D (38.6)	D (38.7)
		PM	C (22.7)	C (21.6)2
Redwood Road/ Castro Valley Blvd. ~~Road~~	Signal	AM	D (47.7)	D (48.3)
		PM	D (51.1)	D (51.5)
Redwood Road/ I-580 West Ramps	Signal	AM	D (37.9)	D (43.8)
		PM	B (19.1)	C (20.2)

Intersection	Control	Peak period	Existing LOS (Delay)[1]	Existing plus Project LOS (Delay)[1]
Redwood Road/ I-580 East Ramps	Signal	AM	C (25.9)	C (26.6)
		PM	B (16.5)	B (17.3)

The text in Table 3-12 on page 3-69 is revised as follows:

Table 3-4 Future Baseline (2030) and Future Baseline Plus Project Intersection Operating Condition

Intersection	Control	Peak Hour	Future Baseline (2030) LOS (Delay)[1]	Future Baseline plus Project LOS (Delay)[1]
Redwood Road/ Seven Hills Road	Signal	AM	D (39.0)	D (41.4)
		PM	C (24.6)	C (23.9)[2]
Redwood Road/ Castro Valley Blvd. ~~Road~~	Signal	AM	D (48.6)	D (49.3)
		PM	E (56.0)	E (56.4)
Redwood Road/ I-580 West Ramps	Signal	AM	D (41.5)	D (48.7)
		PM	C (20.5)	C (22.1)
Redwood Road/ I-580 East Ramps	Signal	AM	C (28.7)	C (29.4)
		PM	B (17.8)	B (18.7)

Mitigation Measure TRA-1

The text on page 3-73 is revised as follows:

TRA-1 Minimize Impacts of Heavy Truck Traffic during Off-Haul Events

Contractors shall enforce the following safety measures to minimize potential safety hazards associated with the increased truck traffic during off-haul events:

- Ensure truck drivers have received written traffic safety requirements focusing on road safety, defensive driving, navigating through school zones, and blind spot monitoring. All drivers shall provide signed acknowledgement of having understood all traffic safety requirements and the consequences of non-compliance. Traffic safety requirements may include:
  - Contractor vehicles shall yield to traffic, bicyclists, and pedestrians at all times.
  - Trucks shall not park or queue along Redwood Road. When trucks are making wide turns at Redwood Road/Miller Road intersection and into the Project site, illuminated signs, a temporary stop sign, or a combination of these methods shall be used to slow approaching traffic.

  - Trucks shall travel along designated routes only.
- Install radar speed feedback signs in each direction on Redwood Road to deter speeding by trucks on haul route.
- Conduct frequent inspections and maintenance of trucks (e.g., brakes, tires, lights) to ensure they are in safe working condition.
- Install advance warning signs and dynamic message signs to alert drivers of upcoming heavy truck traffic along Redwood Road. The signs shall indicate the presence of heavy trucks and the anticipated timeframe.
- Inform the public and local communities about expected truck traffic and safety measures through various channels, such as local media, social media, and community meetings, to provide timely updates and ensure public awareness.

EBMUD shall perform the following for any off-haul event:

- Coordinate with Alameda County Department of Transportation prior to and during an off-haul event.
- If an off-haul event occurs during school sessions, coordinate with Alameda County and Castro Valley Unified School District regarding the need for additional crossing guards and fund the crossing guards as part of the off-haul event.
- ~~Prior to any major off-haul events, a visual survey shall be conducted along Redwood Road between I-580 and Miller Road to establish the baseline condition of the roadway. Any damage to the pavement on Redwood Road shall be repaired after each major off-haul event.~~
- Coordinate with the Alameda County Department of Transportation prior to conducting a video condition assessment of the haul route used for each off-haul events. The video condition assessment will be performed by a qualified videographer as part of the Pre-Construction Site Survey and occur prior to the off-haul. A post-operation video condition assessment will occur after the off-haul which would be conducted in the same areas and recorded and reviewed by the engineer and contractor in order to develop a list of restoration requirements. EBMUD will ensure damage directly caused by the Project operations is repaired accordingly and in a set time. EBMUD would provide a designated representative to coordinate with Alameda County Public Works to obtain encroachment permits for the repairs and ensure site restoration is completed.
- Coordinate with the nearest emergency and sensitive land uses such as police and fire stations, schools, and medical facilities. Notify emergency providers in advance of the timing, location, and duration of off-haul events.
- Ensure qualified EBMUD construction inspectors are present onsite or along the haul routes during off-haul events to m~~M~~onitor the impact of heavy truck traffic and adjust safety measures as needed.

5 EBMUD Mitigation Monitoring and Reporting Plan

Table 5 Mitigation Monitoring and Reporting Plan

Impact	Mitigation Measures	Implementation and Timing	Monitoring Responsibility
Impact TRA-C: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	**MM TRA-1 Minimize Impacts of Heavy Truck Traffic during Off-Haul Events** Contractors shall enforce the following safety measures to minimize potential safety hazards associated with the increased truck traffic during off-haul events: • Ensure truck drivers have received written traffic safety requirements focusing on road safety, defensive driving, navigating through school zones, and blind spot monitoring. All drivers shall provide signed acknowledgement of having understood all traffic safety requirements and the consequences of non-compliance. Traffic safety requirements may include: – Contractor vehicles shall yield to traffic, bicyclists, and pedestrians at all times. – Trucks shall not park or queue along Redwood Road. When trucks are making wide turns at Redwood Road/Miller Road intersection and into the Project site, illuminated signs, a temporary stop sign, or a combination of these methods shall be used to slow approaching traffic. – Trucks shall travel along designated routes only. • Install radar speed feedback signs in each direction on Redwood Road to deter speeding by trucks on haul route. • Conduct frequent inspections and maintenance of trucks (e.g., brakes, tires, lights) to ensure they are in safe working condition. • Install advance warning signs and dynamic message signs to alert drivers of upcoming heavy truck traffic along Redwood Road. The signs shall indicate the presence of heavy trucks and the anticipated timeframe. • Inform the public and local communities about expected truck traffic and safety measures through various channels, such as local media, social media, and community meetings, to provide timely updates and ensure public awareness. EBMUD shall perform the following for any off-haul event: • Coordinate with Alameda County Department of Transportation prior to and during an off-haul event. • If an off-haul event occurs during school sessions, coordinate with Alameda County and Castro Valley Unified School District regarding the need for additional crossing guards and fund the crossing guards as part of the off-haul work. • ~~Prior to any major off-haul events, a visual survey shall be conducted along Redwood Road between I-580 and Miller Road to establish the baseline condition of the roadway. Any damage to the pavement on Redwood Road shall be repaired after each major off-haul event.~~ • Coordinate with the Alameda County Department of Transportation prior to conducting a video condition assessment of the haul route used for each off-haul events. The video condition assessment will be performed by a qualified videographer as part of the Pre-Construction Site Survey and occur prior to the off-haul. A post-operation video condition assessment will occur after the off-haul which would be conducted in the same areas and recorded and reviewed by the engineer and contractor in order to develop a list of restoration requirements. EBMUD will ensure damage directly caused by the project operations is repaired accordingly and in a set time. EBMUD would provide a designated representative to coordinate with Alameda County Public Works to obtain encroachment permits for the repairs and ensure site restoration is completed.	**Implementation:** EBMUD and its contractor(s) **Timing:** During Project Implementation for the life of the Project	EBMUD

Impact	Mitigation Measures	Implementation and Timing	Monitoring Responsibility
	• Coordinate with the nearest emergency and sensitive land uses such as police and fire stations, schools, and medical facilities. Notify emergency providers in advance of the timing, location, and duration of off-haul events. • Ensure qualified EBMUD construction inspectors are present onsite or along the haul routes during off-haul events to m~~M~~onitor the impact of heavy truck traffic and adjust safety measures as needed.		
Impact WILD-A: Substantially impair an adopted emergency response plan or emergency evacuation plan?	**MM TRA-1**, discussed above.	See above	See above

Attachment 1 Example Soil Sample Data Summary

ATTACHMENT 1

Soil Sample Data Summary
7/5/2023

Project Location / Name			Castro Valley / 17272 Redwood Rd		Castro Valley / 17272 Redwood Rd		Castro Valley / 17272 Redwood Rd		Castro Valley / 17272 Redwood Rd		Castro Valley / 17272 Redwood Rd		Castro Valley / 17272 Redwood Rd		Castro Valley / 17272 Redwood Rd	
Lab Report #			2306072		2306072		2306072		2306072		2306072		2306072		2306072	
Sample Date			6/7/2023		6/7/2023		6/7/2023		6/7/2023		6/7/2023		6/7/2023		6/7/2023	
Sample ID/Location			TP1-2.5-060723		TP11-2.5-060723		TP4-5-060723		TP4-10-060723		TP5-5-060723		TP7-5-060723		TP10-5-060723	
	Modified Tier 1 2019 ESL (Rev. 2) + Title 22	Landfill STLC Triggers	Value	RL	Value	RL	Value	RL	Value	RL	Value	RL	Value	RL	Value	RL
Metals (CAM17, 6010B)	mg/kg	mg/kg	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Antimony	11	150	ND	0.054	ND	0.054	ND	0.06	ND	0.062	ND	0.056	ND	0.056	ND	0.072
Arsenic	11	50	4.74	0.16	5.29	0.16	3.37	0.18	5.16	0.18	5.21	0.17	4.12	0.17	5.04	0.21
Barium	390	1000	132	0.059	125	0.059	127	0.066	156	0.068	146	0.062	114	0.062	119	0.079
Beryllium	5	7.5	0.356	0.059	0.329	0.059	0.336	0.066	0.424	0.068	0.409	0.062	0.297	0.062	0.35	0.079
Cadmium	1.9	10	ND	0.11	ND	0.11	ND	0.12	ND	0.12	ND	0.11	ND	0.11	ND	0.14
Chromium	160	50	45	0.081	45.2	0.081	72	0.09	56.8	0.092	58.2	0.084	44.1	0.084	44.2	0.11
Cobalt	23	800	11.1	0.076	13.2	0.076	14.3	0.084	12	0.086	12.1	0.078	13.7	0.078	12.4	0.1
Copper	180	250	30.7	0.22	38.3	0.22	39.5	0.24	34	0.25	30.3	0.22	32.3	0.22	33	0.29
Lead	32	50	8.1	0.11	9.23	0.11	5.57	0.12	6.58	0.12	8.12	0.11	7.06	0.11	7.79	0.14
Molybdenum	6.9	350	0.243	0.054	0.216	0.054	0.144	0.06	0.308	0.062	0.252	0.056	0.28	0.056	0.307	0.072
Nickel	86	200	45.5	0.54	47.7	0.54	76.2	0.6	50.6	0.62	46.3	0.56	45.8	0.56	44.3	0.72
Selenium	2.4	10	ND	0.38	ND	0.38	ND	0.42	ND	0.43	ND	0.39	ND	0.39	ND	0.5
Silver	25	50	ND	0.16	ND	0.16	ND	0.18	ND	0.18	ND	0.17	ND	0.17	ND	0.21
Thallium	0.78	70	ND	0.22	ND	0.22	ND	0.24	ND	0.25	ND	0.22	ND	0.22	ND	0.29
Vanadium	18	240	47.4	0.11	57.2	0.11	75.6	0.12	53.9	0.12	54.9	0.11	54.7	0.11	57.8	0.14
Zinc	340	2500	42.8	0.32	44.9	0.32	41.6	0.36	47.2	0.37	49	0.34	45	0.34	49.5	0.43
Mercury	2	2	0.12	0.09	0.14	0.09	0.13	0.1	0.21	0.1	0.16	0.093	0.11	0.093	0.3	0.12
STLC Chromium (mg/L)	--	5					ND	0.2								
	--	--														
TPH (3550/3510/8015B)	ug/kg	ug/kg	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Gasoline Range Organics (GRO)-C5-C12	50000	5900000	ND	37	ND	37	ND	32	ND	36	ND	50	ND	86	ND	87
	--	--														
TPH (3550/3510/8015B)	mg/kg	mg/kg	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Diesel Range Organics [C10-C28]	260	20000	21.1	4.3	19.1	4.3	26.3	9.6	8.93	2.5	11	4.5	17.2	4.5	8.99	2.9
Motor Oil Range Organics [C24-C36]	1600	10000	208	22	189	22	324	48	60.4	12	89.4	22	142	22	76.7	14
	--	--														
SVOC's - full list by SIM (8270C SIM)	ug/kg	ug/kg	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
SVOC Total Remaining	--	--	ND		ND		ND		ND		ND		ND		ND	
Bis(2-Chloroethyl)Ether	0.03	--	ND	5.4	ND	5.4	ND	1.2	ND	3.1	ND	5.6	ND	5.6	ND	7.2
Naphthalene	42	--	ND	6.2	ND	6.2	ND	1.4	ND	3.5	ND	6.5	ND	6.5	ND	8.2
Isophorone	--	--	ND	5.4	ND	5.4	ND	1.2	ND	3.1	ND	5.6	ND	5.6	ND	7.2
2-Methylnaphthalene	880	--	ND	7	ND	7	ND	1.6	ND	4	ND	7.3	ND	7.3	ND	9.3
1-Methylnaphthalene	--	--	ND	7.5	ND	7.5	ND	1.7	ND	4.3	ND	7.7	ND	7.7	ND	9.9
Acenaphthylene	6400	--	ND	5.4	ND	5.4	ND	1.2	ND	3.1	ND	5.6	5.8	5.6	ND	7.2
Acenaphthene	12000	--	ND	5.4	ND	5.4	ND	1.2	ND	3.1	ND	5.6	ND	5.6	ND	7.2
Diethylphthalate	25	--	ND	47	ND	47	ND	10	ND	27	ND	48	ND	48	ND	62
Fluorene	6000	--	ND	5.4	ND	5.4	ND	1.2	ND	3.1	ND	5.6	ND	5.6	ND	7.2
Pentachlorophenol	13	17000	ND	7.8	ND	7.8	ND	1.7	ND	4.4	ND	8.1	ND	8.1	ND	10
Phenanthrene	7800	--	14.2	5.4	10.6	5.4	16.9	1.2	ND	3.1	7.4	5.6	37.6	5.6	ND	7.2
Anthracene	1900	--	ND	7	ND	7	2.07	1.6	ND	4	ND	7.3	ND	7.3	ND	9.3
Carbazole	--	--	ND	6.2	ND	6.2	1.45	1.4	ND	3.5	ND	6.5	ND	6.5	ND	8.2
Fluoranthene	690	--	15.4	5.4	13.4	5.4	36.5	1.2	3.96	3.1	11.7	5.6	29.2	5.6	12.2	7.2
Pyrene	45000	--	18	5.4	14.6	5.4	32.3	1.2	3.5	3.1	11.5	5.6	32.9	5.6	11	7.2
Benzyl butyl phthalate	--	--	ND	4.7	ND	4.7	2.22	1	3.1	2.7	ND	4.8	ND	4.8	ND	6.2
Benzo[a]anthracene	630	--	19.1	6.2	17.6	6.2	16	1.4	7.66	3.5	14.7	6.5	21	6.5	19.2	8.2
Chrysene	2200	--	21.3	7	17	7	21.6	1.6	7.79	4	14	7.3	28.7	7.3	17.6	9.3
Benzo[b]fluoranthene	1100	--	24.3	4.7	18.8	4.7	21.5	1	8.25	2.7	14.9	4.8	34	4.8	21.6	6.2
Benzo[k]fluoranthene	2800	--	12.5	7	8.48	7	7.98	1.6	ND	4	7.43	7.3	12.3	7.3	9.74	9.3
Benzo[a]pyrene	110	--	20.3	8.6	15.5	8.6	16.6	1.9	6.34	4.9	13.3	8.9	26.6	8.9	14.2	11
Indeno[1,2,3-cd]pyrene	480	--	ND	19	ND	19	10.7	4.3	ND	11	ND	20	21.5	20	ND	26
Dibenz(a,h)anthracene	110	--	8.4	7	ND	7	3.74	1.6	ND	4	ND	7.3	9.08	7.3	ND	9.3
Benzo[g,h,i]perylene	2500	--	24.8	6.2	17.9	6.2	16.8	1.4	8.75	3.5	17.1	6.5	30.1	6.5	19.2	8.2
Pyridine	--	100000	ND	7	ND	7	ND	1.6	ND	4	ND	7.3	ND	7.3	ND	9.3
Benzyl Alcohol	--	--	ND	4.7	ND	4.7	ND	1	ND	2.7	ND	4.8	ND	4.8	ND	6.2
SVOC Total	--	10000000	178.3	230	133.88	230	206.36	52	49.35	130	112.03	240	288.78	240	124.74	310
	--	--														
VOC's (8260B)	ug/kg	ug/kg	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
VOC Total Remaining	--	--	ND		ND		ND		ND		ND		ND		ND	
Chloroethane	1200	--	ND	2.6	ND	2.6	ND	2.2	ND	2.5	ND	3.5	ND	2.6	ND	2.6
Tert-Butyl alcohol (tert-butanol)	75	--	16.3	9.9	ND	9.9	ND	8.5	ND	9.5	ND	13	ND	9.9	ND	10
Chlorodibromomethane	350	--	ND	1.6	ND	1.6	ND	1.4	ND	1.5	ND	2.2	ND	1.6	ND	1.6
Bromoform	690	--	ND	1.4	ND	1.4	ND	1.2	ND	1.4	ND	1.9	ND	1.4	ND	1.5
Naphthalene	42	--	1.68	1.4	1.68	1.4	1.44	1.2	1.61	1.4	2.2	1.9	ND	1.4	ND	1.5
VOC Total	--	--	17.98	9.9	1.68	9.9	1.44	8.5	1.61	9.5	2.2	13	ND	9.9	ND	10
	--	--														
PCB's (8082)	ug/kg	ug/kg	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
PCB-1016	230	50000	ND	7.56	ND	7.56	ND	8.4	ND	8.61	ND	7.84	ND	7.84	ND	10
PCB-1221	230	50000	ND	1.08	ND	1.08	ND	1.2	ND	1.23	ND	1.12	ND	1.12	ND	1.43
PCB-1232	230	50000	ND	3.67	ND	3.67	ND	4.08	ND	4.18	ND	3.81	ND	3.81	ND	4.86
PCB-1242	230	50000	ND	0.648	ND	0.648	ND	0.72	ND	0.738	ND	0.672	ND	0.672	ND	0.858
PCB-1248	230	50000	ND	0.432	ND	0.432	ND	0.48	ND	0.492	ND	0.448	ND	0.448	ND	0.572
PCB-1254	230	50000	ND	3.02	ND	3.02	ND	3.36	ND	3.44	ND	3.14	ND	3.14	ND	4
PCB-1260	230	50000	ND	5.18	ND	5.18	ND	5.76	ND	5.9	ND	5.38	ND	5.38	ND	6.86
PCB Total	230	50000	ND	7.56	ND	7.56	ND	8.4	ND	8.61	ND	7.84	ND	7.84	ND	10
	--	--														
Pesticides (8081A)	ug/kg	ug/kg	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
alpha-BHC	--	--	ND	0.41	ND	0.41	ND	0.46	ND	0.16	ND	0.14	ND	0.43	ND	0.18
gamma-BHC (Lindane)	7.4	4000	ND	0.52	ND	0.52	ND	0.57	ND	0.2	ND	0.18	ND	0.53	ND	0.23
beta-BHC	--	--	ND	1	ND	1	ND	1.1	ND	0.39	ND	0.35	ND	1.1	ND	0.45
delta-BHC	--	--	ND	0.5	ND	0.5	ND	0.56	ND	0.19	ND	0.17	ND	0.52	ND	0.22
Heptachlor	120	160	ND	0.34	ND	0.34	ND	0.38	ND	0.13	ND	0.12	ND	0.35	ND	0.15
Aldrin	2.4	1400	ND	0.63	ND	0.63	ND	0.7	ND	0.24	ND	0.22	ND	0.66	ND	0.28
Heptachlor epoxide	0.18	--	ND	0.25	ND	0.25	ND	0.28	ND	0.096	ND	0.087	ND	0.26	ND	0.11
gamma-Chlordane	--	--	ND	0.53	ND	0.53	ND	0.59	ND	0.2	ND	0.18	ND	0.55	ND	0.23
alpha-Chlordane	--	--	ND	0.56	ND	0.56	ND	0.62	ND	0.21	ND	0.19	ND	0.58	ND	0.25
4,4'-DDE	330	1000	0.674	0.63	0.684	0.63	ND	0.7	ND	0.24	ND	0.22	ND	0.65	ND	0.28
Endosulfan I	9.8	--	ND	0.59	ND	0.59	ND	0.66	ND	0.23	ND	0.21	ND	0.61	ND	0.26
Dieldrin	0.46	8000	ND	0.48	ND	0.48	ND	0.53	ND	0.18	ND	0.17	ND	0.5	ND	0.21
Endrin	1.1	200	ND	0.61	ND	0.61	ND	0.68	ND	0.23	ND	0.21	ND	0.63	ND	0.27
4,4'-DDD	1000	1000	ND	1.8	ND	1.8	ND	2	ND	0.7	ND	0.63	ND	1.9	ND	0.81
Endosulfan II	9.8	--	ND	1.9	ND	1.9	ND	2.1	ND	0.71	ND	0.65	ND	1.9	ND	0.82
4,4'-DDT	1.1	1000	ND	0.42	ND	0.42	ND	0.46	ND	0.16	ND	0.14	ND	0.43	ND	0.18
Endrin aldehyde	--	--	ND	0.49	ND	0.49	ND	0.54	ND	0.19	ND	0.17	ND	0.51	ND	0.22
Methoxychlor	13	100000	ND	0.65	ND	0.65	ND	0.72	ND	0.25	ND	0.22	ND	0.67	ND	0.29
Endosulfan sulfate	9.8	--	ND	0.38	ND	0.38	ND	0.42	ND	0.14	ND	0.13	ND	0.39	ND	0.17
Endrin ketone	--	--	ND	1.4	ND	1.4	ND	1.6	ND	0.53	ND	0.49	ND	1.5	ND	0.62
Hexachlorobenzene	0.8	2600	ND	1.6	ND	1.6	ND	1.8	ND	0.62	ND	0.57	ND	1.7	ND	0.73
Chlordane (technical)	8.5	600	ND	8.7	ND	8.7	ND	9.6	ND	3.3	ND	3	ND	9	ND	3.8
Toxaphene	510	5000	ND	28	ND	28	ND	31	ND	10	ND	9.5	ND	29	ND	12
DDT SUM	1000	1000	0.674	1.8	0.684	1.8	ND	2	ND	0.7	ND	0.63	ND	1.9	ND	0.81
Hexachlorocyclohexane (BHC) sum	--	--	ND	1	ND	1	ND	1.1	ND	0.39	ND	0.35	ND	1.1	ND	0.45
	--	--														
Asbestos (CARB 435)	%	%	%		%		%		%		%		%		%	
Asbestos %	0.25	1							ND	0.25	ND	0.25				
	--	--														
Moisture (ASTM D2216-90)	%	%	%		%		%		%		%		%		%	
% Moisture	--	--	8.17	0.05	7.53	0.05	19.8	0.05	22.9	0.05	11.7	0.05	12.4	0.05	42.9	0.05

Project Location / Name	Castro Valley / 17272 Redwood Rd		Castro Valley / 17272 Redwood Rd		Castro Valley / 17272 Redwood Rd		Castro Valley / 17292 Redwood Rd		Castro Valley / 17292 Redwood Rd		Castro Valley / 17292 Redwood Rd		Castro Valley / 17292 Redwood Rd		Castro Valley / 17292 Redwood Rd		Castro Valley / 17292 Redwood Rd		Castro Valley / 17292 Redwood Rd	
Lab Report #	2306072		2306072		2306072		2306080		2306080		2306080		2306080		2306080		2306080		2306080	
Sample Date	6/7/2023		6/7/2023		6/7/2023		6/8/2023		6/8/2023		6/8/2023		6/8/2023		6/8/2023		6/8/2023		6/8/2023	
Sample ID/Location	TP2-5-060723		TP6-5-060723		TP6-10-060723		TP3-5-060823		TP3-10-060823		TP4-5-060823		TP7-5-060823		TP8-5-060823		TP8-10-060823		TP9-5-060823	
	Value	RL	Value	RL	Value	RL	Value	RL	Value	RL	Value	RL	Value	RL	Value	RL	Value	RL	Value	RL
Metals (CAM17, 6010B)	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Antimony	ND	0.058	ND	0.059	ND	0.058	ND	0.057	ND	0.058	ND	0.058	ND	0.056	ND	0.057	ND	0.057	ND	0.056
Arsenic	5.43	0.17	3.77	0.18	5.46	0.17	4.98	0.17	5.87	0.17	5.86	0.17	5.51	0.17	5.41	0.17	5.46	0.17	7.34	0.17
Barium	161	0.063	92.4	0.064	144	0.064	132	0.062	171	0.063	156	0.064	119	0.062	135	0.062	142	0.063	147	0.062
Beryllium	0.42	0.063	0.281	0.064	0.377	0.064	0.384	0.062	0.437	0.063	0.371	0.064	0.342	0.062	0.373	0.062	0.382	0.063	0.577	0.062
Cadmium	ND	0.12	ND	0.12	ND	0.12	0.667	0.11	0.518	0.12	0.568	0.12	0.594	0.11	0.548	0.11	0.519	0.11	0.672	0.11
Chromium	42.6	0.086	37.3	0.088	45.9	0.087	43.9	0.085	49.2	0.086	54.3	0.087	51.9	0.084	56.5	0.085	44.7	0.086	51.6	0.084
Cobalt	11	0.081	13.4	0.082	12.3	0.081	18.6	0.079	15.6	0.081	17.9	0.081	18.3	0.078	14.6	0.079	16.4	0.08	19.3	0.078
Copper	25.9	0.23	40.4	0.23	40.2	0.23	31.9	0.23	31.2	0.23	40.5	0.23	34	0.22	49	0.23	30.8	0.23	38.5	0.22
Lead	7.19	0.12	6.49	0.12	11.1	0.12	9.66	0.11	8.22	0.12	9.11	0.12	7.06	0.11	7.74	0.11	10.5	0.11	12.3	0.11
Molybdenum	0.374	0.058	0.181	0.059	0.273	0.058	0.503	0.057	0.529	0.058	0.441	0.058	0.347	0.056	0.35	0.057	0.388	0.057	0.56	0.056
Nickel	51	0.58	34.5	0.59	46.7	0.58	43.8	0.57	46.9	0.58	57.4	0.58	49.6	0.56	46.4	0.57	53.9	0.57	49.6	0.56
Selenium	ND	0.4	ND	0.41	ND	0.41	ND	0.4	ND	0.4	ND	0.41	ND	0.39	ND	0.4	ND	0.4	ND	0.39
Silver	ND	0.17	ND	0.18	ND	0.17	ND	0.17	ND	0.17	ND	0.17	ND	0.17	ND	0.17	ND	0.17	ND	0.17
Thallium	ND	0.23	ND	0.23	ND	0.23	ND	0.23	ND	0.23	ND	0.23	ND	0.22	ND	0.23	ND	0.23	ND	0.22
Vanadium	46.1	0.12	60.8	0.12	55	0.12	79.1	0.11	74.2	0.12	70.2	0.12	68.3	0.11	67.8	0.11	55.5	0.11	86.2	0.11
Zinc	48.1	0.35	32.5	0.35	49.2	0.35	53.1	0.34	48.6	0.35	81.2	0.35	46.1	0.34	49.9	0.34	114	0.34	56.6	0.34
Mercury	0.13	0.096	0.2	0.098	0.15	0.097	0.23	0.094	0.12	0.096	ND	0.097	0.11	0.093	0.12	0.094	0.18	0.095	0.17	0.093
STLC Chromium (mg/L)																				
TPH (3550/3510/8015B)	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Gasoline Range Organics (GRO)-C5-C12	ND	76	ND	82	ND	76	ND	100	ND	120	ND	120	ND	110	ND	110	ND	97	ND	79
TPH (3550/3510/8015B)	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Diesel Range Organics [C10-C28]	9.92	2.3	13.4	4.7	20.2	9.3	80.6	18	25.3	4.6	21.3	4.6	21.6	4.5	23.7	4.5	109	27	22.3	4.5
Motor Oil Range Organics [C24-C36]	64.3	12	139	23	371	46	465	90	181	23	143	23	178	22	186	23	592	140	161	22
SVOC's - full list by SIM (8270C SIM)	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
SVOC Total Remaining	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Bis(2-Chloroethyl)Ether	ND	5.8	ND	5.9	ND	2.9	ND	2.8	ND	2.9	ND	2.9	ND	2.8	ND	2.8	ND	2.9	ND	11
Naphthalene	ND	6.6	ND	6.7	ND	3.3	ND	3.3	ND	3.3	ND	3.3	ND	3.2	ND	3.3	ND	3.3	ND	13
Isophorone	ND	5.8	ND	5.9	ND	2.9	ND	2.8	ND	2.9	ND	2.9	ND	2.8	ND	2.8	ND	2.9	ND	11
2-Methylnaphthalene	ND	7.5	ND	7.6	ND	3.8	ND	3.7	ND	3.7	ND	3.8	ND	3.6	ND	3.7	ND	3.7	ND	15
1-Methylnaphthalene	ND	7.9	ND	8.1	ND	4	ND	3.9	ND	4	ND	4	ND	3.9	ND	3.9	ND	3.9	ND	15
Acenaphthylene	ND	5.8	ND	5.9	ND	2.9	ND	2.8	ND	2.9	ND	2.9	ND	2.8	ND	2.8	ND	2.9	ND	11
Acenaphthene	ND	5.8	ND	5.9	ND	2.9	ND	2.8	ND	2.9	ND	2.9	ND	2.8	ND	2.8	ND	2.9	ND	11
Diethylphthalate	ND	50	ND	51	ND	25	ND	24	ND	25	ND	25	ND	24	ND	24	ND	25	ND	97
Fluorene	ND	5.8	ND	5.9	ND	2.9	ND	2.8	ND	2.9	ND	2.9	ND	2.8	ND	2.8	ND	2.9	ND	11
Pentachlorophenol	ND	8.3	ND	8.4	ND	4.2	ND	4.1	ND	4.1	ND	4.2	ND	4	ND	4.1	ND	4.1	ND	16
Phenanthrene	ND	5.8	6.4	5.9	15.7	2.9	21	2.8	4.79	2.9	22.3	2.9	9.66	2.8	6	2.8	11.4	2.9	ND	11
Anthracene	ND	7.5	ND	7.6	ND	3.8	4.53	3.7	ND	3.7	4.17	3.8	ND	3.6	ND	3.7	ND	3.7	ND	15
Carbazole	ND	6.6	ND	6.7	ND	3.3	4.52	3.3	ND	3.3	ND	3.3	ND	3.2	ND	3.3	ND	3.3	ND	13
Fluoranthene	8.14	5.8	8.99	5.9	13.6	2.9	19.3	2.8	4.41	2.9	38.3	2.9	7.14	2.8	7.6	2.8	11.7	2.9	11.8	11
Pyrene	8.45	5.8	9.81	5.9	12.8	2.9	16.8	2.8	4.93	2.9	36.8	2.9	8.11	2.8	9.36	2.8	14.2	2.9	13.9	11
Benzyl butyl phthalate	ND	5	ND	5.1	2.5	2.5	8.11	2.4	5.3	2.5	2.79	2.5	4.18	2.4	3.65	2.4	5.1	2.5	15.9	9.7
Benzo[a]anthracene	15.3	6.6	13	6.7	10.5	3.3	15.7	3.3	8.99	3.3	21.4	3.3	8.85	3.2	9.29	3.3	11.1	3.3	27.2	13
Chrysene	15.7	7.5	14.2	7.6	11.3	3.8	15.5	3.7	11.7	3.7	23.8	3.8	9.53	3.6	12	3.7	14.8	3.7	22.7	15
Benzo[b]fluoranthene	13.1	5	12.6	5.1	12.1	2.5	13.4	2.4	7.86	2.5	23.5	2.5	9.82	2.4	11.3	2.4	14.4	2.5	20.8	9.7
Benzo[k]fluoranthene	ND	7.5	ND	7.6	4.33	3.8	5.54	3.7	ND	3.7	8.54	3.8	3.92	3.6	3.79	3.7	4.35	3.7	ND	15
Benzo[a]pyrene	11.7	9.1	9.68	9.3	7.93	4.6	11.4	4.5	5.97	4.6	21.1	4.6	7.97	4.4	8.77	4.5	11.2	4.5	18.9	18
Indeno[1,2,3-cd]pyrene	ND	21	ND	21	ND	10	ND	10	ND	10	13.2	10	ND	10	ND	10	ND	10	ND	40
Dibenz(a,h)anthracene	ND	7.5	ND	7.6	ND	3.8	4.8	3.7	4.02	3.7	4.54	3.8	ND	3.6	ND	3.7	3.76	3.7	ND	15
Benzo[g,h,i]perylene	14.7	6.6	11.5	6.7	8.89	3.3	11.8	3.3	9.78	3.3	19.2	3.3	11	3.2	13.7	3.3	14.5	3.3	30.2	13
Pyridine	ND	7.5	ND	7.6	ND	3.8	ND	3.7	ND	3.7	ND	3.8	ND	3.6	ND	3.7	ND	3.7	ND	15
Benzyl Alcohol	ND	5	ND	5.1	ND	2.5	ND	2.4	ND	2.5	ND	2.5	ND	2.4	ND	2.4	ND	2.5	ND	9.7
SVOC Total	87.09	250	86.18	250	99.65	130	152.4	120	67.75	120	239.64	130	80.18	120	85.46	120	116.51	120	161.4	480
VOC's (8260B)	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
VOC Total Remaining	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Chloroethane	ND	2.3	ND	2.5	ND	2.3	ND	3	ND	3.5	ND	3.5	ND	3.4	ND	3.2	ND	2.9	ND	2.4
Tert-Butyl alcohol (tert-butanol)	ND	8.8	ND	9.5	ND	8.8	ND	12	ND	13	ND	13	ND	13	ND	12	ND	11	ND	9.2
Chlorodibromomethane	ND	1.4	ND	1.5	ND	1.4	ND	1.9	ND	2.2	ND	2.2	ND	2.1	ND	2	ND	1.8	ND	1.5
Bromoform	ND	1.3	ND	1.4	ND	1.3	ND	1.7	ND	1.9	ND	1.9	ND	1.9	ND	1.8	ND	1.6	ND	1.3
Naphthalene	ND	1.3	ND	1.4	ND	1.3	ND	1.7	ND	1.9	ND	1.9	ND	1.9	ND	1.8	ND	1.6	ND	1.3
VOC Total	ND	8.8	ND	9.5	ND	8.8	ND	12	ND	13	ND	13	ND	13	ND	12	ND	11	ND	9.2
PCB's (8082)	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
PCB-1016	ND	8.05	ND	8.19	ND	8.12	ND	7.91	ND	8.05	ND	8.12	ND	7.84	ND	7.91	ND	7.98	ND	7.84
PCB-1221	ND	1.15	ND	1.17	ND	1.16	ND	1.13	ND	1.15	ND	1.16	ND	1.12	ND	1.13	ND	1.14	ND	1.12
PCB-1232	ND	3.91	ND	3.98	ND	3.94	ND	3.84	ND	3.91	ND	3.94	ND	3.81	ND	3.84	ND	3.88	ND	3.81
PCB-1242	ND	0.69	ND	0.702	ND	0.696	ND	0.678	ND	0.69	ND	0.696	ND	0.672	ND	0.678	ND	0.684	ND	0.672
PCB-1248	ND	0.46	ND	0.468	ND	0.464	ND	0.452	ND	0.46	ND	0.464	ND	0.448	ND	0.452	ND	0.456	ND	0.448
PCB-1254	ND	3.22	ND	3.28	ND	3.25	ND	3.16	ND	3.22	ND	3.25	ND	3.14	ND	3.16	ND	3.19	ND	3.14
PCB-1260	ND	5.52	ND	5.62	ND	5.57	ND	5.42	ND	5.52	ND	5.57	ND	5.38	ND	5.42	ND	5.47	ND	5.38
PCB Total	ND	8.05	ND	8.19	ND	8.12	ND	7.91	ND	8.05	ND	8.12	ND	7.84	ND	7.91	ND	7.98	ND	7.84
Pesticides (8081A)	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
alpha-BHC	ND	0.15	ND	0.15	ND	0.44	ND	0.43	ND	0.44	ND	0.44	ND	0.43	ND	0.43	ND	0.43	ND	0.43
gamma-BHC (Lindane)	ND	0.18	ND	0.19	ND	0.55	ND	0.54	ND	0.55	ND	0.55	ND	0.53	ND	0.54	ND	0.54	ND	0.53
beta-BHC	ND	0.36	ND	0.37	ND	1.1	ND	1.1	ND	1.1	ND	1.1	ND	1.1	ND	1.1	ND	1.1	ND	1.1
delta-BHC	ND	0.18	ND	0.18	ND	0.54	ND	0.53	ND	0.53	ND	0.54	ND	0.52	ND	0.53	ND	0.53	ND	0.52
Heptachlor	ND	0.12	ND	0.12	ND	0.37	ND	0.36	ND	0.36	ND	0.37	ND	0.35	ND	0.36	ND	0.36	ND	0.35
Aldrin	ND	0.22	ND	0.23	ND	0.68	ND	0.66	ND	0.67	ND	0.68	ND	0.66	ND	0.66	ND	0.67	ND	0.66
Heptachlor epoxide	ND	0.09	ND	0.091	ND	0.27	ND	0.26	ND	0.27	ND	0.27	ND	0.26	ND	0.26	ND	0.27	ND	0.26
gamma-Chlordane	ND	0.19	ND	0.19	ND	0.57	ND	0.55	ND	0.56	ND	0.57	ND	0.55	ND	0.55	ND	0.56	ND	0.55
alpha-Chlordane	ND	0.2	ND	0.2	ND	0.6	ND	0.59	ND	0.6	ND	0.6	ND	0.58	ND	0.59	ND	0.59	ND	0.58
4,4'-DDE	ND	0.22	0.58	0.23	ND	0.68	ND	0.66	ND	0.67	ND	0.68	ND	0.65	ND	0.66	ND	0.66	ND	0.65
Endosulfan I	ND	0.21	ND	0.21	ND	0.64	ND	0.62	ND	0.63	ND	0.64	ND	0.61	ND	0.62	ND	0.63	ND	0.61
Dieldrin	ND	0.17	ND	0.17	ND	0.52	ND	0.5	ND	0.51	ND	0.52	ND	0.5	ND	0.5	ND	0.51	ND	0.5
Endrin	ND	0.22	ND	0.22	ND	0.65	ND	0.64	ND	0.65	ND	0.65	ND	0.63	ND	0.64	ND	0.64	ND	0.63
4,4'-DDD	ND	0.65	ND	0.66	ND	2	ND	1.9	ND	1.9	ND	2	ND	1.9	ND	1.9	ND	1.9	ND	1.9
Endosulfan II	ND	0.66	ND	0.67	ND	2	ND	2	ND	2	ND	2	ND	1.9	ND	2	ND	2	ND	1.9
4,4'-DDT	0.392	0.15	0.734	0.15	ND	0.45	ND	0.44	ND	0.45	ND	0.45	ND	0.43	ND	0.44	ND	0.44	ND	0.43
Endrin aldehyde	ND	0.17	ND	0.18	ND	0.53	ND	0.51	ND	0.52	ND	0.53	ND	0.51	ND	0.51	ND	0.52	ND	0.51
Methoxychlor	ND	0.23	ND	0.23	ND	0.7	ND	0.68	ND	0.69	ND	0.7	ND	0.67	ND	0.68	ND	0.68	ND	0.67
Endosulfan sulfate	ND	0.13	ND	0.14	ND	0.41	ND	0.4	ND	0.4	ND	0.41	ND	0.39	ND	0.4	ND	0.4	ND	0.39
Endrin ketone	ND	0.5	ND	0.51	ND	1.5	ND	1.5	ND	1.5	ND	1.5	ND	1.5	ND	1.5	ND	1.5	ND	1.5
Hexachlorobenzene	ND	0.58	ND	0.59	ND	1.8	ND	1.7	ND	1.7	ND	1.8	ND	1.7	ND	1.7	ND	1.7	ND	1.7
Chlordane (technical)	ND	3.1	ND	3.1	ND	9.3	ND	9.1	ND	9.2	ND	9.3	ND	9	ND	9.1	ND	9.1	ND	9
Toxaphene	ND	9.8	ND	10	ND	30	ND	29	ND	29	ND	30	ND	29	ND	29	ND	29	ND	29
DDT SUM	0.392	0.65	1.314	0.66	ND	2	ND	1.9	ND	1.9	ND	2	ND	1.9	ND	1.9	ND	1.9	ND	1.9
Hexachlorocyclohexane (BHC) sum	ND	0.36	ND	0.37	ND	1.1	ND	1.1	ND	1.1	ND	1.1	ND	1.1	ND	1.1	ND	1.1	ND	1.1
Asbestos (CARB 435)	%		%		%		%		%		%		%		%		%		%	
Asbestos %	ND	0.25																		
Moisture (ASTM D2216-90)	%		%		%		%		%		%		%		%		%		%	
% Moisture	15.4	0.05	16.5	0.05	16.4	0.05	12.8	0.05	15.2	0.05	15.9	0.05	11.7	0.05	13.4	0.05	14.5	0.05	12	0.05

ATTACHMENT 1

Soil Sample Data Summary
7/5/2023

Project Location / Name			Castro Valley / 17292 Redwood Rd		Castro Valley / 17292 Redwood Rd		Castro Valley / 17292 Redwood Rd		Castro Valley / 17292 Redwood Rd		Castro Valley / 17292 Redwood Rd	
Lab Report #			2306080		2306080		2306080		2306080		2306080	
Sample Date			6/8/2023		6/8/2023		6/8/2023		6/8/2023		6/8/2023	
Sample ID/Location			TP9-10-060823		TP9-15-060823		TP11-5-060823		TP11-15-060823		TP13-5-060823	
	Modified Tier 1 2019 ESL (Rev. 2) + Title 22	Landfill STLC Triggers	Value	RL	Value	RL	Value	RL	Value	RL	Value	RL
Metals (CAM17, 6010B)	mg/kg	mg/kg	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Antimony	11	150	ND	0.057	ND	0.057	ND	0.056	ND	0.057	ND	0.055
Arsenic	11	50	6.05	0.17	6.04	0.17	6.83	0.17	5.5	0.17	6.55	0.17
Barium	390	1000	121	0.062	158	0.063	157	0.061	308	0.063	163	0.061
Beryllium	5	7.5	0.379	0.062	0.416	0.063	0.411	0.061	0.388	0.063	0.468	0.061
Cadmium	1.9	10	0.588	0.11	0.633	0.11	0.583	0.11	0.581	0.11	0.638	0.11
Chromium	160	50	45.9	0.085	54.5	0.086	56.1	0.083	57	0.086	59.4	0.083
Cobalt	23	800	12.8	0.079	15.8	0.08	16.3	0.078	18.2	0.08	17.4	0.077
Copper	180	250	31.1	0.23	38.1	0.23	51.4	0.22	53.4	0.23	48.9	0.22
Lead	32	50	7.91	0.11	7.3	0.11	11.5	0.11	9.86	0.11	13.6	0.11
Molybdenum	6.9	350	0.429	0.057	0.41	0.057	0.427	0.056	0.336	0.057	0.44	0.055
Nickel	86	200	44.2	0.57	52.7	0.57	57.7	0.56	61.6	0.57	53.7	0.55
Selenium	2.4	10	ND	0.4	ND	0.4	ND	0.39	ND	0.4	ND	0.39
Silver	25	50	ND	0.17	ND	0.17	ND	0.17	ND	0.17	ND	0.17
Thallium	0.78	70	ND	0.23	ND	0.23	ND	0.22	ND	0.23	ND	0.22
Vanadium	18	240	68.4	0.11	77.5	0.11	67.2	0.11	67.3	0.11	82	0.11
Zinc	340	2500	51.4	0.34	58.7	0.34	58.3	0.33	59.3	0.34	58.3	0.33
Mercury	2	2	0.15	0.094	0.15	0.095	0.21	0.093	0.19	0.095	ND	0.092
STLC Chromium (mg/L)	--	5									ND	0.2
TPH (3550/3510/8015B)	ug/kg	ug/kg	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Gasoline Range Organics (GRO)-C5-C12	50000	5900000	ND	110	ND	110	ND	69	ND	130	ND	110
TPH (3550/3510/8015B)	mg/kg	mg/kg	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Diesel Range Organics [C10-C28]	260	20000	41.4	9	20	4.6	29.2	4.4	33.9	9.1	35.9	8.8
Motor Oil Range Organics [C24-C36]	1600	10000	284	45	115	23	194	22	191	46	208	44
SVOC's - full list by SIM (8270C SIM)	ug/kg	ug/kg	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
SVOC Total Remaining	--	--	ND		ND		ND		ND		ND	
Bis(2-Chloroethyl)Ether	0.03	--	ND	2.8	ND	2.9	ND	2.8	ND	2.9	ND	5.5
Naphthalene	42	--	3.58	3.3	4.71	3.3	ND	3.2	ND	3.3	ND	6.3
Isophorone	--	--	9.93	2.8	ND	2.9	ND	2.8	ND	2.9	ND	5.5
2-Methylnaphthalene	880	--	4.33	3.7	ND	3.7	ND	3.6	ND	3.7	ND	7.1
1-Methylnaphthalene	--	--	ND	3.9	ND	3.9	ND	3.8	ND	3.9	ND	7.6
Acenaphthylene	6400	--	4.45	2.8	9.22	2.9	ND	2.8	6.49	2.9	ND	5.5
Acenaphthene	12000	--	ND	2.8	9.76	2.9	ND	2.8	ND	2.9	ND	5.5
Diethylphthalate	25	--	ND	24	ND	25	ND	24	ND	25	ND	48
Fluorene	6000	--	ND	2.8	9.08	2.9	ND	2.8	ND	2.9	ND	5.5
Pentachlorophenol	13	17000	ND	4.1	ND	4.1	ND	4	ND	4.1	ND	7.9
Phenanthrene	7800	--	12.4	2.8	125	2.9	6.79	2.8	8.4	2.9	11.2	5.5
Anthracene	1900	--	ND	3.7	18.3	3.7	ND	3.6	ND	3.7	ND	7.1
Carbazole	--	--	ND	3.3	ND	3.3	ND	3.2	ND	3.3	ND	6.3
Fluoranthene	690	--	19.1	2.8	100	2.9	14.3	2.8	17.7	2.9	15	5.5
Pyrene	45000	--	27.1	2.8	117	2.9	14.7	2.8	27.9	2.9	18.4	5.5
Benzyl butyl phthalate	--	--	ND	2.4	7.26	2.5	4.33	2.4	5.92	2.5	8.64	4.8
Benzo[a]anthracene	630	--	15.1	3.3	42.6	3.3	11.7	3.2	18.3	3.3	23.8	6.3
Chrysene	2200	--	23	3.7	42.1	3.7	13.7	3.6	26.1	3.7	31.6	7.1
Benzo[b]fluoranthene	1100	--	31.3	2.4	45.9	2.5	15	2.4	38.4	2.5	32.8	4.8
Benzo[k]fluoranthene	2800	--	9.58	3.7	14.8	3.7	5.33	3.6	12	3.7	10.7	7.1
Benzo[a]pyrene	110	--	25.1	4.5	48.3	4.5	11.4	4.4	32	4.5	26.6	8.7
Indeno[1,2,3-cd]pyrene	480	--	22.9	10	28	10	ND	10	27.1	10	ND	20
Dibenz(a,h)anthracene	110	--	6.86	3.7	7.21	3.7	ND	3.6	7.89	3.7	7.41	7.1
Benzo[g,h,i]perylene	2500	--	35.6	3.3	44.3	3.3	14.9	3.2	38.3	3.3	27.1	6.3
Pyridine	--	100000	ND	3.7	ND	3.7	ND	3.6	ND	3.7	ND	7.1
Benzyl Alcohol	--	--	ND	2.4	ND	2.5	ND	2.4	ND	2.5	ND	4.8
SVOC Total	--	10000000	250.33	120	673.54	120	112.15	120	266.5	120	213.25	240
VOC's (8260B)	ug/kg	ug/kg	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
VOC Total Remaining	--	--	ND		ND		ND		ND		ND	
Chloroethane	1200	--	ND	3.4	ND	3.4	ND	2.1	ND	4.1	4.26	3.4
Tert-Butyl alcohol (tert-butanol)	75	--	ND	13	ND	13	ND	8	ND	16	ND	13
Chlorodibromomethane	350	--	ND	2.1	ND	2.1	ND	1.3	ND	2.5	ND	2.1
Bromoform	690	--	ND	1.9	ND	1.9	ND	1.2	ND	2.3	ND	1.9
Naphthalene	42	--	2.42	1.9	ND	1.9	ND	1.2	ND	2.3	ND	1.9
VOC Total	--	--	2.42	13	ND	13	ND	8	ND	16	4.26	13
PCB's (8082)	ug/kg	ug/kg	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
PCB-1016	230	50000	ND	7.91	ND	7.98	ND	7.77	ND	7.98	ND	7.7
PCB-1221	230	50000	ND	1.13	ND	1.14	ND	1.11	ND	1.14	ND	1.1
PCB-1232	230	50000	ND	3.84	ND	3.88	ND	3.77	ND	3.88	ND	3.74
PCB-1242	230	50000	ND	0.678	ND	0.684	ND	0.666	ND	0.684	ND	0.66
PCB-1248	230	50000	ND	0.452	ND	0.456	ND	0.444	ND	0.456	ND	0.44
PCB-1254	230	50000	ND	3.16	ND	3.19	ND	3.11	ND	3.19	ND	3.08
PCB-1260	230	50000	ND	5.42	ND	5.47	ND	5.33	ND	5.47	ND	5.28
PCB Total	230	50000	ND	7.91	ND	7.98	ND	7.77	ND	7.98	ND	7.7
Pesticides (8081A)	ug/kg	ug/kg	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
alpha-BHC	--	--	ND	0.43	ND	0.43	ND	0.42	ND	0.43	ND	0.42
gamma-BHC (Lindane)	7.4	4000	ND	0.54	ND	0.54	ND	0.53	ND	0.54	ND	0.52
beta-BHC	--	--	ND	1.1	ND	1.1	ND	1.1	ND	1.1	ND	1
delta-BHC	--	--	ND	0.53	ND	0.53	ND	0.52	ND	0.53	ND	0.51
Heptachlor	120	160	ND	0.36	ND	0.36	ND	0.35	ND	0.36	ND	0.35
Aldrin	2.4	1400	ND	0.66	ND	0.67	ND	0.65	ND	0.67	ND	0.64
Heptachlor epoxide	0.18	--	ND	0.26	ND	0.27	ND	0.26	ND	0.27	ND	0.26
gamma-Chlordane	--	--	ND	0.55	ND	0.56	ND	0.54	ND	0.56	ND	0.54
alpha-Chlordane	--	--	ND	0.59	ND	0.59	ND	0.58	ND	0.59	ND	0.57
4,4'-DDE	330	1000	ND	0.66	ND	0.66	ND	0.65	ND	0.66	ND	0.64
Endosulfan I	9.8	--	ND	0.62	ND	0.63	ND	0.61	ND	0.63	ND	0.6
Dieldrin	0.46	8000	ND	0.5	ND	0.51	ND	0.49	ND	0.51	ND	0.49
Endrin	1.1	200	ND	0.64	ND	0.64	ND	0.63	ND	0.64	ND	0.62
4,4'-DDD	1000	1000	ND	1.9	ND	1.9	ND	1.9	ND	1.9	ND	1.9
Endosulfan II	9.8	--	ND	2	ND	2	ND	1.9	ND	2	ND	1.9
4,4'-DDT	1.1	1000	ND	0.44	ND	0.44	ND	0.43	ND	0.44	ND	0.43
Endrin aldehyde	--	--	ND	0.51	ND	0.52	ND	0.5	ND	0.52	ND	0.5
Methoxychlor	13	100000	ND	0.68	ND	0.68	ND	0.67	ND	0.68	ND	0.66
Endosulfan sulfate	9.8	--	ND	0.4	ND	0.4	ND	0.39	ND	0.4	ND	0.39
Endrin ketone	--	--	ND	1.5	ND	1.5	ND	1.4	ND	1.5	ND	1.4
Hexachlorobenzene	0.8	2600	ND	1.7	ND	1.7	ND	1.7	ND	1.7	ND	1.7
Chlordane (technical)	8.5	600	ND	9.1	ND	9.1	ND	8.9	ND	9.1	ND	8.8
Toxaphene	510	5000	ND	29	ND	29	ND	28	ND	29	ND	28
DDT SUM	1000	1000	ND	1.9	ND	1.9	ND	1.9	ND	1.9	ND	1.9
Hexachlorocyclohexane (BHC) sum	--	--	ND	1.1	ND	1.1	ND	1.1	ND	1.1	ND	1
Asbestos (CARB 435)	%	%	%		%		%		%		%	
Asbestos %	0.25	1							ND	0.25		
Moisture (ASTM D2216-90)	%	%	%		%		%		%		%	
% Moisture	--	--	13.4	0.05	13.5	0.05	11.1	0.05	13.9	0.05	10.4	0.05

Project Location / Name	Castro Valley / 17292 Redwood Rd		Castro Valley / 17292 Redwood Rd		Castro Valley / 17292 Redwood Rd		Castro Valley / 17292 Redwood Rd		Castro Valley / 17292 Redwood Rd	
Lab Report #	2306080		2306080		2306080		2306080		2306080	
Sample Date	6/8/2023		6/8/2023		6/8/2023		6/8/2023		6/8/2023	
Sample ID/Location	TP13-10-060823		TP14-5-060823		TP14-10-060823		TP111-15-060823		TP15-5-060823	
	Value	RL	Value	RL	Value	RL	Value	RL	Value	RL
Metals (CAM17, 6010B)	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Antimony	ND	0.058	ND	0.056	ND	0.054	ND	0.056	ND	0.067
Arsenic	7.88	0.17	6.88	0.17	6.96	0.16	7.49	0.17	7.85	0.2
Barium	225	0.063	140	0.061	145	0.059	194	0.061	209	0.073
Beryllium	0.529	0.063	0.45	0.061	0.444	0.059	0.505	0.061	0.565	0.073
Cadmium	0.65	0.12	0.733	0.11	0.679	0.11	0.672	0.11	0.831	0.13
Chromium	63.8	0.086	72.7	0.083	56.2	0.08	99.3	0.083	79.8	0.1
Cobalt	18.6	0.081	20	0.078	19	0.075	20.2	0.078	24.5	0.093
Copper	60.4	0.23	51.6	0.22	46.8	0.21	50.5	0.22	72.5	0.27
Lead	11.5	0.12	12.6	0.11	11.4	0.11	12	0.11	13.8	0.13
Molybdenum	0.558	0.058	0.488	0.056	0.444	0.054	0.405	0.056	0.579	0.067
Nickel	52.8	0.58	54.7	0.56	51.6	0.54	73.8	0.56	78.5	0.67
Selenium	ND	0.4	ND	0.39	ND	0.37	ND	0.39	ND	0.47
Silver	ND	0.17	ND	0.17	ND	0.16	ND	0.17	ND	0.2
Thallium	ND	0.23	ND	0.22	ND	0.21	ND	0.22	ND	0.27
Vanadium	88.6	0.12	99.9	0.11	81.3	0.11	93.8	0.11	109	0.13
Zinc	66.7	0.35	57.2	0.33	59.9	0.32	64.9	0.33	73.8	0.4
Mercury	0.25	0.096	0.33	0.093	0.3	0.089	0.32	0.093	0.34	0.11
STLC Chromium (mg/L)	ND	0.2	ND	0.2			ND	0.2	ND	0.2
TPH (3550/3510/8015B)	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Gasoline Range Organics (GRO)-C5-C12	ND	100	ND	180	ND	97	ND	110	ND	170
TPH (3550/3510/8015B)	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Diesel Range Organics [C10-C28]	54.7	9.2	45.2	8.9	61.3	8.6	34.8	8.9	57.3	11
Motor Oil Range Organics [C24-C36]	393	46	266	44	404	43	275	44	321	53
SVOC's - full list by SIM (8270C SIM)	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
SVOC Total Remaining	ND		ND		ND		ND		ND	
Bis(2-Chloroethyl)Ether	ND	2.9	ND	2.8	ND	5.4	ND	2.8	ND	6.7
Naphthalene	6.6	3.3	ND	3.2	ND	6.2	ND	3.2	ND	7.7
Isophorone	ND	2.9	ND	2.8	ND	5.4	ND	2.8	ND	6.7
2-Methylnaphthalene	8.46	3.7	ND	3.6	ND	6.9	ND	3.6	ND	8.6
1-Methylnaphthalene	6.35	4	ND	3.8	ND	7.4	ND	3.8	ND	9.2
Acenaphthylene	ND	2.9	ND	2.8	ND	5.4	ND	2.8	ND	6.7
Acenaphthene	ND	2.9	ND	2.8	ND	5.4	ND	2.8	ND	6.7
Diethylphthalate	ND	25	ND	24	ND	46	ND	24	ND	57
Fluorene	ND	2.9	ND	2.8	ND	5.4	ND	2.8	ND	6.7
Pentachlorophenol	ND	4.1	ND	4	ND	7.7	ND	4	ND	9.6
Phenanthrene	11.6	2.9	8.31	2.8	12.1	5.4	10.4	2.8	ND	6.7
Anthracene	ND	3.7	ND	3.6	ND	6.9	ND	3.6	ND	8.6
Carbazole	ND	3.3	ND	3.2	ND	6.2	ND	3.2	ND	7.7
Fluoranthene	17	2.9	18.5	2.8	21.2	5.4	13.2	2.8	15.3	6.7
Pyrene	17.1	2.9	17.5	2.8	22.1	5.4	15.5	2.8	15.6	6.7
Benzyl butyl phthalate	ND	2.5	5.76	2.4	7.16	4.6	3.83	2.4	6.53	5.7
Benzo[a]anthracene	15.8	3.3	13.3	3.2	16.5	6.2	10.5	3.2	19.9	7.7
Chrysene	20.6	3.7	18.7	3.6	24.9	6.9	13.4	3.6	28.2	8.6
Benzo[b]fluoranthene	28	2.5	24.9	2.4	22.8	4.6	14.7	2.4	26.5	5.7
Benzo[k]fluoranthene	9.21	3.7	7.84	3.6	7.34	6.9	4.28	3.6	ND	8.6
Benzo[a]pyrene	17.4	4.6	15	4.4	15.6	8.5	10.7	4.4	20.4	11
Indeno[1,2,3-cd]pyrene	12.1	10	13.5	10	ND	19	ND	10	ND	24
Dibenz(a,h)anthracene	4.34	3.7	4.81	3.6	ND	6.9	ND	3.6	ND	8.6
Benzo[g,h,i]perylene	14.9	3.3	18.5	3.2	16.4	6.2	11.2	3.2	21	7.7
Pyridine	ND	3.7	ND	3.6	ND	6.9	ND	3.6	ND	8.6
Benzyl Alcohol	ND	2.5	49.9	2.4	ND	4.6	ND	2.4	ND	5.7
SVOC Total	189.46	120	216.52	120	166.1	230	107.71	120	153.43	290
VOC's (8260B)	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
VOC Total Remaining	ND		ND		ND		ND		ND	
Chloroethane	3.81	3.1	6.82	5.5	ND	2.9	ND	3.3	ND	5
Tert-Butyl alcohol (tert-butanol)	ND	12	ND	21	ND	11	ND	13	ND	19
Chlorodibromomethane	4.1	1.9	7.3	3.4	ND	1.8	ND	2.1	ND	3.1
Bromoform	ND	1.7	5.08	3	ND	1.6	ND	1.9	ND	2.8
Naphthalene	ND	1.7	ND	3	1.97	1.6	2.21	1.8	ND	2.8
VOC Total	7.91	12	19.2	21	1.97	11	2.21	13	ND	19
PCB's (8082)	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
PCB-1016	ND	8.05	ND	7.77	ND	7.49	ND	7.77	ND	9.31
PCB-1221	ND	1.15	ND	1.11	ND	1.07	ND	1.11	ND	1.33
PCB-1232	ND	3.91	ND	3.77	ND	3.64	ND	3.77	ND	4.52
PCB-1242	ND	0.69	ND	0.666	ND	0.642	ND	0.666	ND	0.798
PCB-1248	ND	0.46	ND	0.444	ND	0.428	ND	0.444	ND	0.532
PCB-1254	ND	3.22	ND	3.11	ND	3	ND	3.11	ND	3.72
PCB-1260	ND	5.52	ND	5.33	ND	5.14	ND	5.33	ND	6.38
PCB Total	ND	8.05	ND	7.77	ND	7.49	ND	7.77	ND	9.31
Pesticides (8081A)	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
alpha-BHC	ND	0.44	ND	0.42	ND	0.41	ND	0.42	ND	0.51
gamma-BHC (Lindane)	ND	0.55	ND	0.53	ND	0.51	ND	0.53	ND	0.63
beta-BHC	ND	1.1	ND	1.1	ND	1	ND	1.1	ND	1.3
delta-BHC	ND	0.53	ND	0.52	ND	0.5	ND	0.52	ND	0.62
Heptachlor	ND	0.36	ND	0.35	ND	0.34	ND	0.35	ND	0.42
Aldrin	ND	0.67	ND	0.65	ND	0.63	ND	0.65	ND	0.78
Heptachlor epoxide	ND	0.27	ND	0.26	ND	0.25	ND	0.26	ND	0.31
gamma-Chlordane	ND	0.56	ND	0.54	ND	0.52	ND	0.54	ND	0.65
alpha-Chlordane	ND	0.6	ND	0.58	ND	0.56	ND	0.58	ND	0.69
4,4'-DDE	ND	0.67	ND	0.65	0.62	0.62	ND	0.65	ND	0.77
Endosulfan I	ND	0.63	ND	0.61	ND	0.59	ND	0.61	ND	0.73
Dieldrin	ND	0.51	ND	0.49	ND	0.48	ND	0.49	ND	0.59
Endrin	ND	0.65	ND	0.63	ND	0.6	ND	0.63	ND	0.75
4,4'-DDD	ND	1.9	ND	1.9	ND	1.8	ND	1.9	ND	2.3
Endosulfan II	ND	2	ND	1.9	ND	1.8	ND	1.9	ND	2.3
4,4'-DDT	ND	0.45	ND	0.43	1.08	0.41	ND	0.43	ND	0.51
Endrin aldehyde	ND	0.52	ND	0.5	ND	0.48	ND	0.5	ND	0.6
Methoxychlor	ND	0.69	ND	0.67	ND	0.64	ND	0.67	ND	0.8
Endosulfan sulfate	ND	0.4	ND	0.39	ND	0.38	ND	0.39	ND	0.47
Endrin ketone	ND	1.5	ND	1.4	ND	1.4	ND	1.4	ND	1.7
Hexachlorobenzene	ND	1.7	ND	1.7	ND	1.6	ND	1.7	ND	2
Chlordane (technical)	ND	9.2	ND	8.9	ND	8.6	ND	8.9	ND	11
Toxaphene	ND	29	ND	28	ND	27	ND	28	ND	34
DDT SUM	ND	1.9	ND	1.9	1.7	1.8	ND	1.9	ND	2.3
Hexachlorocyclohexane (BHC) sum	ND	1.1	ND	1.1	ND	1	ND	1.1	ND	1.3
Asbestos (CARB 435)	%		%		%		%		%	
Asbestos %					ND	0.25				
Moisture (ASTM D2216-90)	%		%		%		%		%	
% Moisture	14.7	0.05	10.9	0.05	7.26	0.05	11.2	0.05	33	0.05

Project Location / Name	Castro Valley / 17292 Redwood Rd		Castro Valley / 17292 Redwood Rd		Castro Valley / 17292 Redwood Rd		Castro Valley / 17292 Redwood Rd	
Lab Report #	2306080		2306080		2306080		2306080	
Sample Date	6/8/2023		6/8/2023		6/8/2023		6/8/2023	
Sample ID/Location	TP15-10-060823		TP151-10-060823		TP16-5-060823		TP16-10-060823	
	Value	RL	Value	RL	Value	RL	Value	RL
Metals (CAM17, 6010B)	mg/kg		mg/kg		mg/kg		mg/kg	
Antimony	ND	0.055	ND	0.055	ND	0.056	ND	0.054
Arsenic	6.66	0.17	5.78	0.17	5.82	0.17	5.72	0.16
Barium	150	0.061	126	0.061	130	0.062	139	0.059
Beryllium	0.446	0.061	0.407	0.061	0.381	0.062	0.427	0.059
Cadmium	0.611	0.11	0.567	0.11	0.51	0.11	0.556	0.11
Chromium	52.9	0.083	48.4	0.083	45.7	0.084	48.3	0.081
Cobalt	20.4	0.077	17.7	0.077	14.2	0.078	14.8	0.076
Copper	46.5	0.22	33.2	0.22	35.7	0.22	34.8	0.22
Lead	10.5	0.11	9.63	0.11	8.18	0.11	9.34	0.11
Molybdenum	0.495	0.055	0.407	0.055	0.28	0.056	0.34	0.054
Nickel	52.1	0.55	47.2	0.55	47.7	0.56	51.2	0.54
Selenium	ND	0.39	ND	0.39	ND	0.39	ND	0.38
Silver	ND	0.17	ND	0.17	ND	0.17	ND	0.16
Thallium	ND	0.22	ND	0.22	ND	0.22	ND	0.22
Vanadium	74.3	0.11	78.1	0.11	66.6	0.11	64.8	0.11
Zinc	61.1	0.33	52.6	0.33	47.4	0.34	62.6	0.32
Mercury	0.35	0.092	0.18	0.092	0.2	0.093	0.17	0.09
STLC Chromium (mg/L)								
TPH (3550/3510/8015B)	ug/kg		ug/kg		ug/kg		ug/kg	
Gasoline Range Organics (GRO)-C5-C12	ND	110	ND	94	ND	96	ND	170
TPH (3550/3510/8015B)	mg/kg		mg/kg		mg/kg		mg/kg	
Diesel Range Organics [C10-C28]	29.9	8.8	50.4	8.8	41.9	9	24.2	4.3
Motor Oil Range Organics [C24-C36]	183	44	290	44	229	45	152	22
SVOC's - full list by SIM (8270C SIM)	ug/kg		ug/kg		ug/kg		ug/kg	
SVOC Total Remaining	ND		ND		ND		ND	
Bis(2-Chloroethyl)Ether	ND	2.8	ND	2.8	ND	2.8	ND	5.4
Naphthalene	4.08	3.2	ND	3.2	ND	3.2	ND	6.2
Isophorone	ND	2.8	ND	2.8	ND	2.8	ND	5.4
2-Methylnaphthalene	ND	3.6	ND	3.6	ND	3.6	ND	7
1-Methylnaphthalene	ND	3.8	ND	3.8	ND	3.9	ND	7.5
Acenaphthylene	5.45	2.8	ND	2.8	ND	2.8	ND	5.4
Acenaphthene	ND	2.8	ND	2.8	ND	2.8	ND	5.4
Diethylphthalate	ND	24	ND	24	ND	24	ND	47
Fluorene	ND	2.8	ND	2.8	ND	2.8	ND	5.4
Pentachlorophenol	ND	4	ND	4	ND	4	ND	7.8
Phenanthrene	66.6	2.8	11.6	2.8	6.35	2.8	9.63	5.4
Anthracene	4.93	3.6	ND	3.6	ND	3.6	ND	7
Carbazole	3.47	3.2	ND	3.2	ND	3.2	ND	6.2
Fluoranthene	72.9	2.8	15	2.8	8.88	2.8	15.1	5.4
Pyrene	66.2	2.8	15.7	2.8	10.3	2.8	19	5.4
Benzyl butyl phthalate	5.21	2.4	11.3	2.4	8.43	2.4	8.97	4.7
Benzo[a]anthracene	27.9	3.2	10.5	3.2	10.7	3.2	17.8	6.2
Chrysene	40.7	3.6	19.9	3.6	13.4	3.6	39.2	7
Benzo[b]fluoranthene	45.8	2.4	19.8	2.4	11.6	2.4	23.9	4.7
Benzo[k]fluoranthene	14.4	3.6	4.18	3.6	4.12	3.6	ND	7
Benzo[a]pyrene	33	4.4	12.3	4.4	9.08	4.4	18.3	8.6
Indeno[1,2,3-cd]pyrene	16.9	9.9	ND	9.9	ND	10	ND	19
Dibenz(a,h)anthracene	5.63	3.6	3.85	3.6	ND	3.6	8.87	7
Benzo[g,h,i]perylene	23.7	3.2	13.2	3.2	12	3.2	29.1	6.2
Pyridine	ND	3.6	ND	3.6	ND	3.6	ND	7
Benzyl Alcohol	ND	2.4	12.2	2.4	ND	2.4	ND	4.7
SVOC Total	436.87	120	149.53	120	94.86	120	189.87	230
VOC's (8260B)	ug/kg		ug/kg		ug/kg		ug/kg	
VOC Total Remaining	ND		ND		ND		ND	
Chloroethane	ND	3.4	ND	2.8	ND	2.9	ND	5.3
Tert-Butyl alcohol (tert-butanol)	ND	13	ND	11	ND	11	ND	20
Chlorodibromomethane	ND	2.1	ND	1.8	ND	1.8	ND	3.3
Bromoform	ND	1.9	ND	1.6	ND	1.6	ND	2.9
Naphthalene	2.23	1.9	ND	1.6	1.86	1.6	ND	2.9
VOC Total	2.23	13	ND	11	1.86	11	ND	20
PCB's (8082)	ug/kg		ug/kg		ug/kg		ug/kg	
PCB-1016	ND	7.7	ND	7.7	ND	7.84	ND	7.56
PCB-1221	ND	1.1	ND	1.1	ND	1.12	ND	1.08
PCB-1232	ND	3.74	ND	3.74	ND	3.81	ND	3.67
PCB-1242	ND	0.66	ND	0.66	ND	0.672	ND	0.648
PCB-1248	ND	0.44	ND	0.44	ND	0.448	ND	0.432
PCB-1254	ND	3.08	ND	3.08	ND	3.14	ND	3.02
PCB-1260	ND	5.28	ND	5.28	ND	5.38	ND	5.18
PCB Total	ND	7.7	ND	7.7	ND	7.84	ND	7.56
Pesticides (8081A)	ug/kg		ug/kg		ug/kg		ug/kg	
alpha-BHC	ND	0.42	ND	0.42	ND	0.43	ND	0.41
gamma-BHC (Lindane)	ND	0.52	ND	0.52	ND	0.53	ND	0.52
beta-BHC	ND	1	ND	1	ND	1.1	ND	1
delta-BHC	ND	0.51	ND	0.51	ND	0.52	ND	0.5
Heptachlor	ND	0.35	ND	0.35	ND	0.35	ND	0.34
Aldrin	ND	0.64	ND	0.64	ND	0.66	ND	0.63
Heptachlor epoxide	ND	0.26	ND	0.26	ND	0.26	ND	0.25
gamma-Chlordane	ND	0.54	ND	0.54	ND	0.55	ND	0.53
alpha-Chlordane	ND	0.57	ND	0.57	ND	0.58	ND	0.56
4,4'-DDE	ND	0.64	ND	0.64	ND	0.65	ND	0.63
Endosulfan I	ND	0.6	ND	0.6	ND	0.61	ND	0.59
Dieldrin	ND	0.49	ND	0.49	ND	0.5	ND	0.48
Endrin	ND	0.62	ND	0.62	ND	0.63	ND	0.61
4,4'-DDD	ND	1.9	ND	1.9	ND	1.9	ND	1.8
Endosulfan II	ND	1.9	ND	1.9	ND	1.9	ND	1.9
4,4'-DDT	ND	0.43	0.861	0.43	ND	0.43	ND	0.42
Endrin aldehyde	ND	0.5	ND	0.5	ND	0.51	ND	0.49
Methoxychlor	ND	0.66	ND	0.66	ND	0.67	ND	0.65
Endosulfan sulfate	ND	0.39	ND	0.39	ND	0.39	ND	0.38
Endrin ketone	ND	1.4	ND	1.4	ND	1.5	ND	1.4
Hexachlorobenzene	ND	1.7	ND	1.7	ND	1.7	ND	1.6
Chlordane (technical)	ND	8.8	ND	8.8	ND	9	ND	8.7
Toxaphene	ND	28	ND	28	ND	29	ND	28
DDT SUM	ND	1.9	0.861	1.9	ND	1.9	ND	1.8
Hexachlorocyclohexane (BHC) sum	ND	1	ND	1	ND	1.1	ND	1
Asbestos (CARB 435)	%		%		%		%	
Asbestos %	ND	0.25						
Moisture (ASTM D2216-90)	%		%		%		%	
% Moisture	10	0.05	10.4	0.05	11.8	0.05	8.47	0.05