Final

SAN RAMON VALLEY RECYCLED WATER PROGRAM PUMP STATION R3000 PROJECT

Initial Study and Mitigated Negative Declaration

Prepared for

East Bay Municipal Utility District

June 2019

ESA

NOTE: The San Ramon Valley Recycled Water Program Pump Station R3000 Project Initial Study and Mitigated Negative Declaration dated October 2018, together with the added Appendix E, "Response to Comments," comprise the Final Initial Study and Mitigated Negative Declaration.

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NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION

Project Title: San Ramon Valley Recycled Water Program Pump Station R3000 Project

Lead Agency: East Bay Municipal Utility District

Project Location:
New pump station to be located on one of two sites (referred to as Site A2 and Site A4) and associated pipelines located in the City of San Ramon, Contra Costa County, CA.

Site A2 is located on property owned by the City of San Ramon, on the west side of Dougherty Road, approximately 1,100 feet south of Red Willow Road (APN: 217-430-097). Pipelines associated with Site A2 would be constructed from the pump station site approximately 40 feet east in Dougherty Road.

Site A4 is located on property owned by Dublin San Ramon Services District – East Bay Municipal Utility District Recycled Water Authority (DERWA), on the north side of Lilac Ridge Road, approximately 200 feet north of Laurelspur Loop (APN: 222-240-031). Pipelines associated with Site A4 would be constructed from the pump station site to Lilac Ridge Road, Lilac Ridge Road to North Gale Ridge Road, North Gale Ridge Road to Dougherty Road, and approximately 1,500 feet north on Dougherty Road.

Project Description:
The San Ramon Valley Recycled Water Program (SRVRWP) supplies recycled water to portions of the Dublin San Ramon Services District (DSRSD) and East Bay Municipal Utility District (EBMUD) service areas in the San Ramon and Dougherty valleys. The SRVRWP began recycled water deliveries to customers in 2006, including portions of San Ramon. The proposed SRVRWP Pump Station R3000 Project (Pump Station R3000 or Project) is part of Phase 3 of the SRVRWP. The proposed Project would be owned and operated by EBMUD. The proposed Pump Station R3000 would have a capacity of approximately 5.6 million gallons per day (MGD) and would pump recycled water to Reservoir R3000 to serve areas north of the pump station (i.e., parts of the San Ramon, Danville, and Blackhawk communities) above elevation 570 feet. Approximately 5,500 square feet (sf) would be developed to accommodate the pump station building, electrical structures, 30-foot antenna, parking, fencing, landscaping, and retaining walls. The pump station building would be 21 feet above grade with a building area of 1,200 sf. New 12 to 16-inch diameter supply and discharge pipelines would connect the pump station to existing recycled water pipelines in Dougherty Road.

Schedule: Key milestones for project implementation are summarized as follows:

Complete Environmental Review	December 2018
Develop Bid Construction Documents	2020-2021
Begin Construction	2022
Complete Construction	2024

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

construction work could potentially generate environmental impacts to aesthetics, biological resources, and cultural resources. Long-term pump station operation would 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 during construction. Based on this assessment, a Mitigated Negative Declaration has been prepared.

Environmental Mitigation: All impacts will be reduced to Less than Significant levels by implementation of proposed mitigation measures.

Public Comment/Review:
The Mitigated Negative Declaration and Initial Study are available for review at:

- East Bay Municipal Utility District, 375 11th Street, Oakland, CA 94607
- EBMUD website: http://www.ebmud.com/r3000
- City of San Ramon Library, 100 Montgomery St, San Ramon, CA 94583

An informational meeting is scheduled for: Tuesday, November 13, 2018, 6:00pm – 7:30pm
Location: Castenada Service Yard, 5050 Crow Canyon Road, San Ramon, 94582

In accordance with Section 15073 of the State of California's Environmental Quality Act Guidelines, this Mitigated Negative Declaration is available for public review for at least 30 days from **10/8/2018** through **12/7/2018**. The comment period has been extended from 11/9/2018 to 12/7/2018 to allow additional time for review. No changes to the Mitigated Negative Declaration have been made. Written comments on this proposed Mitigated Negative Declaration must be received no later than **4:30 p.m. on 12/7/2018**. Please address comments to:

Mail:
Ben Glickstein
Community Affairs Representative
375 11th Street MS #407
Oakland, CA 94607

Email: r3000@ebmud.com

Questions? Call 510-287-1631

11-1-18

Date

Richard G. Sykes
Director of Water and Natural Resources
East Bay Municipal Utility District

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SECTION S.0
Summary

S.1 Background

The San Ramon Valley Recycled Water Program (SRVRWP) supplies recycled water to portions of the Dublin San Ramon Services District (DSRSD), Pleasanton, and East Bay Municipal Utility District (EBMUD) water service areas in the San Ramon and Dougherty valleys. Refer to Section 1.1 for additional background information.

S.2 Project Objectives and Overview

The objective of the SRVRWP Pump Station R3000 Project (Project) is to enhance delivery of recycled water to the San Ramon, Danville and Blackhawk communities in the future to help meet EBMUD's long-range water supply needs. The Project would include a new recycled water pump station with a capacity of about 5.6 million gallons per day, plus pipelines to connect the pump station to an existing transmission main in Dougherty Road.

S.3 Purpose of Mitigated Negative Declaration

This 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 Mitigation Monitoring and Reporting Plan (MMRP) presented in Appendix D.

S.4 Summary of Environmental Considerations

Based on the results of the Initial Study, project-related construction work could potentially generate environmental impacts to aesthetic, biological and cultural resources. Mitigation measures incorporated into the Project that would reduce impacts to less-than-significant levels are described in Chapter 2 of this MND. Long-term pump station operations would not generate any significant impacts. EBMUD determined that an MND is the appropriate level of CEQA review for this Project. The mitigation measures that have been incorporated in the Project are included in the MMRP presented in Appendix D.

S.5 List of Referenced Studies by Environmental Topic

The following studies were completed as part of the Project:

Air Quality and Greenhouse Gas – ESA, *Air Quality and Greenhouse Gas Emissions Estimates*, June 2017.

Biological Resources – ESA, *Potential to Occur Table and Special Status Species Lists*, April 2018.

Cultural Resources, Tribal Cultural Resources – ESA, *East Bay Municipal Utility District, R3000 Pump Station, San Ramon Valley Recycled Water Program, Contra Costa County, Phase I Cultural Resources Survey Report*, June 2017.

Geology, Soils, and Seismicity – EBMUD, *Geologic Hazards Assessment for Pump Station R3000 Alternative Site Location*, July 19, 2016.

S.6 Circulation of Mitigated Negative Declaration

In accordance with CEQA, a good faith effort has been made by EBMUD during the preparation of the Initial Study and MND to contact affected agencies, organizations and persons who may have an interest in the Project. In reviewing the Initial Study and MND, interested 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 could be 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 §15205(d) of the CEQA Guidelines. Following the close of the public comment period, which ends on November 7, 2018 at 4:30 p.m., EBMUD will consider this Initial Study and MND and comments thereto in determining whether to approve the Project. The Initial Study and MND are available online on EBMUD's webpage (www.ebmud.com). Written comments should be sent to EBMUD's street address or email address as follows:

East Bay Municipal Utility District
(EBMUD) Water Supply Improvements
Division – Mail Slot 407
Reena Thomas, Project Manager
375 Eleventh Street
Oakland, CA 94607

or

r3000@ebmud.com

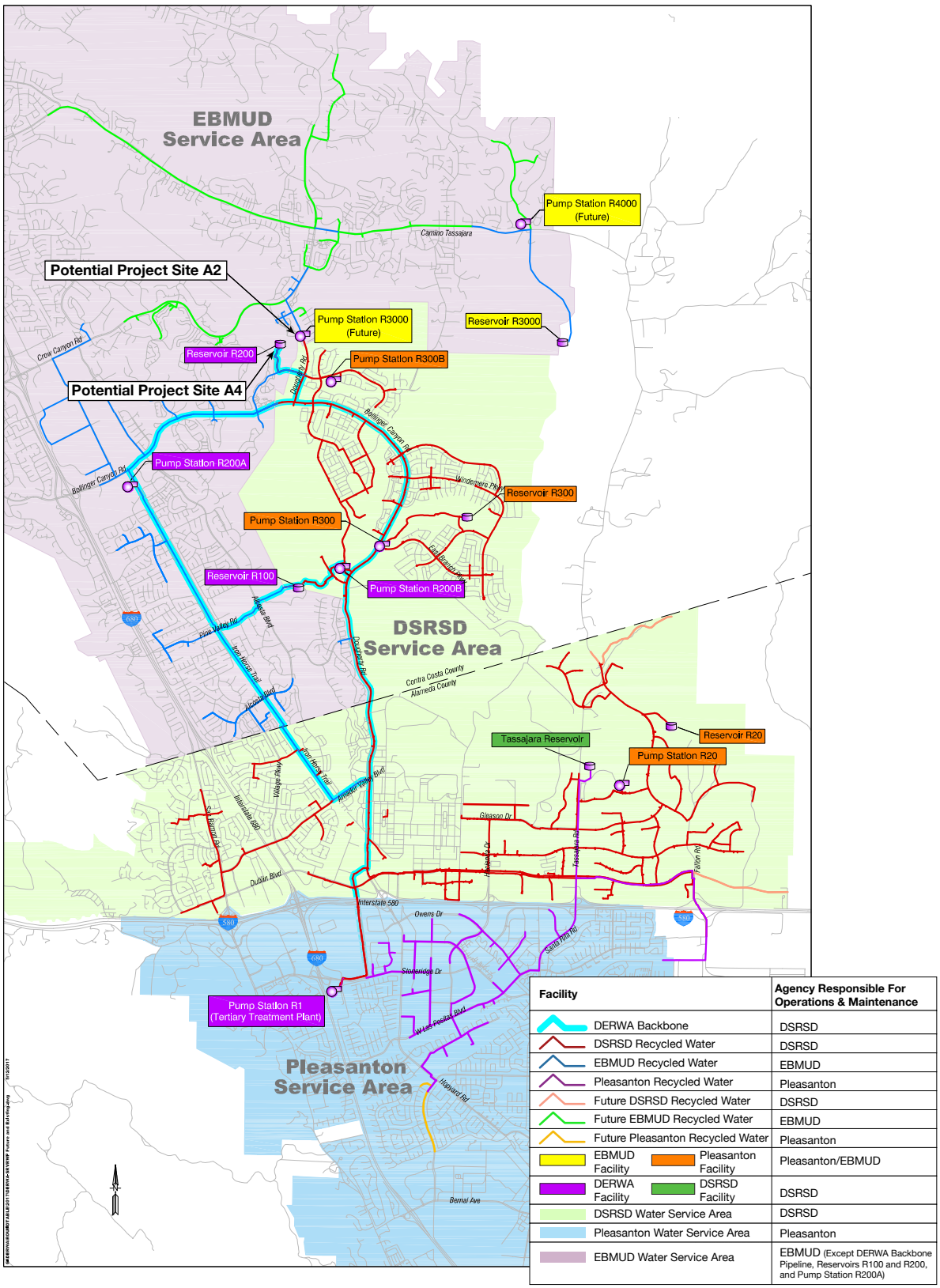
SECTION 1.0
Project Description

1.1 Introduction and Background

The San Ramon Valley Recycled Water Program (SRVRWP) supplies recycled water to portions of the Dublin San Ramon Services District (DSRSD), Pleasanton, and East Bay Municipal Utility District (EBMUD) water service area in the San Ramon and Dougherty valleys as shown in Figure 1. The SRVRWP began deliveries to customers in 2006. The DSRSD•EBMUD Recycled Water Authority (DERWA) is a Joint Powers Authority formed in 1995 between the DSRSD and the EBMUD. DERWA provides recycled water through SRVRWP transmission facilities to EBMUD, DSRSD and Pleasanton for distribution to customers that can use recycled water for irrigation. EBMUD provides retail potable and recycled water service in the northern (lavender-shaded) area shown on Figure 1. DSRSD provides retail potable and recycled water service in the central (green-shaded) area shown on Figure 1. The City of Pleasanton's recycled water service area is in the southern (blue-shaded) area shown on Figure 1. The DERWA Board of Directors approved and certified a Program Environmental Impact Report (EIR) on the SRVRWP in December 1996.[1] The approved SRVRWP project is based on serving up to approximately 5.9 million gallons per day (MGD) of recycled water to urban retail water customers of EBMUD and DSRSD.

The SRVRWP Pump Station R3000 Project (Pump Station R3000 or Project) evaluated in this Initial Study/Mitigated Negative Declaration (IS/MND) is part of Phase 3 of the SRVRWP. The Project would be owned and operated by EBMUD and would allow the provision of recycled water to areas served only by EBMUD within the DERWA system through construction of a new pump station which was included in the SRVRWP Program EIR, and EBMUD was identified a Responsible Agency for the SRVRWP. This IS/MND was prepared because the Project location was changed following further site reviews. Pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15052(a)(2) and Section 15162(c), EBMUD is the Lead Agency for this IS/MND; no further approval action by the DERWA Board of Directors is necessary for Pump Station R3000 because the Project would be owned and operated by EBMUD individually.

[1] State Clearinghouse No. 96013028.



SRVRWP Pump Station R3000 . 160455

SOURCE: EBMUD, 2015

Figure 1
Existing and Future San Ramon Valley Recycled Water Distribution System

1.2 Project Objectives

The objective of the Project is to enhance delivery of recycled water to the San Ramon, Danville and Blackhawk communities in the future to help meet EBMUD's long-range water supply needs, consistent with EBMUD's Water Supply Management Program 2040 (WSMP 2040) and Non-Potable Water Policy (Policy 9.05)[2]. The WSMP 2040 is a program-level planning document that estimates EBMUD's water supply needs to 2040, and includes a diverse portfolio of policies and projects to ensure that those needs can be met in dry years. The WSMP 2040 identifies recycled water as a key component. The WSMP 2040 seeks to provide a total of 50 MGD of future water supply through increases in conservation and water recycling over the next 20 plus years. The recycled water offsets potable water use and reduces the need for severe rationing during droughts.

1.3 Environmental Setting

Pump Station R3000 would be located on one of two sites (referred to as Site A2 and Site A4, shown on Figure 2 and described further below in Section 1.4.1) in the City of San Ramon, Contra Costa County, California. Site A2 is located on property owned by the City of San Ramon adjacent to Dougherty Road and north of Gale Ridge Road (APN: 217-430-097). Site A4 is on DERWA-owned property about 300 feet northeast of Lilac Ridge Road (APN: 222-240-031). Pipelines associated with Site A2 would be within Dougherty Road, as shown on Figure 3. Pipelines associated with Site A4 would be within Lilac Ridge Road, N. Gale Road, and Dougherty Road, as shown on Figure 4.

Pump Station R3000 would deliver recycled water to the existing Reservoir R3000, serving portions of the San Ramon, Danville and Blackhawk communities in the future that are located north of the potential Project sites, as shown in Figure 1. The communities of San Ramon, Danville and Blackhawk consists of rolling, grass-covered open space hillsides interspersed with urbanized residential housing and commercial land uses with moderate to heavy vegetation in the developed areas. Site A2 occupies a landscaped area adjacent to Dougherty Road, approximately 2,000 feet south of Crow Canyon Road, with nearby residences located approximately 150 feet to the west and 300 feet to the east. Site A4 is located within open space, with nearby open space land and two residential subdivisions: Bridges at Gale Ranch, approximately 350 feet to the south of the site; and the Capella at Gale Ranch located at Laurelspur Loop, approximately 170 feet to the east of the site.

[2] EBMUD's Policy 9.05 requires that customers use non-potable water for nondomestic purposes when it is of adequate quality and quantity, available at reasonable cost, not detrimental to public health and not injurious to plant life, fish and wildlife.

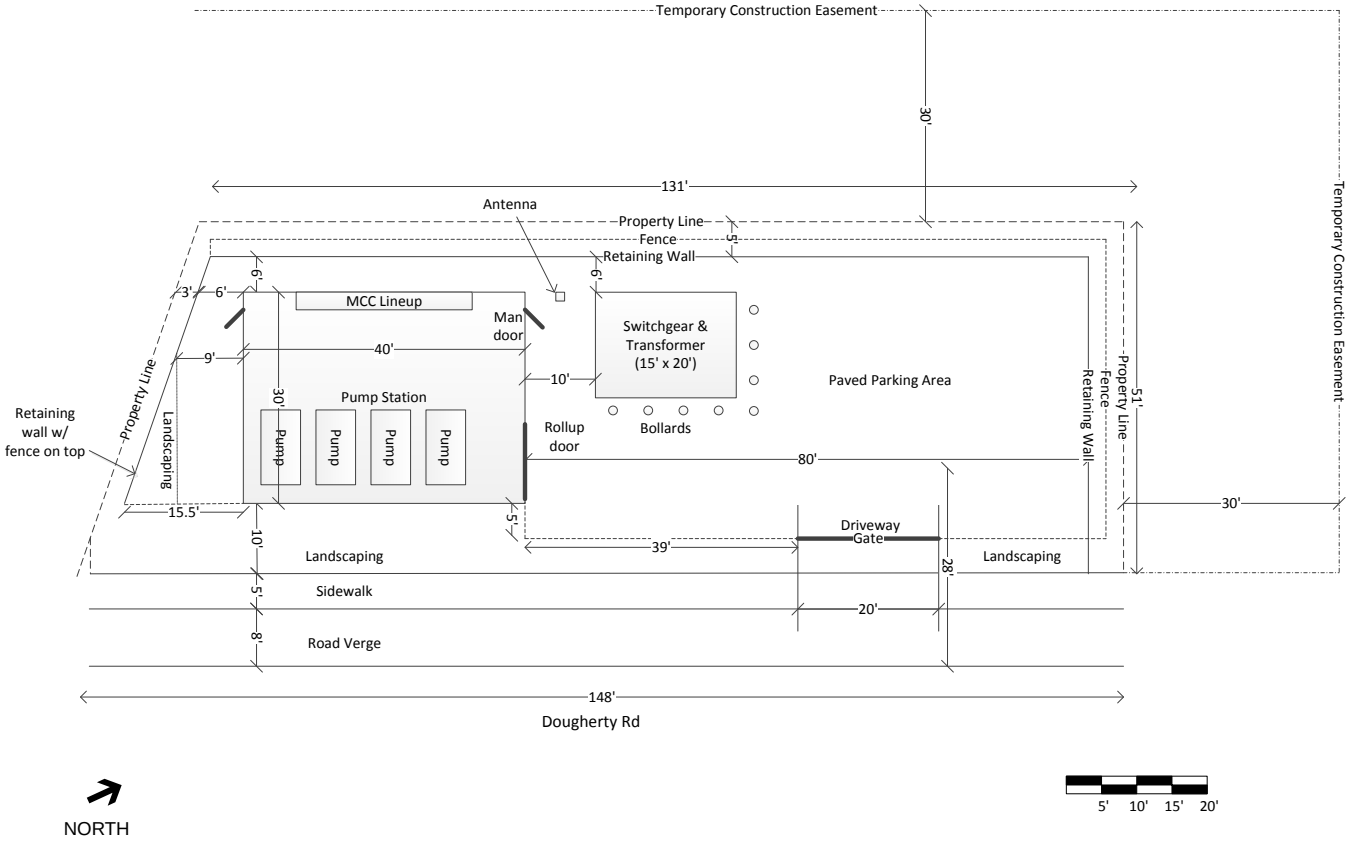
Note: Refer to Figures 3 and 4 for pipeline alignments.

SRVRWP Pump Station R3000 . 160455

SOURCE: Google Earth, 2017; ESA, 2017

Figure 2

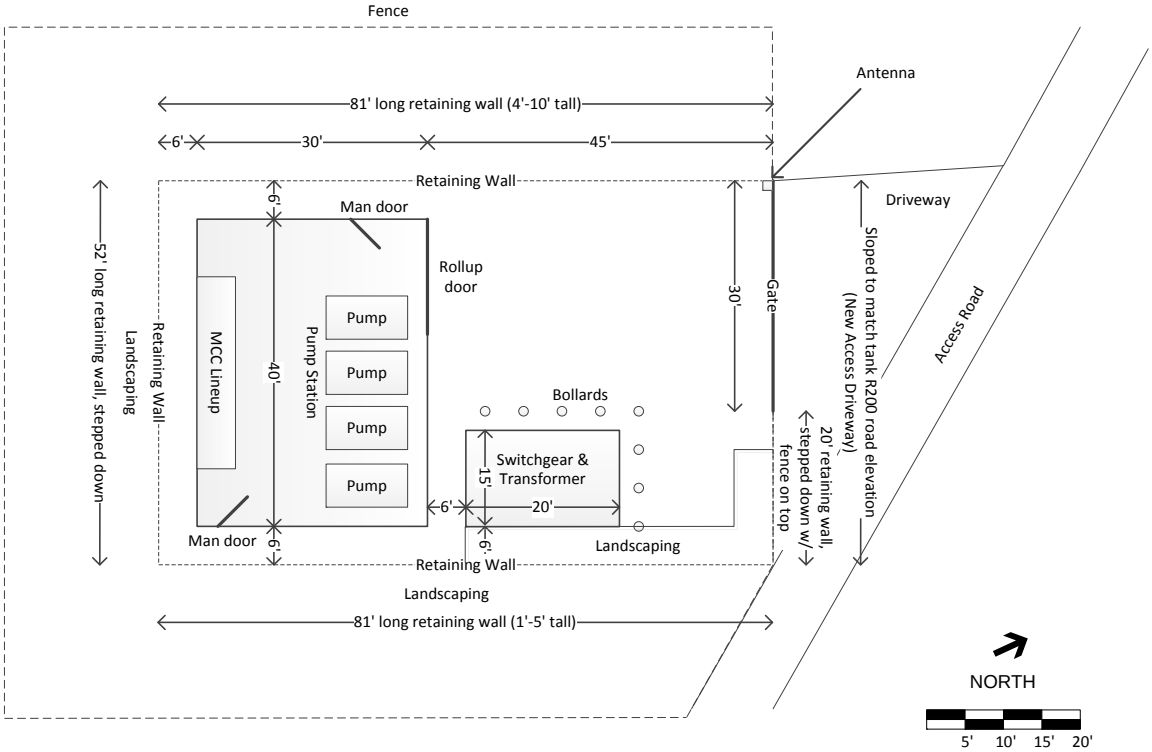
Potential Project Site and Construction Staging Area Locations



SRVRWP Pump Station R3000 . 160455

SOURCE: Google Earth, 2017; EBMUD, 2017; Adapted by ESA, 2017

Figure 3
Site A2 Location and Building Details



SOURCE: Google Earth, 2017; EBMUD, 2017; Adapted by ESA, 2017

SRVRWP Pump Station R3000 . 160455

Figure 4
Site A4 Location and Building Details

1.4 Project Description

1.4.1 Location

EBMUD has identified two candidate sites for Pump Station R3000, Site A2 and Site A4, both of which are shown on Figure 2 and described below:

- **Site A2** is located within the City of San Ramon east of Interstate 680 (I-680) on the west side of Dougherty Road between Crow Canyon Road and North Gale Ridge Road. The site is located at an elevation of approximately 570 feet. The property is currently owned by the City of San Ramon. The pump station site is described in more detail in Section 1.4.2 below. The pipelines associated with this site would be in Dougherty Road immediately east of Site A2 and are described in more detail in Section 1.4.3, below.

- **Site A4** is also located within the City of San Ramon and east of I-680. Site A4 is adjacent to the access road to EBMUD's recycled water tank Reservoir R200 (or Tank R200) (see Figure 2), located off of Lilac Ridge Road near Lantana Way. The site is at an elevation of approximately 675 feet. Site A4 is owned by DERWA. The pump station site is described in more detail in Section1.4.2 below. Pipelines associated with Site A4 would be installed in the Reservoir R200 access road, Lilac Ridge Road, North Gale Ridge Road, and Dougherty Road and are described in more detail in Section 1.4.3, below.

1.4.2 Pump Station R3000

Pump Station Design

Pump Station R3000 would pump recycled water to Reservoir R3000, which serves areas north of the pump station (i.e., parts of the San Ramon, Danville and Blackhawk communities) above elevation 570 feet. The facility would consist of up to four 350 horsepower (hp) vertical turbine pumps with a combined capacity of approximately 5.6 MGD. The pump station would have a flow meter and surge provisions located within the pump structure. The pumps would be supplied recycled water from existing recycled water pipelines (at Site A2) and storage facilities (Reservoir R200 at Site A4) and discharge it into a recycled water transmission pipeline in Dougherty Road for service to higher elevations. The recycled water source is the DSRSD Wastewater Treatment Plant and Jeffrey G. Hansen Water Recycling Facility located in Pleasanton. The recycled water would be used for landscape irrigation by a variety of commercial customers.

The pump station design would incorporate noise reduction methods, including acoustical louvers in two building walls to reduce noise transmission while allowing air circulation. The pump station would use electricity supplied by PG&E through a 480 volt 300 kVA transformer. The distribution panel, switchgear and motor control center would be located outside of the pump station building, but within the boundary of the site. Facilities communication would use an approximately 30-foot tall radio antenna. The pump station building would be designed to match the architectural styles of surrounding subdivisions, including a beige colored building with a slanted, clay tiled roof.

Site A2

Site A2 occupies a landscaped area adjacent to Dougherty Road, a 50 mile-per-hour (MPH), six-lane roadway (Figure 3). The closest residences to Site A2 are located approximately 150 feet to the west and 300 feet to the east. Figure 3 shows the site dimensions and building plan for the pump station and transformer facilities at Site A2. The entire paved site would have a footprint of approximately 5,500 square feet and would include a pump station building, parking area and electrical transformer facilities. The pump station building would be approximately 1,200 square feet in area, partially buried, and approximately 21 feet high located at the southern end of the site. The pump station would be built into a hillside requiring retaining walls across the western and northern edges of the building and parking areas. A 30-foot wide construction easement along both the western and northern property lines would provide access during retaining wall construction. The property would be surrounded by eight-foot tall anti-climb and anti-cut wire mesh panel security fencing. Outdoor security lighting would be provided with motion detectors in addition to manual switches and timers. Lights would typically be used in the manual mode. Luminaire shields would be installed such that no light is directed off the site or into the sky. Runoff from Site A2 would drain into a new pipeline at the southeast corner of the site that would connect into an existing 36-inch stormwater pipeline north of the site that runs perpendicular to Dougherty Road.

Site A4

Site A4 is located within open space, as shown in Figure 4. Nearby existing land uses include open space and two residential subdivisions: Bridges at Gale Ranch, approximately 300 feet to the south of the site; and the Capella at Gale Ranch located at Laurelspur Loop, approximately 170 feet to the east of the site. Figure 4 shows the site dimensions and building plan for the pump station and transformer facilities at Site A4. The entire paved site would have a footprint of approximately 5,500 square feet and would include a pump station building, parking area and electrical transformer facilities. The pump station building would be approximately 1,200 square feet in area, partially buried, and approximately 21 feet high located at the southern end of the site. As shown in Figure 4, retaining walls would extend along most site boundaries except the driveway area on the eastern side. The property would be surrounded by eight-foot tall anti-climb and anti-cut wire mesh panel security fencing. Outdoor security lighting would be provided with motion detectors in addition to manual switches and timers. Lights would typically be used in the manual mode. Luminaire shields would be installed such that no light is directed off the site or into the sky. Runoff from Site A4 would drain into a new pipeline that would then connect into the existing storm drain system for Reservoir R200. An approximately 700 square foot triangular shaped access driveway would extend from the new site to the existing Reservoir R200 access road to allow for truck access onto the pump station site.

Landscape Design

Up to thirteen trees (Live Oak, Valley Oak, and Elm), ranging in size between four and eighteen inches' diameter at breast height (DBH), would be removed during pump station construction at Site A2, including two trees located within the temporary construction easement and one tree within the landscape strip between the curb and the sidewalk. No

tree removal would be needed for construction at Site A4, or for use of either Staging Area 1 or Staging Area 2.

Site A2

Site A2 occupies a landscaped area adjacent to Dougherty Road. Site A2 would include new landscaping in the unpaved area between the pump station and sidewalk, between the driveway and sidewalk, and construction easement area (Figure 3). Landscaping would include installation of approximately thirteen trees within the pump station landscape areas and the temporary construction easement, and would include a mix of: coast live oak (*Quercus agrifolia*), large evergreen shrub or small tree (*Photinia fraseri*), and large deciduous shrub or small tree (*Lagerstroemia indica* or Crape Myrtle), to match the existing tree landscaping along Dougherty Road. The landscaping may also include a mix of evergreen shrub (*Ligustrum japonicum* or Wax-leaf Privet) and compact evergreen shrub (*Escallonia* or Newport Dwarf) between the taller-growing *Photinias* or Crape Myrtles. The proposed landscaping is consistent with the City of San Ramon's Architectural Review Board (ARB) review comments.[3] In addition, with the exception of the two trees to be removed within the construction easement at Site A2, the construction easement would be restored with shrubbery. All landscaping would be watered with recycled water.

Site A4

Site A4 is located within open space. Site A4 would include landscaping in the unpaved area between the parking lot and southern and eastern boundary of the Project site, and at the base of the lower retaining walls (Figure 4). Plants could include the following; large evergreen shrub or small tree (*Photinia fraseri*), large deciduous shrub or small tree (*Lagerstroemia indica* or Crape Myrtle), evergreen shrub (*Ligustrum japonicum* or Wax-leaf Privet), and compact evergreen shrub (*Escallonia* or Newport Dwarf). The landscaping may also include a mix of the lower-growing Privet or Escallonia shrubs between the taller-growing Photinias or Crape Myrtles. All landscaping would be watered with recycled water.

1.4.3 Pipelines

Figures 3 and 4 indicate the approximate locations of pipelines that would be associated with Pump Station R3000 at Site A2 or Site A4, respectively.

Site A2 Pipelines

The proposed supply and discharge pipelines associated with Site A2 would be between 12 to 16 inches in diameter and approximately 150 feet long. The pump supply pipeline and pump discharge pipeline at Site A2 would both connect to an existing recycled water pipeline immediately in front of the pump station in Dougherty Road, separated by a new isolation valve[4], as shown in Figure 3.

[3] Personal communication, City of San Ramon Architectural Review Board Meeting, August 9, 2018.

[4] There would be two different recycled water pressure zones associated with the pipeline connections. A pressure zone is an area within a specific elevation range (e.g., 250 to 450 feet) where storage and distribution facilities are designed to deliver water at a pressure range suitable for customer use. The zones would be separated by a new isolation valve that would be installed during pipeline construction.

Site A4 Pipelines

The proposed supply and discharge pipelines associated with Site A4 would be between 12 to 16 inches in diameter. The supply pipeline for Site A4 would connect to the inlet-outlet pipeline for Reservoir R200, located within the tank's access road adjacent to the pump station site (Figure 4). The discharge pipeline would be about 1-mile-long, extending between the pump station and Dougherty Road via Lilac Ridge Road and North Gale Ridge Road (see Figure 4). The discharge pipeline would connect to an existing recycled water pipeline 0.5 miles north of the intersection of Dougherty Road with North Gale Ridge and North Monarch Roads, downstream from a new isolation valve[5].

1.5 Construction Methods and Schedule

1.5.1 Pump Station Construction

Table 1 identifies specific activities that would occur and the estimated duration of each construction phase. Note that overall, pump station construction would occur during a period of approximately 24 months. Construction phases would include mobilization, excavation/site work, pump station construction, backfill, landscaping/site restoration, and demobilization. The maximum depth of excavation for building construction is approximately 18 feet. The pump station foundation would be slab-on-grade; no pile driving is anticipated. The retaining walls would be constructed with drilled and poured concrete piers. Table 2 shows the equipment expected to be used during each construction phase.

Trucks and other construction equipment would access the sites via the nearest roadways, including Dougherty Road for Site A2 and Lilac Ridge Road and North Gale Ridge Road for Site A4. There would be a maximum of ten one-way worker vehicle trips per day (five commute trips in the morning and five commute trips in the afternoon) and eight one-way truck trips per hour (assuming an eight-hour work day, this equals 64 truck trips per day) to either pump station construction site. The total estimated one-way worker vehicle trip and truck trips combined would be 74 trips per day.

The construction sites would be secured with temporary eight-foot-high chain link fencing. Temporary lighting may be installed for security purposes.

Pump Station Construction Hours

Pump station construction would primarily occur Monday through Friday between 7:30 am to 7:00 pm on weekdays and between 9:00 am to 6:00 pm on weekends as needed for required outages[6] and/or emergencies. Per EBMUD Standard Construction Specification 01 14 00, Work Restrictions, the work hours for haul trucks would be limited to between 9:00 am and 4:00 pm to prohibit haul truck traffic during commute hours. Section 1.5.2 presents proposed hours for pipeline construction.

5 Ibid.

6 Outages refer to periods when the EBMUD takes the recycled water system out of service. For Pump Station R3000, outages could occur during pipeline connections and would not be expected to last more than one day.

TABLE 1
PUMP STATION CONSTRUCTION PHASES AND ACTIVITIES

Construction Phase	Construction Activity	Approximate Duration (months)[a]
Mobilization	• Commence pump station construction • Setup offices • Initial site survey • Mobilize equipment	3
Excavation/Site Work	• Remove Trees and stumps • Clear and grub • Install and maintain Storm Water Pollution Prevention Plan (SWPPP) features • Excavate and Grade Pump Station and Transformer Pad, • Concrete retaining wall • Drive up ramps	3
Pump Station Construction (Concrete Work)	• Construct pump station foundation and structure (e.g., walls, roof slab, etc.) • Construct transformer pad	8
Pump Station Construction	• Roof construction • Mechanical and electrical work • Architectural elements • Pipeline construction • Backfill pump station	4
Landscaping/Site Restoration	• Re-vegetation and planting • Pave access and parking area • Fence installation	3
Demobilization	• Final site cleanup • Testing and startup • Conclude pump station construction	3

[a] Duration of construction phases do not reflect down time and are not additive. Overall, pump station construction is expected to take 24 months.

Site A2 Earthwork, Haul Trips, and Construction Staging

The total volume of soil that would be hauled during excavation at Site A2 is approximately 200 cubic yards. The soil would be hauled away in approximately 23 truck trips, with nine to 16 cubic yards of soil being hauled per trip. The site is currently occupied by a low to moderate density of native and non-native trees and shrubs. Up to thirteen trees would be removed during pump station construction, including two trees located within the temporary construction easement, and one tree located in the median between the sidewalk and road, to accommodate the new driveway. The Project would replace the two trees removed within the temporary construction easement and the rest would be replaced in the unpaved area between the pump station and sidewalk, and between the driveway and sidewalk. Staging would occur for approximately 24 months.

TABLE 2
PUMP STATION CONSTRUCTION EQUIPMENT

Construction Phase	Equipment	Number of Equipment
Mobilization	Haul Truck	2
	Backhoe	1
Excavation/Site Work	Crane (small)	1
	Excavator	1
	Front End Loader	2
	Backhoe	2
	Haul Trucks	6
	Drill Rig	1
	Chain Saws	2
Pump Station Construction (Concrete Work)	Backhoe	1
	Drill	2
	Concrete and Shotcrete Trucks	2
	Concrete Pump	2
	Forklift	1
	Boom Truck	1
Pump Station Construction	Crane	1
	Drill Rig	1
	Backhoe	1
	Welding Equipment	1
	Forklift	1
	Boom Truck	1
Backfill	Excavator	1
	Front End Loader	1
	Scraper	1
	Compactor	1
	Haul Trucks	6
Landscaping/Site Restoration	Backhoe	1
	Soil Compactor	3
	Haul Trucks	3
	Asphalt Pavers	2
	Rollers	2
Demobilization	Backhoe	1
	Haul Truck	1

SOURCE: EBMUD, RFI Response to ESA, September 2, 2016.

There are two potential staging areas for Site A2:

- **Staging Area 1**. The first potential staging area is 5077 Crow Canyon Road, adjacent to the Acorn Learning Center, a dirt area staging (open space, not in a conservation area) owned by the City of San Ramon and used on past projects for construction. Staging Area 1 is located less than one mile northwest of Site A2 and is shown on Figure 2.

- **Staging Area 2**. The second potential staging area is the paved area approximately 170 feet north of Reservoir R200 (Staging Area 2 on Figure 2) and is located about one mile by road southwest of Site A2.

In addition, approximately 100 feet of Dougherty Road (the westernmost, southbound travel lane) adjacent to Site A2 would be closed daily during non-commute hours for pump station facilities construction to accommodate pump station excavation and concrete pumping.

Site A4 Earthwork, Haul Trips, and Construction Staging

The total volume of soil that would be hauled during excavation at Site A4 is approximately 1,040 cubic yards. The soil would be hauled away in approximately 115 truck trips, with nine to 16 cubic yards of soil hauled per trip. Construction at Site A4 would be staged on a paved area approximately 170 feet north of Reservoir R200 (Staging Area 2 on Figure 2). This site has an existing access road. Staging would occur for approximately 24 months.

1.5.2 Pipeline Construction

The pipelines would be constructed using the open-trench (or "cut and cover") construction technique. Open trench construction involves saw cutting the pavement, excavating a trench, removing the soil, installing the pipeline, backfilling the trench, installing temporary asphalt over the backfilled trench, and then installing permanent paving using a T-cut repair. A T-cut repair involves replacing the roadway to one foot beyond the edge of the trench. Where the edge of the trench is within two feet of a gutter lip or the edge of pavement, the pavement between the trench cut and the gutter lip or edge of pavement would be removed and replaced. The contractor could typically install between 80 lineal feet (LF) and 200 LF of pipeline per workday in paved areas. One paving crew could typically pave 700 LF of trench with six-inch asphalt concrete paving per day.

The pipeline tie-ins (i.e., connections to existing pipelines) would require the excavation of a trench or pit at each location. Temporary shoring would be required to ensure the stability of the excavation. Shoring may include the use of vibratory or impact driven sheet piles. The proposed tie-ins would be located within street rights-of-way and sited to minimize disruptions to traffic and homeowner access. Table 3 identifies specific activities that would occur and the estimated duration of each construction phase for pipeline installation. Note that overall, pipeline construction would occur during a period of approximately four months.

TABLE 3
PIPELINE CONSTRUCTION PHASES AND ACTIVITIES

Construction Phase	Construction Activity	Approximate Duration (months)[a]
Mobilization	• Layout • Excavate	1
Install pipe	• Install pipe, Steel pipe welding for offsets • Tie-in • Pressure test • Flush & chlorinate	1
Landscaping/Site Restoration	• Pavement restoration • Median restoration	1
Demobilization	• Conclude pipeline construction	1

[a] Duration of construction phases do not reflect down time and are not additive. Overall, pipeline construction is expected to take four months.

Table 4 shows the equipment expected to be used during each construction phase for pipeline installation.

Pipeline Construction Hours

Pipeline construction would occur primarily Monday through Friday from 7:30 am to 7:00 pm and between 9:00 am to 6:00 pm on weekends as needed for required outages[7] and/or emergencies. Pipeline construction at Site A2 could occur outside of normal work hours or during night hours when authorized or requested by the City of San Ramon, in order to minimize traffic disruption in the southbound lanes of Dougherty Road. In addition, EBMUD Standard Construction Specification 01 14 00, Work Restrictions, limits the work hours for haul trucks to between 9:00 am and 4:00 pm to prohibit haul truck traffic during commute hours. There would be no pipeline construction activity for the pipeline associated with Site A4 on North Gale Ridge Road during the normal school year for Coyote Creek Elementary School.

Site A2 Pipelines

As shown in Figure 3, the supply and discharge pipelines would be installed beneath the southbound travel lanes of Dougherty Road. The pipeline trench would typically be about five feet wide and between five and eight feet deep. A minimum construction corridor width of 10 feet would be needed to accommodate pipeline storage and to allow trucks and equipment access along the trench. In some areas where the pipeline would need to be installed at greater depth to avoid other utilities, a wider trench and construction easement of up to 15 feet may be required. Other construction activities, such as the installation of pipeline connections, could also require larger excavations. The pipeline would be installed in sections and would require temporary lane closures in Dougherty Road. One to two lanes

[7] Outages refer to periods when the EBMUD takes the reclaimed water system out of service. For the R3000 Project, outages could occur during pipeline connections and would not be expected to last more than one day.

TABLE 4
PIPELINE CONSTRUCTION EQUIPMENT

Construction Phase	Equipment	Number of Equipment
Pipeline Construction	Services Truck	1
	Supervisor Pickup Truck	1
	Crew pickup truck	1
	Water Truck	1
	Transfer truck with trailer	1
	Saw Cutting Machine & Truck	1 each
	Pickup truck	1
	Hydro Pressure test pump	1
	Baker Tanks	2
	Backhoe with 4&1 Bucket / Carry Deck	1 each
	Welding Equipment with Pickup truck	1
	Vibra Plate	1
	Hydro Vac Truck	1
	Option Backhoe with Hydro Hammer	1
	Large Hydro Vibra Plate for Class 1 Backfill	1
	Boom Truck	1
Backfill	Services Truck	1
	Pickup Truck	2
	Excavator	1
	Front End Loader	1
	Skid Steer	1
	Compactor Rammex	1
	Haul Trucks	3
Landscaping/Site Restoration	Services Truck	1
	Pickup Truck	1
	Backhoe	1
	Soil Compactor	1
	Haul Trucks	2
	Asphalt Pavers	1
	Rollers	1
Demobilization	Services Truck	1
	Pickup Truck	1
	Backhoe	1
	Haul Truck	1

are expected to be closed during non-commute hours on the southbound side of Dougherty Road during pipeline construction, with traffic being funneled into the remaining available lane(s). Traffic control measures (e.g., signage, flaggers) would be implemented in order to route traffic around the construction area.

Pipeline construction for Site A2 would occur in concurrence with the pump station construction described above; therefore, the haul trucks and trips per day are included as part of the total estimate for the Site A2 pump station construction.

Site A4 Pipelines

As shown in Figure 4, the supply pipeline would be installed in the Reservoir R200 access road, and the discharge pipeline would be installed in the Reservoir R200 access road, Lilac Ridge Road, and North Gale Ridge Road, turning north on Dougherty Road and connecting to the existing recycled water pipeline in Dougherty Road. The trench typically would be up to three feet wide and seven feet deep, to account for existing buried pipelines. A minimum construction corridor width of 10 feet would be needed to accommodate pipeline storage and to allow trucks and equipment access along the trench. In some areas where the pipeline would need to be installed at greater depth to avoid other utilities, a wider trench and construction easement of up to 15 feet would be required. Other construction activities, such as the installation of pipeline connections, could also require larger excavations. One lane of Lilac Ridge Road and North Gale Ridge Road is anticipated to be closed during pipeline construction and connection. One-way traffic control around the construction site would be implemented in order to reduce traffic road congestion. It is expected that one or two lanes would be closed during non-commute hours on either the southbound or northbound side of Dougherty Road during pipeline construction (from Site A4 to the recycled water transmission main in Dougherty Road), with traffic being funneled into the remaining available lane(s). Traffic control measures (e.g., signage, flaggers) would be implemented in order to route traffic around the construction area.

Pipeline construction at Site A4 would require approximately 14 haul trucks per day for trench pavement, soil disposal, and fill import deliveries. The haul trucks average nine to 16 cubic yards per load. Four materials trucks would be used per day for deliveries of pipeline, appurtenance, paving, and other equipment delivery. There would be approximately thirteen worker trips per day for pipeline construction at Site A4.

1.5.3 Schedule

EBMUD would decide whether to implement Site A2 or Site A4 based primarily on whether a property transfer agreement can be negotiated with the City of San Ramon regarding Site A2. Pump station and pipeline construction may occur simultaneously, except during pump station concrete work. For purposes of analysis, pump station construction is anticipated to take approximately 24 months and would occur anytime between 2020 and 2024, and pipeline construction is anticipated to take approximately four months within this same time frame.

1.6 EBMUD Practices and Procedures

EBMUD has incorporated a number of standard construction specifications, standard practices from EBMUD's Environmental Compliance Manual, and Engineering Standard Practices into the Project. These standard specifications and standard practices are designed to address typical characteristics of EBMUD construction projects and are not project-specific or tailored to the unique characteristics of the Project. These standard specifications and standard practices, which are applicable to all EBMUD projects and reflect generally applicable EBMUD standard operating procedures, are described in more detail below.

EBMUD maintains several Standard Construction Specification documents specifically related to environmental conditions, including:

- **00 31 21.13, Site Survey Information** – This section requires the Contractor to provide documentation of both pre- and post-construction pavement conditions in the project vicinity and includes provisions for long-term transportation safety.
- **01 14 10, Work Restrictions** – This section describes special requirements and construction constraints (including work hours) that may affect Project construction.
- **01 35 24, Project Safety Requirements** – This section includes provisions for the safety of the public and construction workers regarding hazards and hazardous materials.
- **01 35 44, Environmental Requirements** – This section includes provisions related to water quality, dust and emissions control, noise and vibration control, hazardous materials control, and protection of biological and cultural resources.
- **01 55 26, Traffic Regulation** – This section includes provisions for the regulation of traffic during construction and compliance with applicable traffic regulations requirements.

Section 3.0, Water Quality Protection, and Section 9.0, Trench Spoils Field Management Practices, of EBMUD's Environmental Compliance Manual include best management practices (BMPs) that have been incorporated into the Project including provisions regarding liquid discharges and trench spoils management.

EBMUD Procedure 711, Hazardous Waste Removal, defines hazardous waste and establishes responsibilities for removal of hazardous wastes from EBMUD facilities. This procedure outlines specific steps and responsibilities for: characterizing the waste and determining what analyses are needed to classify the waste; coordinating waste disposal, reuse, or recycling issues; labeling, storing, inspecting, and maintaining inventory records for the waste; and reviewing, signing, and tracking any hazardous waste handling and disposal requirements and hazardous waste manifests.

EBMUD's Engineering Standard Practice 512.1, Water Main and Services Design Criteria, and Engineering Standard Practice 550.1, Seismic Design Requirements, dictate

basic requirements for water pipelines and design standards for pipelines to withstand seismic hazards.

EBMUD's Pumping Plant Design Guide establishes minimum requirements to be followed in the design of EBMUD pumping plants.

Appendix A contains the EBMUD Practices and Procedures Monitoring and Reporting Plan. This table and discussion in the Initial Study detail these practices and procedures and describe their relationship to Project impacts.

1.7 Operation and Maintenance

EBMUD would own and operate Pump Station R3000. The pump station would generally be operated remotely via the EBMUD's Supervisory Control and Data Acquisition (SCADA) system. The operating hours of the pump station would vary. In general, EBMUD tries to operate pump stations during off-peak hours (e.g., nighttime and morning hours) when electricity demand and cost are lower. One worker vehicle trip per week is anticipated for pump station operation and maintenance.

1.8 Approvals Required

In addition to EBMUD approval of the Project, the following approvals may be required for Project implementation:

- City of San Ramon
  - Sale of Pump Station Site A2
  - Encroachment Permit for pipeline construction within City roadways and (for Site A2) use of a segment of Dougherty Road during construction for vehicle access and staging.

1.9 References

DERWA, *Draft Environmental Impact Report for the San Ramon Valley Recycled Water Program,* State Clearinghouse No. 96013028, August 1996.

East Bay Municipal Utility District (EBMUD), Engineering Standard Practice, ESP 512.1, Water Main and Services Design Criteria, effective October 9, 2006.

EBMUD, Engineering Standard Practice, ESP 550.1, Seismic Design Requirements, effective November 2, 2001.

EBMUD, Environmental Compliance Manual, 2010 Edition, Section 3.0, Water Quality Protection, effective October 2010.

EBMUD, Environmental Compliance Manual, 2010 Edition, Section 9.0, Trench Spoils Field Management Practices, effective October 2010.

EBMUD, Pumping Plant Design Guide, October 14, 2014.

EBMUD, Standard Construction Specification, Section 00 31 21.13, Site Survey Information, April 21, 2017.

EBMUD, Standard Construction Specification, Section 01 14 00, Work Restrictions, May 3, 2017.

EBMUD, Standard Construction Specification, Section 01 35 24, Project Safety Requirements, November 23, 2017.

EBMUD, Standard Construction Specification, Section 01 35 44, Environmental Requirements, March 2, 2018.

EBMUD, Standard Construction Specification, Section 01 55 26, Traffic Regulation, February 9, 2017.

EBMUD, Mandatory Use Policy, Non-Potable Water, Policy 9.05, September 22, 2105. Accessed on August 4, 2016.

EBMUD, *Water Supply Management Program 2040 Plan*, April 2012. Available online at https://www.ebmud.com/about-us/construction-my-neighborhood/water-supply-management-program-2040. Accessed on August 4, 2016.

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SECTION 2.0
Initial Study Environmental Checklist

1. Project Title:	San Ramon Valley Recycled Water Program Pump Station R3000 Project
2. Lead Agency Name and Address:	East Bay Municipal Utility District (EBMUD) Water Supply Improvements Division – Mail Slot 407 375 Eleventh Street Oakland, CA 94607
3. Contact Person and Phone Number:	Reena Thomas, EBMUD Project Manager 510-287-0593
4. Project Location:	New pump station to be located on one of two sites (referred to as Site A2 and Site A4 and shown on Figure 2) and associated pipelines located in the City of San Ramon, Contra Costa County, CA. Site A2 is located on property owned by the City of San Ramon adjacent to Dougherty Road and north of Gale Ridge Road (APN: 217-430-097). Site A4 is on DERWA-owned property about 300 feet northeast of Lilac Ridge Road (APN: 222-240-031). Pipelines associated with Site A2 would be within Dougherty Road. Pipelines associated with Site A4 would be within Lilac Ridge Road, N. Gale Road, and Dougherty Road. Two construction staging areas in the vicinity of the sites are under consideration (refer to Figure 2).
5. Project Sponsor's Name and Address:	East Bay Municipal Utility District Water Supply Improvements Division – Mail Slot 407 375 Eleventh Street Oakland, CA 94607

6. General Plan Designation(s):	Multi-Family High Density Residential (Site A2); Open Space for Natural State and Passive Recreation (Site A4)
7. Zoning:	Medium Density Residential (Site A2); Open Space (Site A4)
8. Description of Project:	A new recycled water pump station (Pump Station R3000) with a capacity of about 5.6 million gallons per day, plus pipelines (shown on Figures 3 and 4) to connect the pump station to an existing transmission main in Dougherty Road. Please see Chapter 1 for details.
9. Surrounding Land Uses and Setting:	Open Space; Parks and Recreation; Residential
10. Other public agencies whose approval is required:	City of San Ramon – Encroachment Permit; sale of Site A2 (if that site is selected)

2.1 Environmental Factors Potentially Affected

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

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

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial study:

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

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

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

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

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

Richard G. Sykes
Director of Water and Natural Resources

10-2-18
Date

Introduction to the Analysis: This section includes analyses for both Site A2 and Site A4. Where the analyses differ, Site A2 and Site A4 are discussed separately. This section also describes the existing environmental conditions on and near the Project sites, as relevant to the analyses.

2.2 Environmental Checklist

2.2.1 Aesthetics

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
1.	**AESTHETICS — 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)	Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d)	Create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area?	☐	☒	☐	☐

Discussion

Site A2

Site A2 is within a landscaped portion of the Miravilla at Gale Ranch subdivision. There are currently trees and shrubs on the site. The site abuts southbound Dougherty Road and is at elevation 570 feet. Site topography directly adjacent to the sidewalk and roadway is flat, while the western portion of the site occupies an east-facing slope. The site is most visible from the southbound travel lanes of Dougherty Road as well as adjacent sidewalks (see Photo 1 of Figure 5). In general, the hillslope west of Dougherty Road south of Red Willow Road is landscaped with a natural appearance largely lacking manmade structures. The elevation of the hillslope decreases as southbound drivers and pedestrians approach Site A2. Beginning roughly 100 feet north of Site A2 there are street trees between the sidewalk and roadway which, coupled with the landscaped median, constrains views of Site A2 from northbound drivers and pedestrians. Site A2 is minimally visible from a number of single family residences on the east side on the road. The site is not visible from publicly accessible roadways to the west. Views of the site from homes along Ivy Pointe Circle upslope of the site are likely largely obscured by intervening vegetation. The site is not visible from any state scenic highways or other scenic resources.

Photo 1- Site A2 as seen driving southbound on Dougherty Road.

Photo 2- Site A4 as seen driving northwest on Lilac Ridge Road.

SRVRWP Pump Station R3000 . 160455

SOURCE: Google Earth, 2015; ESA

Figure 5
Site Views from Public Locations

Site A4

Site A4 is located adjacent to Bridges at Gale Ranch and Capella at Gale Ranch subdivisions and is approximately one-half mile north of Bollinger Canyon Road, 1,500 feet west of Dougherty Road, and 2,500 feet southwest of Crow Canyon Road. The site is at elevation 680 feet and occurs within a topographic bowl on the south-southeastern facing slope of a ridgeline that extends to 800 feet.

Site A4 is within property owned by DERWA that contains underground below grade recycled water reservoir (Reservoir R200) and access road. The pump station would be constructed adjacent to the access road. The visual attributes of the site vicinity are rolling, grass-covered hillsides on the outskirts of urbanized, residential areas. Vegetation at the site consists of grasses and shrubs. The pump station site is visible from parts of Lilac Ridge Road (see Photo 2 of Figure 5) and Lantana Way, and slightly visible from the corner of Sky Jasmine Way and Laurelspur Loop. Although the site can be seen from portions of West Alamo Creek Trail, it is mostly obscured by intervening topography and vegetation. There are no scenic highways or other scenic resources nearby or adjacent to Site A4.

a) For purposes of analysis, a scenic vista is defined as a distant view encompassing valued natural or built landscape features such as ridgelines, water bodies or landmark features.

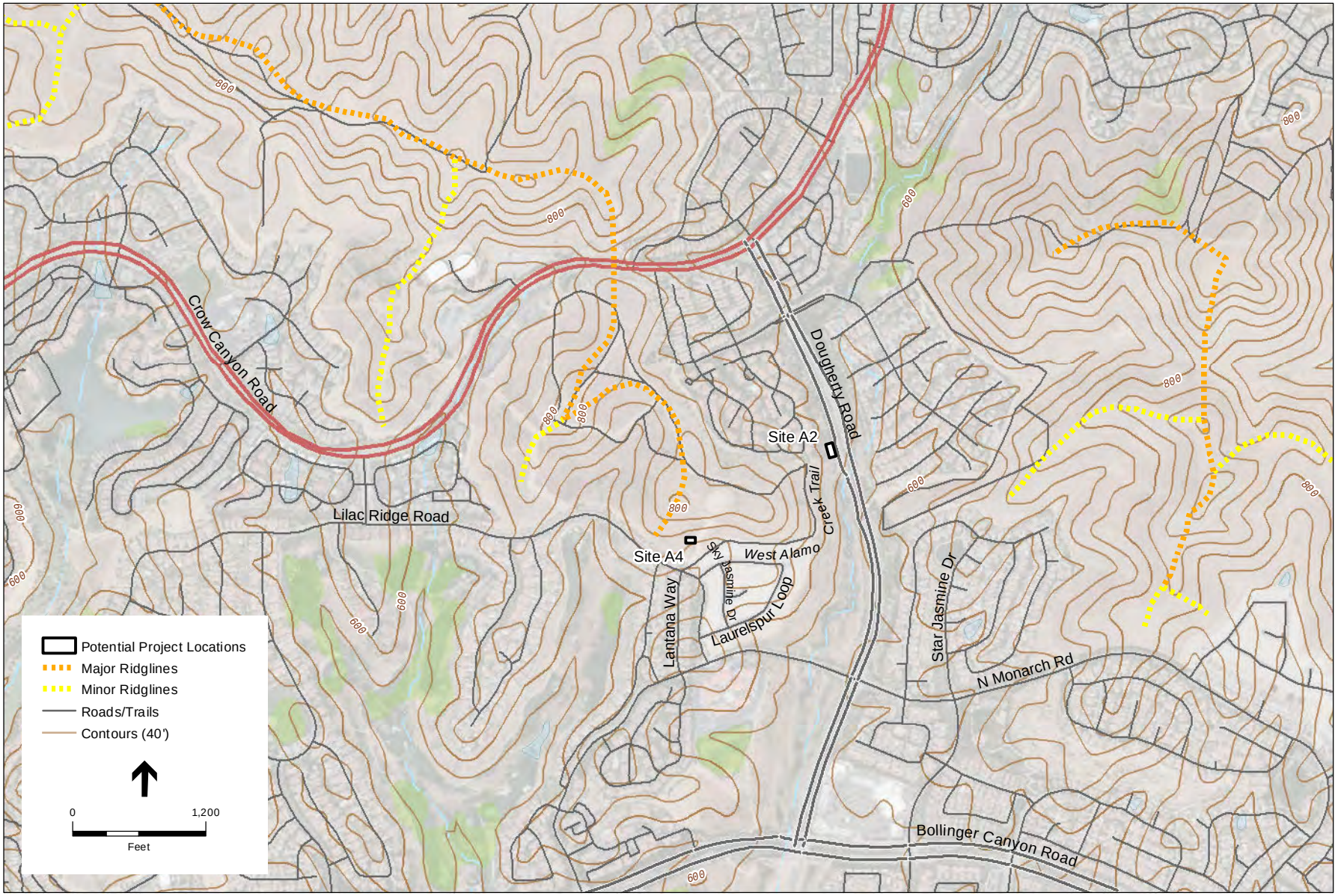
Site A2

Site A2 is located on the west side of Dougherty Road between Crow Canyon Road and North Gale Ridge Road. The site is at 570 feet elevation and is on property that is currently owned by the City of San Ramon. Although Site A2 is visible from Dougherty Road, construction and operation of the pump station at Site A2 would not have a substantial adverse effect on a scenic vista because the site is not part of a scenic vista. (**No Impact**)

Site A4

As shown in Figure 6, Site A4 lies south and west of the southern terminus of a Major Ridgeline as identified in the San Ramon General Plan 2035 (General Plan - San Ramon, 2015). As noted above, the ridgeline extends to 800 feet elevation. The General Plan requires a 100-foot vertical setback from major ridgelines within the City. For purposes of this evaluation, views of this ridgeline are treated as a scenic vista.

The structure housing the pumps would be about 21 feet high to the top of the roof; thus, the pump station would be approximately 100 vertical feet below the ridgeline. While the ridgeline itself is visible in views from segments of Dougherty and Crow Canyon Roads and neighboring land uses, Site A4 is not visible from these roadways because of its elevation relative to intervening topography and vegetation, its location and orientation, and its size (see Photo 2 of Figure 5). The ridgeline is visible from Lilac Ridge Road near Lantana Way, and from homes at higher elevation on Sky Jasmine Drive, northeast of the intersection of Dougherty Road and North Monarch Road.



SOURCE: USDA, 2014, USGS, 2016; City of San Ramon; 2015; ESA, 2016

SRVRWP Pump Station R3000 . 160455

Figure 6

City of San Ramon Designated Major and Minor Ridgelines

While the pump station would be visible from Lilac Ridge Road and from homes at higher elevation on Sky Jasmine Drive, because of its location, elevation, and scale, the pump station would not obstruct views of the ridgeline. Consequently, development and operation of the pump station at Site A4 would not have a substantial adverse effect on a scenic vista. (**Less than Significant**)

b) The trees and other landscaping on the hill slope west of Dougherty Road south of Red Willow Road could be considered a scenic resource to pedestrians and drivers passing the sites and to which vegetation at the Project sites incrementally contributes (see Photo 1 of Figure 5).

Site A2

Construction of Pump Station R3000 at Site A2 would require the removal of up to thirteen trees, including one tree located in the median between the sidewalk and Dougherty Road, as well as shrubs within the site boundary. Tree removal at Site A2 to accommodate the pump station would incrementally diminish trees as a scenic resource at the site; however, any remaining trees on site and within the construction easement would be protected and preserved to the extent possible as part of the Project. As detailed in the Project Description, a number of EBMUD standard practices and procedures, applicable to all EBMUD projects, have been incorporated into the Project, including Standard Construction Specification 01 35 44, Environmental Requirements. Section 3.7, Protection of Native and Non-Native Protected Trees, of this specification includes best practices for protecting trees that are not to be removed within the Project construction limits, including: 1) Showing the location of trees to be removed and protected on construction drawings; 2) Pruning in accordance with the Tree Pruning Guidelines of the International Society of Arboriculture; 3) Installation of exclusion fencing outside of the drip lines of trees to be protected; 4) Excluding work or storage inside of the tree protection zone; and 5) Conducting pruning or tree replacement to the satisfaction of a certified arborist provided by EBMUD. The EBMUD Practices and Procedures Monitoring and Reporting Plan (Appendix A of this Initial Study/Mitigated Negative Declaration) lists the applicable standard specifications language.

Through compliance with the EBMUD Standard Construction Specification 3.7, Protection of Native and Non-native Protected Trees the Project would implement best practices for tree protection. As described in Section 1.4.2 of Section 1.0, Project Description, EBMUD would also landscape the frontage of Site A2 following construction. The landscaping would buffer views of the pump station for motorists and pedestrians passing the site. Because Section 3.7, Protection of Native and Non-Native Protected Trees, of EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements, has been incorporated into the Project and includes provisions for tree protection, and because landscaping has been incorporated into the Project, which would buffer views, Project construction and operational impacts related to effects on a scenic resource are less than significant. (**Less than Significant**)

Site A4

Construction of Pump Station R3000 at Site A4 would not require the removal of any trees, nor substantially damage scenic resources visible from a state scenic highway because there are no trees on the site, and the site is not visible from a state scenic highway. Because the Project would not remove trees from Site A4, and it is not visible from a scenic highway, there would be no impact from the Project on a scenic resource at Site A4. (**No Impact**)

c) **Site A2 and Site A4**

Pump Station R3000 at either of the site locations would change the existing visual character of the sites. Site A2 is currently occupied by trees and shrubs. Site A4 is on a hillside that is currently occupied by grasses and shrubs. Neighboring uses include the access road and manmade features (fencing, stairs, etc.) associated with Reservoir R200 at Site A4. The vegetation would be replaced by a building, electrical equipment, and a paved parking area. The transition from natural to manmade elements occupying the sites would be softened with landscaping to be installed along portions of the perimeter of the pump station, as described in Section 1.4.2 of Section 1.0, Project Description. Because landscaping has been incorporated into the Project, the Project impacts related to the visual character of the site are less than significant. (**Less than Significant**)

Construction activities (excavation, grading, haul road, open trenches, machinery and vehicle storage) would have a temporary effect on the visual quality at both of the potential pump station sites and along the pipeline alignments during construction. Due to the limited duration of construction activities, potential visual impacts due to construction activities would be temporary and less than significant. (**Less than Significant**)

d) **Site A2 and Site A4**

The pump station at either site would have motion detected security lighting once it is in operation. Periodically, this lighting may be on consistently, in non-motion detect mode, if evening maintenance is required. Infrequent use and uses in short duration of the security lighting would ensure that the lighting is not a substantial new source of light in the area. The lighting would also include luminaire shields to ensure that no light is directed off the Project site or into the sky.

Although it is not expected, nighttime construction may be a temporary new light source if pipeline connection and construction is necessary during nighttime hours. Should construction need to occur at night, lighting would be used to illuminate the construction area. The construction lighting may be visible to adjacent residences and along public roadways. Although the use of construction lighting at night would be temporary, the impact from night lighting on nighttime views could be potentially significant. **Mitigation Measure AES-1: Shield Night Lighting** requires the shielding of night lighting to be directed downward or oriented such that the light source is not directed toward residential areas or into streets. By directing the light source away from residential areas and streets, the

nighttime lighting would be kept contained on the Project site, reducing the potential to create a new source of light or glare that would adversely affect nighttime views in the area.

Mitigation Measure AES-1: Shield Night Lighting.

Stationary lighting used during nighttime construction (if required) shall be shielded and directed downward or oriented such that the light source is not directed toward residential areas or into streets.

With implementation of Mitigation Measure AES-1, which requires the shielding of night lighting, the Project would not create a new source of substantial light that would adversely affect views and impacts would be less than significant. (**Less than Significant with Mitigation**)

References

The City of San Ramon, *San Ramon General Plan 2035,* Open Space Element, adopted by the City Council April 28 2015. Available online at http://www.ci.san-ramon.ca.us/gprc/gprcindex.htm. Accessed on August 15, 2016.

California Department of Transportation (Caltrans), California Scenic Highway Mapping System – Contra Costa County. Updated September 07, 2011. Available online at http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm.

EBMUD, Standard Construction Specification, Section 01 35 44, Environmental Requirements, March 2, 2018.

San Ramon, California, *Municipal Code Section C6-46.*

2.2.2 Agricultural and Forest Resources

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
2. AGRICULTURAL AND FOREST RESOURCES — In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.				
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Discussion

a) **Site A2 and Site A4**

Neither Site A2 nor Site A4 is on land that is designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance according to the California Department of Conservation (CDC) Contra Costa County Important Farmland map. Site A2 is on built and planned urban land. Site A4 is on grazing land, land that is composed of vegetation that is suited to the grazing of livestock, but is not currently grazed. Therefore, implementation of the Project would not have a substantial adverse effect on land designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. (**No Impact**)

b) **Site A2 and Site A4**

A Williamson Act contract allows local governments to enter contracts with private landowners in order to restrict specific parcels of land for the use of open space or agricultural. Neither Site A2 nor Site A4 is on land that is restricted under a Williamson Act contract (California Department of Conservation, 2013). Therefore, implementation of the Project would not have a substantial adverse effect. (**No Impact**)

c) **Site A2 and Site A4**

Site A2 is designated as Multi-Family High Density Residential by the San Ramon Zoning Ordinance. To the east, Site A2 is bordered by Dougherty Road, a 50 MPH roadway with three lanes in each direction. Site A4 is designated as Open Space by the San Ramon Zoning Ordinance. Site A4 consists of grassland and an access road that leads to an EBMUD recycled water tank (Reservoir R200). There are single family residences to the east and south of Site A4. Neither Site A2 nor A4 conflicts with existing zoning for, or would cause rezoning of, forest land, timberland, or timberland zoned Timberland Production. Therefore, implementation of the Project would not have a substantial adverse effect. (**No Impact**)

d) **Site A2 and Site A4**

The construction of Pump Station R3000 at either of the proposed sites would not result in the loss of forest land or conversion of forest land to non-forest use (refer to discussions under item 2a, above). Therefore, implementation of the Project would not have a substantial adverse effect. (**No Impact**)

e) **Site A2 and Site A4**

Pump Station R3000 would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agriculture use or conversion of forest land to non-forest use (refer to discussions under items 2a and 2b, above). Therefore, implementation of the Project would not have a substantial adverse effect. (**No Impact**)

References

California Department of Conservation, Division of Land Resource Protection, *Contra Costa County Williamson Act FY 2012/2013,* 2013.

California Department of Conservation, Division of Land Resource Protection, *Contra Costa County Important Farmland Map 2014,* Published April 2016.

The City of San Ramon, *San Ramon General Plan 2035,* Open Space Element, adopted by the City Council April 28 2015. Available online at http://www.ci.san-ramon.ca.us/gprc/gprcindex.htm. Accessed on July 27, 2016.

The City of San Ramon, *San Ramon Zoning Map,* August 13, 2015.

2.2.3 Air Quality

Issues (and Supporting Information Sources):		*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 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)	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c)	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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d)	Expose sensitive receptors[8] to substantial pollutant concentrations?	☐	☐	☒	☐
e)	Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Discussion

a) **Setting**

Sites A2 and A4 are within the San Francisco Bay Area Air Basin (Bay Area Basin). Under amendments to the federal Clean Air Act (CAA), the U.S. Environmental Protection Agency (USEPA) has classified air basins or portions thereof as either "attainment" or "non-attainment" for each criteria air pollutant, based on whether or not the national standards have been achieved. The California CAA, which is patterned after the federal CAA, also requires areas to be designated as "attainment" or "non-attainment" for the state standards. Thus, areas in California have two sets of attainment / non-attainment designations: one set with respect to the national standards and one set with respect to the state standards. The Bay Area Basin is currently designated as a non-attainment area for state and national ozone standards, state particulate matter (PM_{10} and $PM_{2.5}$) standards, and federal $PM_{2.5}$ (24-hour) standard, as shown in Table 5. Areas designated as non-attainment are required to prepare air quality plans that demonstrate how the regional plan to attain the air quality standards.

[8] For the purposes of air quality analysis, sensitive receptors are defined as facilities and land uses where people spend extended amounts of time or that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of sensitive uses include residences, schools, hospitals, and daycare centers. The reasons for greater than average sensitivity include pre-existing health problems, proximity to emissions sources, and/or duration of exposure to air pollutants.

TABLE 5
AMBIENT AIR QUALITY STANDARDS AND SAN FRANCISCO AIR BASIN ATTAINMENT STATUS

Pollutant	Averaging Time	State Standard	SF Air Basin Attainment Status for California Standard	Federal Primary Standard	SF Air Basin Attainment Status for Federal Standard
Ozone	8 hour	0.070 ppm	Non-Attainment	0.070 ppm[1]	Non-Attainment
	1 hour	0.090 ppm	Non-Attainment	---	---
Carbon Monoxide	8 hour	9.0 ppm	Attainment	9 ppm	Attainment
	1 Hour	20 ppm	Attainment	35 ppm	Attainment
Nitrogen Dioxide	Annual Average	0.030 ppm	---	0.053 ppm	Attainment
	1 Hour	0.18 ppm	Attainment	0.100 ppm	See Note 2
Sulfur Dioxide	Annual Average	---	---	0.03 ppm	See Note 3
	24 Hour	0.04 ppm	Attainment	0.14 ppm	See Note 3
	1 Hour	0.25 ppm	Attainment	0.075 ppm	See Note 3
Respirable Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 $\mu g/m^3$	Non-Attainment	---	---
	24 hour	50 $\mu g/m^3$	Non-Attainment	150 $\mu g/m^3$	Unclassified
Fine Particulate Matter ($PM_{2.5}$)	Annual Arithmetic Mean	12 $\mu g/m^3$	Non-Attainment	12 $\mu g/m^3$	Unclassified/Attainment[4]
	24 hour	---	---	35 $\mu g/m^3$	Non-Attainment
Sulfates	24 hour	25 $\mu g/m^3$	Attainment	---	---
Lead	Calendar Quarter	---	---	1.5 $\mu g/m^3$	Attainment
	30 Day Average	1.5 $\mu g/m^3$	---	---	Attainment
	Rolling 3-month Average	---	---	0.15 $\mu g/m^3$	See Note 5
Hydrogen Sulfide	1 hour	0.03 ppm	Unclassified	---	---
Vinyl Chloride	24 hour	0.010 ppm	No information available	---	---
Visibility Reducing Particles	8 hour (10:00 to 18:00PST)	Extinction of 0.23/km when the relative humidity is less than 70 percent; visibility of 10 miles or more	Unclassified	---	---

NOTES:
1 On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm. An area will meet the standard if the fourth-highest maximum daily 8-hour ozone concentration per year, averaged over three years, is equal to or less than 0.070 ppm. EPA will make recommendations on attainment designations by October 1, 2016, and issue final designations October 1, 2017. Nonattainment areas will have until 2020 to late 2037 to meet the health standard, with attainment dates varying based on the ozone level in the area.
2 To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100ppm (effective January 22, 2010). The US Environmental Protection Agency (EPA) expects to make a designation for the Bay Area by the end of 2017.
3 On June 2, 2010, the U.S. EPA established a new 1-hour SO2 standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. The existing 0.030 ppm annual and 0.14 ppm 24-hour SO2 NAAQS however must continue to be used until one year following U.S. EPA initial designations of the new 1-hour SO2 NAAQS. EPA expects to make designation for the Bay Area by the end of 2017.
4 In December 2012, EPA strengthened the annual PM 2.5 National Ambient Air Quality Standards (NAAQS) from 15.0 to 12.0 micrograms per cubic meter (µg/m3). In December 2014, EPA issued final area designations for the 2012 primary annual PM 2.5 NAAQS. Areas designated "unclassifiable/attainment" must continue to take steps to prevent their air quality from deteriorating to unhealthy levels. The effective date of this standard is April 15, 2015.
5 National lead standard, rolling 3-month average: final rule signed October 15, 2008. Final designations effective December 31, 2011.

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

SOURCES: BAAQMD, 2017, Air Quality Standards and Attainment Status. Obtained online April 10, 2018. Available: http://www.baaqmd.gov/research-and-data/air-quality-standards-and-attainment-status

The most recently adopted air quality plan to address non-attainment issues for the Bay Area Basin is the *2017 Bay Area Clean Air Plan* (2017 CAP). The 2017 CAP provides a regional strategy to protect public health and protect the climate by continuing progress toward attaining all state and federal air quality standards; eliminating health risk disparities from exposure to air pollution among Bay Area Basin communities; transitioning the region to a post-carbon economy needed to achieve greenhouse gas (GHG) reduction targets mandated by the State for 2030 (40 percent emissions reductions below 1990 levels) and 2050 (80 percent reduction below 1990 levels); and providing a regional climate protection strategy that would put the Bay Area Basin on a pathway to achieve those GHG reduction targets. The 2017 CAP includes a wide range of 85 control measures designed to decrease emissions of the air pollutants that are most harmful to Bay Area residents, such as particulate matter, ozone, and toxic air contaminants (TACs); to reduce emissions of methane and other "super-GHGs" that are potent climate pollutants in the near-term; and to decrease emissions of carbon dioxide by reducing fossil fuel combustion (BAAQMD, 2017).

The Bay Area Air Quality Management District (BAAQMD) *CEQA Air Quality Guidelines* were published in 1999 and updated in 2017 to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area (BAAQMD, 2017). The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process, consistent with CEQA requirements, and include recommended thresholds of significance, mitigation measures, and background air quality information. Construction and operational impacts of the Project have been addressed separately under each impact discussion, when applicable.

Impacts Site A2 and Site A4

The BAAQMD CEQA Guidelines recommend that a project's consistency with the current CAP be evaluated using the following three criteria:

a. The project supports the goals of the Air Quality Plan,

b. The project includes applicable control measures from the CAP, and

c. The project does not disrupt or hinder implementation of any control measures from the CAP.

If it can be concluded based on substantial evidence that the project would be consistent with the above three criteria, then the BAAQMD considers the project to be consistent with air quality plans prepared for the Bay Area.

The primary goals of the 2017 CAP are to attain air quality standards, reduce population exposure, protect public health in the Bay Area, reduce GHG emissions, and protect the climate. The BAAQMD-recommended measure for determining if a project supports the goals in the 2017 CAP is consistency with BAAQMD thresholds of significance. If a project would not result in exceeding

the BAAQMD thresholds of significance after the application of all feasible mitigation measures, the project is considered to be consistent with the 2017 CAP.

General basin-wide, construction-related emissions are included in the BAAQMD emission inventories that form the basis of air quality planning assumptions used in the preparation of Clean Air Plans. Therefore, temporary construction emissions that do not exceed the significance thresholds are not expected to prevent attainment or maintenance of the ozone, particulate matter, and carbon monoxide levels within the Bay Area and hence not conflict with the goals of the 2017 CAP. As detailed in the discussion below, with regard to air quality impact question b), the Project's estimated construction emissions would be less than the BAAQMD significance thresholds, with the implementation of EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements, specifically, Section 3.3 Dust Control and Monitoring and Section 3.4 Emissions Control, which together include all the BAAQMD-recommended mitigation measures.

Once operational, the Project would be powered by electricity and would not generate emissions or fumes from the operation of the pumps or the transformer. The Project is expected to generate about one worker trip per week for pump station operation and maintenance, which would generate a negligible amount of emissions. As detailed in the discussion of operational emissions under question b), these emissions would be well below the BAAQMD's significance thresholds for operation.

As the Project would not exceed the BAAQMD's recommended significance thresholds for both construction and operation, which form the basis of air quality planning assumptions in the preparation of the 2017 CAP, the Project would be considered to be consistent with the goals of the 2017 CAP.

The 2017 CAP contains 85 control measures aimed at reducing air pollution in the Bay Area. Projects that incorporate all feasible air quality plan control measures are considered consistent with the CAP. There are two control measures in the 2017 CAP to reduce emissions of criteria pollutants, TACs and GHG emissions, from the water sector by encouraging water conservation, limiting GHG emissions from Publicly Owned Treatment Works (POTWs), and promoting the use of biogas recovery systems. Neither of these measures would apply to the Project which includes water pumping facilities and pipelines and therefore, no inconsistencies with the 2017 CAP are identified.

With no specific control measures from the 2017 CAP applicable to water pumping facilities and pipelines, the Project would not be considered to hinder implementation of CAP control measures.

In summary, the Project would be consistent with all three criteria listed above to evaluate consistency with the CAP, and therefore would not conflict with or obstruct implementation of the 2017 CAP during both construction and operation. (**Less than Significant**)

b) **Setting**

The Bay Area Basin experiences occasional violations of ozone and particulate matter (PM_{10} and $PM_{2.5}$) standards. Thus, during the construction and operational phase of any given project that generates emissions, there is a potential for local and basin wide violations to occur.

Impacts Site A2 and Site A4

Construction Emissions

Construction activities are short-term and typically result in emissions of ozone precursors (reactive organic compounds [ROG] and nitrogen oxides [NOx]) as well as particulate matter in the form of dust (fugitive dust) and exhaust (e.g., vehicle tailpipe emissions). Project-related excavation, grading, and other construction activities could cause wind-blown dust that would contribute particulate matter into the local atmosphere. Dust can be an irritant causing watering eyes or irritation to the lungs, nose, and throat. Depending on exposure, adverse health effects can occur due to particulate matter in general. Criteria pollutant emissions would be generated by exhaust from construction equipment, on-road vehicle trips of haul trucks for delivering construction material and removing debris and excavation spoils, and construction worker commutes to and from the Project site. ROGs are also emitted from activities that involve painting, other types of architectural coatings, and asphalt paving. Emission levels from these activities would vary depending on the number and types of equipment used, duration of use, operation schedules, and the number of construction workers. Criteria pollutant emissions from these emission sources would incrementally add to the regional atmospheric loading of ozone precursors during Project development.

Construction-related criteria air pollutant emissions for the Project were estimated using CalEEMod (California Emissions Estimator Model, version 2016.3.1). Project specific data for construction phasing schedule and equipment fleet was used in the model to estimate emissions (refer to Appendix B). Table 6 shows unmitigated construction exhaust emissions for both Sites A2 and A4. The emissions associated with pump station construction would be similar for both sites. However, emissions associated with the construction of the pipelines would vary between the two sites. The pipeline at Site A2 would be up to 150 feet long and connect the pump station to an existing recycled water pipeline and a new isolation valve immediately in front of the pump station on Dougherty Road. The discharge pipeline for Site A4 would be approximately one-mile-long and connect the pump station to a recycled water header north of the Dougherty Road/ North Monarch Road/North Gale Ridge Road intersection. As shown in Table 6, emissions of all criteria pollutants would be below their respective significance thresholds for both sites A2 and A4. Therefore, the Project would have a less than significant impact related to construction criteria air pollutant emissions.

Rather than quantifying fugitive dust (non-exhaust) emissions to evaluate impacts, BAAQMD emphasizes the implementation of appropriate mitigation measures for dust control during all construction activities. The BAAQMD Guidelines provide feasible control measures for construction emission of PM_{10} to reduce construction impacts from fugitive dust.

TABLE 6
UNMITIGATED EMISSIONS FROM CONSTRUCTION (AVERAGE POUNDS PER DAY)[a]

	ROG	NO_x	PM_{10}	$PM_{2.5}$
Site A2 including pipelines				
Average Daily Construction Emissions	3.3	32.6	1.35	1.26
BAAQMD Thresholds	54	54	82	54
Significant (Yes or No)?	**No**	**No**	**No**	**No**
Site A4 including pipelines				
Average Daily Construction Emissions	3.9	38.9	1.6	1.5
BAAQMD Thresholds	54	54	82	54
Significant (Yes or No)?	**No**	**No**	**No**	**No**

[a] Project construction emissions were estimated using CalEEMod, version 2013.2.2. Emissions are average daily pounds per day and are estimated by dividing the total construction emissions generated by the Project with the total number of construction workdays.

SOURCE: ESA, 2016.

EBMUD implements a number of standard practices and procedures in all its projects, including this Project. This includes Standard Construction Specification 01 35 44, Environmental Requirements, which includes appropriate construction emission management practices and all the BAAQMD recommended control measures to reduce impacts from fugitive dust that would be implemented as part of the Project, and includes:

Section 1.3.E of EBMUD's Standard Construction Specification 01 35 44 requires a Dust Control and Monitoring Plan that details the means and methods for controlling and monitoring dust generated by construction activities on the site.

Section 3.3.B of EBMUD's Standard Construction Specification 01 35 44 requires that construction contractors implement all necessary dust control measures, including but not limited to the following:

- Water and/or coarse rock all dust-generating construction areas as directed by Engineer to reduce the potential for airborne dust from leaving the site.
- Cover all haul trucks entering/leaving the site and trim their loads as necessary.
- Using wet power vacuum street sweepers to:
  - Sweep all paved access road, parking areas and staging areas at the construction site daily or as often as necessary.
  - Sweep public roads adjacent to the site at least twice daily or as often as necessary.
- The use of dry power sweeping is prohibited.

- All trucks and equipment, including their tires, shall be washed off prior to leaving the site.
- Gravel or apply non-toxic soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.
- Water and/or cover soil stockpiles daily.
- Site accesses to a distance of 100 feet from the paved road shall be treated with 12-inches layer of compacted coarse rock.
- Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible.
- Building pads shall be laid as soon as possible after grading.
- Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.
- Wind breaks (e.g., fences) shall be installed on the windward sides(s) of actively disturbed areas of construction. Wind breaks should have a maximum 50 percent air porosity.
- All vehicle speeds shall be limited to fifteen (15) mph or less on the construction site and any adjacent unpaved roads.

Implementation of Section 1.3.E, Dust Control and Monitoring Plan, and Section 3.3.B, Dust Control, of EBMUD's Standard Construction Specification 01 35 44 ensures that dust generated by short-term construction activities would be monitored and controlled to minimize short-term construction dust emissions.

Section 1.3.I of EBMUD's Standard Construction Specification 01 35 44 requires tune-up logs that provide records that show construction equipment in use at the Project sites has undergone required maintenance and requires:

- Submittal of a log of required tune-ups for all construction equipment, particularly haul and delivery trucks, on a quarterly basis for review.

Implementation of Section 1.3.I, Tune-up Logs, of Standard Construction Specification 01 35 44 ensures that construction equipment used at the Project site would be maintained regularly for efficient operation, reducing exhaust emissions generated during operation.

Section 3.4.A of the EBMUD Standard Construction Specification 01 35 44 includes the following requirements that would reduce emissions from construction equipment and exposure to receptors:

- The Contractor shall ensure that line power is used instead of diesel generators at all construction sites where line power is available.
- The Contractor shall ensure that for operation of any stationary, compression-ignition engines as part of construction, comply with Section 93115, Title 17, California Code of Regulations, Airborne Toxic Control Measure for Stationary Compression Ignition Engines, which specifies fuel and fuel additive requirements as well as emission standards.
- Fixed temporary sources of air emissions (such as portable pumps, compressors, generators, etc.) shall be electrically powered unless the Contractor submits documentation and receives approval from the Engineer that the use of such equipment is not practical, feasible, or available. All portable engines and equipment units used as part of construction shall be properly registered with the California Air Resources Board or otherwise permitted by the appropriate local air district, as required.
- Contractor shall implement standard air emissions controls such as:
  - Minimize the use of diesel generators where possible
  - Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes as required by the California Airborne Toxics Control Measure (ATCM) Title 13, Section 2485 of California Code of Regulations. Clear signage shall be provided for construction workers at all access points.
  - Follow applicable regulations for fuel, fuel additives, and emission standards for stationary, diesel-fueled engines.
  - Locate generators at least 100 feet away from adjacent homes and ball fields.
  - Perform regular low-emission tune-ups on all construction equipment, particularly haul trucks and earthwork equipment.
- Contractor shall implement the following measures to reduce greenhouse gas emissions from fuel combustion:
  - On road and off-road vehicle tire pressures shall be maintained to manufacturer specifications. Tires shall be checked and re-inflated at regular intervals.
  - Construction equipment engines shall be maintained to manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
  - All construction equipment, diesel trucks, and generators shall be equipped with Best Available Control Technology for emission reductions of Oxide of Nitrogen (NOx) and Particulate Matter (PM).

- Demolition debris shall be recycled for reuse to the extent feasible. See the Construction and Demolition Waste Disposal Plan paragraphs above for requirements on wood treated with preservatives.

Implementation of Section 3.4.A, Air Quality and Emissions Control, of EBMUD's Standard Construction Specification 01 35 44 ensures specified air emissions control BMPs would be implemented to minimize short-term construction diesel exhaust emissions.

As the estimated construction emissions from the Project would be less than the recommended BAAQMD significance thresholds for construction, and because Section 1.3.E, Dust Control and Monitoring Plan; Section 1.3.I, Tune-up Logs; Section 3.3.B, Dust Control; and Section 3.4.A, Air Quality and Emissions Control, of EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements, have been incorporated into the Project, and require a Dust Control and Monitoring Plan, regular maintenance of construction vehicles and equipment and include provisions for BMPs for dust and air quality emissions control, the Project's air quality impacts related to short-term construction particulate matter impacts and short-term diesel- and gasoline-powered construction equipment emissions would be less than significant. (**Less than Significant**)

Operational Emissions

Once operational, the pump station would be operated remotely via the EBMUD's Supervisory Control and Data Acquisition (SCADA) system. The operating hours of the pump station would vary, but in general would be operated to avoid high electrical tariff rates (e.g., between noon and 6:00 pm). The Project is expected to generate about one worker trip per week for pump station operation and maintenance, which would produce negligible emissions. As the pumps would be powered by electricity, which would not generate any direct air pollutant emissions, and as the Project would not include any other sources that generate onsite emissions during operations, the Project's air quality operational impact would be less than significant. (**Less than Significant**)

c) **Setting**

Based on BAAQMD CEQA guidance, if a project would result in an increase in ROG, NOx, PM_{10}, or $PM_{2.5}$ of more than their respective daily mass thresholds, then it would also be considered to contribute considerably to a significant cumulative impact. In developing thresholds of significance for air pollutants, BAAQMD has considered the emission levels for which a project's individual emissions would be cumulatively considerable. Therefore, if a project would exceed the identified significance thresholds, its emissions would be cumulatively considerable, and if a project would not exceed the significance thresholds, its emissions would not be cumulatively considerable.

Impacts Site A2 and Site A4

As shown in Table 6, criteria pollutant emissions generated by Project construction would be less than the identified significance thresholds. As the only source of emissions would be from the one weekly worker commute trip for pump station maintenance, the Project would not include any operational sources of criteria pollutant emissions. Therefore, the operational impact would also be less than significant.

By its very nature, air pollution is largely a cumulative impact. Past, present and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. In developing thresholds of significance for air pollutants, BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds individually, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. No single project is sufficient in size to, by itself, result in non-attainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. Given the less than significant Project level construction and operational impacts, the Project would not be considered to result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment (see discussion for checklist item b, above). (**Less than Significant**)

d) **Setting**

BAAQMD defines sensitive receptors as children, adults, and seniors occupying or residing in residential dwellings, schools, colleges and universities, daycares, hospitals, and senior-care facilities. Sensitive receptors closest to the Site A2 are the residences located along Ivy Point Circle approximately 150 feet west of Site A2. Sensitive receptors closest to Site A4 are the residences on Laurelspur Loop are located as close as 170 feet from Site A4.

Impacts Site A2 and Site A4

Construction of the Project would result in short-term diesel exhaust emissions including diesel particulate matter (DPM) from the use of off-road diesel equipment required for construction activities. DPM is a complex mixture of chemicals and particulate matter that has been identified by the State as a TAC with potential cancer and chronic non-cancer effects. Exposure of sensitive receptors to these emissions is the primary factor used to determine health risk. Exposure is a function of the concentration of a substance or substances in the environment and the extent of exposure that person has with the substance. A longer exposure period would result in a higher exposure level. Thus, the risks estimated for a maximally exposed individual are higher if a fixed exposure occurs over a longer period of time.

According to the Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments, which determine the lifetime exposure of sensitive receptors to toxic emissions, should be based on a 30-year exposure period;

however, short term assessments should be limited to the period/duration of activities associated with the Project. Thus, the two-year duration of the proposed construction activities would only constitute a small percentage of the total 30-year exposure period over the lifetime of a receptor for exposure to toxic emissions. In addition, as discussed under checklist item b) above, emissions of all criteria pollutants, including fugitive $PM_{2.5}$, would be less than two pounds per day for both sites A2 and A4, which is way below the respective significance threshold. Further, implementation of EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements, specifically, Section 1.3.I Tune-up Logs, Section 3.3.B, Dust Control, and Section 3.4 Emissions Control would, in addition to other measures, as discussed under checklist item a) above, require construction contractors to maintain construction equipment used at the Project site regularly for efficient operation, monitor and control dust generated by short-term construction activities, and use construction equipment, diesel trucks, and generators equipped with Best Available Control Technology for emission reductions of TACs, which would ensure that potential DPM emissions from Project construction would be reduced and not result in significant health risks at nearby receptors resulting in a less than significant impact. (**Less than Significant**)

Operational-related TAC's could include diesel exhaust emissions from generators. However, the Project would include electric powered pumps, and no diesel-powered equipment would be used. As described in Section 1.7 of the Project Description, one worker vehicle trip per week is anticipated for the maintenance and operation of the pump station. Operation of the pump station and associated facilities is not expected to generate DPM emissions as there would be no TAC sources located or used at Site A2 or Site A4. Therefore, the Project operations would not contribute to existing health risks at the nearest off-site sensitive receptors in the Project vicinity. (**Less than Significant**)

e) **Site A2 and Site A4**

As a general matter, the types of land use development that pose potential odor problems include wastewater treatment plants, refineries, landfills, composting facilities and transfer stations.

Short-term construction activities using diesel powered construction equipment and vehicles that emit diesel- and/or gasoline- engine exhaust odors could be a potential source of objectionable odors and noticeable in the immediate vicinity up to about 50 feet from the operating equipment. However, as construction odors would be temporary, the location of the construction equipment would vary spatially at different points on the sites, and as there are no receptors within 50 feet of the two sites under consideration, which could be affected by these odors, any odors generated during Project construction would not affect a substantial number of people. In addition, the restriction of construction activities to daylight work hours and the implementation of the EBMUD standard practices and procedures described below would reduce this potential impact.

As detailed in the Project Description, a number of EBMUD standard practices and procedures, applicable to all EBMUD projects, have been incorporated into the Project, including Standard Construction Specification 01 35 44, Environmental Requirements. Section 1.3.I of this specification requires tune-up logs that provide records that show construction equipment in use at the Project sites has undergone required maintenance and requires:

- Submittal of a log of required tune-ups for all construction equipment, particularly haul and delivery trucks, on a quarterly basis for review.

Implementation of Section 1.3.I, Tune-up Logs, of EBMUD's Standard Construction Specification 01 35 44 ensures that construction equipment used at the Project site would be maintained regularly for efficient operation, reducing exhaust emissions to the environment that could generate objectionable odors.

Section 3.4.A of EBMUD's Standard Construction Specification 01 35 44 includes the following provisions for air quality and emissions control:

- The Contractor shall ensure that line power is used instead of diesel generators at all construction sites where line power is available.
- The Contractor shall ensure that for operation of any stationary, compression-ignition engines as part of construction, comply with Section 93115, Title 17, California Code of Regulations, ATCM for Stationary Compression Ignition Engines, which specifies fuel and fuel additive requirements as well as emission standards.
- Fixed temporary sources of air emissions (such as portable pumps, compressors, generators, etc.) shall be electrically powered unless the Contractor submits documentation and receives approval from the Engineer that the use of such equipment is not practical, feasible, or available. All portable engines and equipment units used as part of construction shall be properly registered with CARB or otherwise permitted by the appropriate local air district, as required.
- Contractor shall implement standard air emission controls such as:
  - Minimize the use of diesel generators where possible.
  - Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes as required by the California ATCM, Title 13, Section 2485 of California Code of Regulations. Clear signage shall be provided for construction workers at all access points.
  - Follow applicable regulations for fuel, fuel additives, and emission standards for stationary, diesel-fueled engines.

- Locate generators at least 100 feet away from adjacent homes.
- Perform regular low-emission tune-ups on all construction equipment, particularly haul trucks and earthwork equipment.

Implementation of Section 3.4.A, Air Quality and Emissions Control, of EBMUD's Standard Construction Specification 01 35 44 ensures specified air emissions control BMPs would be implemented to minimize short-term construction diesel exhaust emissions that could generate objectionable odors.

Because Section 1.3.I, Tune-up Logs, and Section 3.4.A, Air Quality and Emissions Control, of EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements, have been incorporated into the Project, and require regular maintenance of construction vehicles and equipment, and include provisions for BMPs for air emissions control, the Project impact related to creation of objectionable odors affecting a substantial number of people during construction would be less than significant. (**Less than Significant**)

Operation of a pump station that uses pumps powered by electricity to pump recycled water would not generate any odors. Therefore, the Project would not create objectionable odors during operation that would affect a substantial number of people. (**No Impact**)

References

BAAQMD, *Clean Air Plan,* September 15, 2010. Available: http://www.baaqmd.gov/Divisions/Planning-and-Research/Plans/Clean-Air-Plans.aspx

BAAQMD, *BAAQMD CEQA Air Quality Guidelines – Assessing the Air Quality Impacts of Projects and Plans*, December 1999.

BAAQMD, 2017. *BAAQMD CEQA Air Quality Guidelines*, adopted June 2, 2010, revised May 2017.

BAAQMD, 2017 Clean Air Plan: Spare the Air, Cool the Climate, adopted April 19, 2017.

EBMUD, Environmental Compliance Manual, Section 01 35 44, Environmental Requirements, March 2, 2018.

2.2.4 Biological Resources

Issues (and Supporting Information Sources):		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 U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c)	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (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 sites are south of Mt. Diablo, on the north end of the Diablo Range, within the Coast Range province and consist of non-native grasslands, landscaped, or developed communities in the City of San Ramon's Dougherty Valley in the southwest region of Contra Costa County. The valley is situated east of I-680 within the San Ramon Creek watershed. West Alamo Creek is approximately 100 feet south of Site A2 and is surrounded by a City of San Ramon designated Critical Wildlife Habitat, which extends to approximately 50 feet south of proposed Site A2 construction activities.

The biological analysis presents the findings of data review and of a reconnaissance-level site assessment[9] pertaining to terrestrial biological resources of the Study Areas. Use of the term "Study Area" in this section refers to the area where direct, indirect, or cumulative effects could occur to terrestrial biological resources as a result of the Project. The Study Areas are shown on Figure 7a, and generally include the Project sites and adjacent habitats. The Lilac Ridge Road Study Area includes the hillside up to and

[9] ESA biologist Elizabeth Hill surveyed the Study Area on July 28, 2016, to identify potential presence and distribution of common and special-status plant and wildlife species, and sensitive natural communities (ESA, 2016b).

including the ridgeline above Site A4 and Staging Area 2, in addition to the hillside below these sites. The Crow Canyon Road Study Area includes Staging Area 1 and the grasslands and trees immediately to the southeast. Landscaped and developed areas adjacent to Site A2 are considered part of the Dougherty Road Study Area.

Plant Communities and Wildlife Habitats

Plant communities are assemblages of plant species that present a characteristic appearance based on size, shape, and spacing of the plants that are the predictable result of plants' interaction with specific environments.[10] No rare or sensitive plant communities were identified within the Study Areas. Plant communities generally correlate with wildlife habitat types and those found within each Study Area; described in detail below. Table 7 indicates the plant communities for each Study Area.

TABLE 7
PLANT COMMUNITIES WITHIN BIOLOGICAL RESOURCES STUDY AREAS

Study Areas	Plant Communities	
	Landscaped/Developed	**Non-Native Grassland**
Crow Canyon Road Study Area (Staging Area 1)	Dominated by developed or disturbed areas, though portions of it are covered by landscaped vegetation, including native and non-native shrubs and trees.	Non-native grassland is located in the southern portion of the Study Area.
Dougherty Road Study Area (Potential Pump Station Site A2)	Dominated by landscaped native and non-native vegetation.	N/A
Lilac Ridge Road Study Area (Potential Pump Station Site A4 and Staging Area 2)	Access road to Staging Area 2 and other existing Reservoir R200 represents developed infrastructure.	Non-native grassland habitat dominates areas adjacent to Site A4 and Staging Area 2.

Landscaped/Developed

Native and non-native vegetation species found in landscaped and developed areas include coast live oak (*Quercus agrifolia*), valley oak (*Q. lobata*), toyon (*Heteromeles arbutifolia*), pine (*Pinus* sp.), Pacific rhododendron (*Rhododendron macrophyllum*), manzanita (*Arctostpahylos* sp.), coyote brush (*Baccharis pilularis*), Peruvian pepper tree (*Schinus molle*), chamise (*Adenostoma fasciculatum*), and rosemary (*Rosmarinus officinalis*). Irrigation has been applied to the majority of the landscaped areas to encourage the establishment of planted trees and shrubs.

Generally, plant cover in developed or disturbed areas is scarce due to the lack of topsoil. Developed or disturbed areas have been subject to intense or recurring disturbance, generally through soil compaction, paving, or removal or alteration of native vegetation. Pavement and ruderal ground characterize the Study Areas, which typically does not support high quality vegetation or wildlife habitat. However, the limited amount of vegetation present can be characterized by a small number of weedy and/or native plant

[10] The classification of communities presented here is based on A Manual of California Vegetation. Second Edition. John O. Sawyer, Todd Keeler-Wolf, and Julie M. Evens. 2009. *A Manual of California Vegetation. Second Edition.* California Native Plant Society, Sacramento, California, USA.

species including yellow star thistle (*Centaurea solstitialis*), coyote brush (*Baccharis pilularis*), wild oat (*Avena fatua*), and sweet fennel (*Foeniculum vulgare*).

Common avian wildlife found in landscaped and developed areas include red-breasted sapsucker (*Sphyrapicus ruber*), acorn woodpecker (*Melanerpes formicivorus*), western scrub-jay (*Aphelocoma californica*), mourning dove (*Zenaida macroura*), northern mockingbird (*Mimus polyglottos*), house finch (*Carpodacus mexicanus*), and American bushtit (*Psaltriparus minimus*). Mammals commonly associated with landscaped and developed areas include California ground squirrel (*Otospermophilus beecheyi*), striped skunk (*Mephitis mephitis*), raccoon (*Procyon lotor*), coyote (*Canis latrans*), and common bats.

Non-Native Grassland

Non-native grassland is composed of a dense cover of non-native annual grasses often associated with numerous annual and perennial herbs. Plant species associated with non-native grassland usually germinate in the late winter, grow actively during the winter and early spring, then produce numerous seeds that remain dormant during the summer and early fall. Species of the non-native grassland community identified during the reconnaissance-level site assessment include numerous common non-native annual grasses, such as annual fescue (*Vulpia* sp.), wild oat, and bromes (*Bromus hordaceus, B. diandrus,* and *B. madritensis*). Associated non-native herbs typically found in the Study Areas include black mustard (*Brassica nigra*) and filaree (*Erodium botrys*, *E. cicutarium*), in addition to invasive yellow star-thistle, Italian thistle (*Carduus pycnocephalus*), milk thistle (*Silybum marianum*), and sweet fennel. Sparse occurrences of dock (*Rumex* sp.) can be found in the Study Areas.

Common and characteristic wildlife observed during the reconnaissance-level site assessment in non-native grassland include song sparrow (*Melospiza melodia*), red-tailed hawk (*Buteo jamaicensis*), killdeer (*Charadrius vociferous*), and black phoebe (*Sayornis nigricans*). Mammals common to non-native grassland are similar to those found in the Landscaped/Developed habitat described above.

Special-Status Species

A number of species known to occur in the Study Areas vicinities are protected pursuant to federal and/or State endangered species laws, or have been designated Species of Special Concern by the California Department of Fish and Wildlife (CDFW). In addition, Section 15380(b) of the CEQA Guidelines provides a definition of rare, endangered or threatened species that are not included in any listing.[11] Per Section 15380(b), a species of animal or plant is: (1) "Endangered" when its survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors; or (2) "Rare" when either: (A) Although not presently threatened with extinction, the species is existing in such small numbers throughout all or a significant portion of its range that it may

[11] For example, vascular plants listed as rare or endangered or as CRPR Rank 1 or 2 are considered to meet Section 15380(b). Under some circumstances, CRPR Rank 3 or 4 species, or other species with locally limited distribution may also warrant consideration under CEQA.

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

A list of special-status species with potential to occur on or in the vicinity of the Project's Study Areas was compiled from a California Natural Diversity Database (CNDDB) nine-quad search for the following 7.5-minute United States Geological Survey (USGS) topographic quadrangles: Diablo, Antioch South, Clayton, Dublin, Hayward, Livermore, Tassajara, Las Trampas Ridge, and Walnut Creek (CDFW, 2018); a nine-quad search on the California Native Plant Society's (CNPS) Rare Plant Inventory (CNPS, 2018); a search of the Project Study Areas from the U.S. Fish and Wildlife Service endangered species database (USFWS, 2018); and biological literature of the region. Appendix C presents a comprehensive list of special-status plant and wildlife species that were included in the database searches. Special-status plants are not expected at any of the Project Study Areas based on the database searches and a review of available habitat at each Study Area.

Figure 7b shows the documented CNDDB species occurrences in the vicinity of the Study Areas, some of which have a moderate potential to occur as discussed below.[12]

However, a majority of these species are unlikely to occur in the Project Study Areas, or be affected by the Project, due to the Project's location being outside of special-status species' geographic range; habitats are of poor quality; or unsuitable conditions occur in the Project Study Areas (CDFW, 2018; CNPS, 2018; USFWS, 2018). From the full list of species in Appendix C, each special-status species was then individually assessed based on habitat requirements and distribution relative to vegetation communities that occur in and around the respective Study Areas. Table 8 lists the special-status species that have at least a moderate potential to occur within the Study Areas based on the database searches and the reconnaissance-level site assessment.

[12] Please see Appendix C for all the listed and special-status species considered for the Project.

Note: Refer to Figures 3 and 4 for pipeline alignments.

SRVRWP Pump Station R3000 . 160455

SOURCE: Google Earth, 2018; ESA, 2018

Figure 7a
Project Biological Resources Study Areas

SRVRWP Pump Station R3000 . 160455

SOURCE: CDFW, 2018

Figure 7b

CNDDB Species Occurrences in the Project Vicinity

Note: The distance to the nearest documented California red-legged frog occurrence from either proposed pump station site or staging area is 2.5 miles east of Site A2, beyond the extent of the map.

TABLE 8
SPECIAL-STATUS SPECIES THAT MAY OCCUR WITHIN STUDY AREA

Name	Listing Status	General Habitat Requirements	Occurrence	Potential for Species Occurrence Within the Study Areas
Amphibians				
California red-legged frog (*Rana draytonii*)	FT/ CT	Freshwater pools, ponds, reservoirs, and slow- moving streams with overhanging vegetation. Also found in woods adjacent to streams. Requires permanent or ephemeral water sources and needs pools of >0.5 m depth for breeding.	Historical range is Sacramento Valley east into the Sierra Nevada foothills.	**Moderate Potential.** Site A2 is less than 100 feet from the west branch of Alamo Creek, which could provide suitable migrating habitat for CRLF. Non-native grasslands in the vicinity of Crow Canyon Road and Lilac Ridge Road Study Areas unlikely to support migrating CRLF due to human disturbance and lack of aquatic habitat. The nearest occurrence of this species was documented approximately 2.5 east of the Study Area in a large detention pond.
Birds				
Cooper's hawk (Accipiter cooperii)	CDFW §3503.5	Forests, woodlands, and fields. Will also inhabit trees in suburban areas in parks and neighborhoods.	Widespread across California and the United States.	**Moderate potential.** A common raptor; open habitat areas exist nearby the proposed Project sites that could support this raptor. Large trees adjacent to Projects sites may provide nesting habitat.
Burrowing owl (*Athene cunicularia)*	BCC-/CSC (burrowing sites)	Nests and forages in low-growing grasslands with burrowing mammals	Interior areas of San Francisco Bay, with larger numbers in Alameda, Contra Costa, and Santa Clara counties.	**Moderate potential**. Although routine mowing activities and exposure to human disturbance is routine in Lilac Ridge Road Study Area, mammal burrows are present in the existing Reservoir R200 site (Staging Area 2), which could provide suitable habitat for burrowing owl (BUOW). Potential foraging and nesting habitat could be found near proposed Site A4.
Red-tailed hawk (*Buteo jamaicensis*)	CDFW §3503.5	Occupies numerous types of open habitat including desert, scrublands, grasslands, roadsides, fields and pastures. Commonly found at field edges and perched on fences, poles, and trees. Nests in tall trees.	Widespread across California and the United States.	**Moderate potential.** Common raptor. Open habitat areas exist nearby the Project site that could support this raptor. Large trees adjacent to Projects sites may provide nesting habitat.
Swainson's hawk (*Buteo swainsoni*)	--/ST	Summer resident; breeds in lower Sacramento and San Joaquin valleys, the Klamath Basin, and Butte Valley.	Nests in oaks or cottonwoods in or near riparian habitats; forages in grasslands, irrigated pastures, and grain fields	**Moderate potential.** Trees near West Alamo Creek could provide nesting habitat for Swainson's hawk.

Status Codes:
USFWS (U.S. Fish and Wildlife Service)
FE = Listed as Endangered by the Federal Government
FT = Listed as Threatened (likely to become Endangered within the foreseeable future) by the Federal Government. CDFW (California Department of Fish and Wildlife)
CE = Listed as Endangered by the State of California
CT = Listed as Threatened by the State of California
CSC = California Species of Special Concern
§3503.5 = CDFW Fish and Game Code Section §3503.5; this code protects nesting raptors and birds of prey

Potential to Occur Categories:
Low Potential = The project areas and/or immediate vicinities only provide limited habitat. In addition, the species' known range may be outside of the project areas.
Moderate Potential = The project areas and/or immediate vicinities provide suitable habitat.
High Potential = The project areas and/or immediate vicinity provide ideal habitat conditions.

SOURCES: CDFW, 2018; CNPS, 2018; USFWS, 2018a; USFWS, 2018b; USFWS, 2018c.

Impacts

a) The biological inventory database searches and field studies identified several special-status wildlife species that have an absent to low potential to occur within the Study Area. These species were dismissed from further analysis due to lack of primary habitat; routine mowing activities and general human disturbance present in the Study Areas; and/or the database record was considered historical. Some of these species are displayed on Figure 7b due to their historical presence, or because they have occurred in habitat not found within any of the Study Areas. Few species were considered to have a moderate potential to occur and be potentially affected by the Project. These species are listed in Table 8 and are discussed further below. The following discussion presents special-status wildlife species with a moderate potential to occur in the Project Study Areas and describes potential Project impacts within each Study Area (if any), as well as mitigation measures, as applicable.

Special-status Amphibians

California Red-legged Frog. The California red-legged frog (*Rana draytonii*) (CRLF) is a federally threatened species and a state species of special concern. The nearest USFWS-designated Critical Habitat for CRLF is 2.75 miles east of the Dougherty Road Study Area. The distance to the nearest documented CRLF occurrence from any Project Study Area is 2.5 miles east of Site A2 in a large detention pond (CDFW, 2018). Although CRLF are known to migrate across grasslands, no CRLF were observed during the biological site reconnaissance survey at any of the Project Study Areas. The overall lack of aquatic habitat at Crow Canyon Road and Lilac Ridge Road Study Areas provides little opportunity during both construction and operation of the Project for CRLF to forage, seek cover, or breed in creeks or drainage segments in the vicinity of these Study Areas, which includes Site A4, Staging Area 2, and Staging Area 1. Furthermore, these areas are exposed to human disturbance such as nearby residential development construction, vehicle traffic, and recreation, which makes these areas unsuitable habitat for the CRLF. As such, potential construction and operational impacts to CRLF foraging and breeding habitat in the Crow Canyon Road and Lilac Ridge Road Study Areas are considered less than significant.

The Dougherty Road Study Area, which includes Site A2, is less than 100 feet from the west branch of Alamo Creek. Although Site A2 provides limited upland estivation or dispersal opportunities for CRLF due to the adjacent roadway, potential CRLF daily and seasonal movements in the Alamo Creek riparian corridor may be indirectly affected during Project construction activities. Adverse effects may include increased visual disturbance as a result of construction personnel, and increased noise and substrate vibrations as a result of heavy equipment use and construction personnel, both of which may cause individuals to move out of refugia exposing them to a greater risk of predation or desiccation. These impacts are considered significant. Site A2 operational impacts to CRLF are considered less than significant due to the small footprint of the Site A2

facility, limited habitat value of the site, and minimal presence of humans and vehicles at the site during operations.

As detailed in the Project Description, a number of EBMUD standard practices and procedures, applicable to all EBMUD projects, have been incorporated into the Project, including EBMUD Standard Construction Specification 01 35 44, Environmental Requirements, Section 3.8, Protection of Birds Protected under the Migratory Treaty Act and Roosting Bats, which would require all contractor construction personnel to attend an environmental training program provided by the District of up to one-day for site supervisors, foreman and project managers, and up to 30-minutes for non-supervisory contractor personnel, prior to the beginning of construction. The training program shall be completed in person or by watching a video at an EBMUD-designated location, conducted by a qualified biologist provided by EBMUD. The program will discuss all sensitive habitats and sensitive species that may occur within the project work limits, including CRLF, and the responsibilities of contractor's construction personnel, applicable mitigation measures, and notification requirements. The contractor is responsible for ensuring that all workers requiring training are identified to EBMUD. However, potential CRLF daily and seasonal movements in the Alamo Creek riparian corridor may be indirectly affected during Project construction activities. These impacts include visual disturbance as a result of construction personnel, and increased noise and substrate vibrations as a result of heavy equipment use and construction personnel. Even with compliance with EBMUD construction specification, there is potential for individuals to move out of refugia exposing them to a greater risk of predation or desiccation. This impact would be considered significant. Implementation of **Mitigation Measure BIO-1: Conduct Pre-Construction Surveys for California Red-legged Frog** and **Mitigation Measure BIO-2: Wildlife Exclusion Fencing** would require CRLF pre-construction surveys at Site A2 and installation of wildlife exclusion fencing along the southeast portion of Site A2 to isolate construction activities and deter CRLF from potentially migrating into the construction site. Pre-construction project site surveys are the best method for assessing whether CRLF are present where suitable habitat is present. The egress points constructed in the exclusion fencing would further reduce impacts to CRLF, allowing individuals to exit the construction site in the event they became trapped. With implementation of this mitigation measure, impacts to CRLF are considered less than significant. (**Less than Significant with Mitigation**)

> **Mitigation Measure BIO-1: Conduct Pre-Construction Surveys for California Red-legged Frog.**
>
> Within 24 hours before any construction activities that involve ground disturbance or vegetation removal a USFWS approved biologist will conduct pre-construction surveys for CRLF at Site A2. The survey area will include all habitats suitable for these species within a 300-foot buffer of the work limits. Whenever a lapse in project-related construction activity of 2 weeks or greater has occurred these areas will be re-inspected. If CRLF(s) (including eggs, larvae, or adult forms) is/are found

during pre-construction surveys, the biologist will contact USFWS and/or CDFW to determine whether their relocation is appropriate and if additional measures are necessary. Construction activities will not proceed until consultation and/or relocation activities are complete.

A monitoring report of all activities associated with surveys and mitigation for the CRLF will be submitted to the USFWS and CDFW by EBMUD no later than three months after construction is completed. The monitoring report will describe methods and results of any field survey efforts and mitigation measures implemented before, during or after project construction.

Mitigation Measure BIO-2: Wildlife Exclusion Fencing.

A multi-purpose protective barrier (such as silt fencing) or CDFW-approved species exclusion fencing shall be constructed at Site A2 to deter common and special status wildlife in the West Alamo Creek riparian corridor from entering into the Project construction work limits. Fence installation shall be overseen by a qualified biologist. The fence shall be a minimum height of 3 feet above ground surface with an additional 4-6 inches of fence material buried such that species cannot crawl under the fence. The fencing will be installed along the south boundary of Site A2, starting from Dougherty Road and extending approximately 265 linear feet west to the West Alamo Creek Trail. The barrier shall be installed adjacent to the existing chain-link fence, where feasible. At the southeastern boundary of Site A2, the exclusion fence shall extend approximately 90 linear feet to the south along the existing chain-link fence.

- The fencing will contain one-way egress for sensitive species to the extent possible;
- Signage shall be installed on the fencing to identify sensitive habitat areas and restrict construction activities;
- No equipment mobilization, grading, clearing, or storage of equipment or machinery, or similar activity shall occur at the project site until a qualified biologist has inspected and approved the wildlife exclusion fencing; and
- EBMUD shall ensure that the temporary fencing is continuously maintained until all construction is complete.

Roosting Bat Species

Common Roosting Bats. Bats and other non-game mammals are protected in California under the California Fish and Game Code Section 4150, which states that all non-game mammals or parts thereof may not be taken or possessed except as otherwise provided in the code or in accordance with regulations adopted by

the California Fish and Game Commission. The following activities are prohibited and would be considered a significant impact: (1) destruction of an occupied, non-breeding bat roost, resulting in the death of bats; (2) disturbance that causes the loss of a maternity colony of bats (resulting in the death of young); or (3) destruction of hibernacula[13] (although hibernacula are generally not formed by bat species in the Bay Area due to sufficiently high temperatures year-round). Maternity roosts are those that are occupied by pregnant females or females with non-flying young. Non-breeding roosts are day roosts without pregnant females or non-flying young.

No special status bats are known to occur in the Project's Study Areas (CDFW, 2018). Based on the site reconnaissance survey, no roosting habitat is present for common bat species at Site A4 or Staging Area 1 or 2. However, common bats could utilize the trees at Site A2 for roosting. Removing existing trees in support of Project construction could result in significant impacts to common roosting bats through direct mortality or indirect disturbance, such as increased noise, both of which are considered significant impacts. As detailed in the Project Description, a number of EBMUD standard practices and procedures, applicable to all EBMUD projects, have been incorporated into the Project, including EBMUD Standard Construction Specification 01 35 44, Environmental Requirements, Section 3.8, Protection of Birds Protected under the Migratory Treaty Act and Roosting Bats, which includes the following provisions:

Before beginning construction, all Contractor construction personnel are required to attend an environmental training program provided by the District of up to one-day for site supervisors, foreman and project managers, and up to 30-minutes for non-supervisory contractor personnel. The training program will be completed in person or by watching a video at an EBMUD-designated location, conducted by a qualified biologist provided by EBMUD. The program will discuss all sensitive habitats and sensitive species that may occur within the project work limits, including roosting bats, and the responsibilities of Contractor's construction personnel, applicable mitigation measures, and notification requirements. The Contractor is responsible for ensuring that all workers requiring training are identified to EBMUD.

- If construction commences between March 1 and July 31, during the bat maternity period, EBMUD will conduct a preconstruction survey for roosting bats within two weeks prior to construction to ensure that no roosting bats will be disturbed during construction.

- If roosting surveys indicate potential occupation by a special-status bat species, and/or identify a large day roosting population or maternity roost by any bat species within 200 feet of a construction work area, a qualified biologist provided by EBMUD will conduct focused day- and/or night-emergence surveys, as appropriate.

[13] Hibernaculum refers to the winter quarters of a hibernating animal.

- If active maternity roosts or day roosts are found within the project site, or in areas subject to disturbance from construction activities, avoidance buffers shall be constructed. The buffer size will be determined by EBMUD in consultation with CDFW.

- If a non-breeding bat roost is found in a structure scheduled for modification or removal, the bats shall be safely evicted, under the direction of a qualified biologist provided by EBMUD in consultation with CDFW to ensure that the bats are not injured.

- If preconstruction surveys indicate that no roosting is present, or potential roosting habitat is unoccupied during the construction period, no further action is required. Trees and shrubs within the construction footprint that have been determined to be unoccupied by roosting bats, or that are located outside the avoidance buffer for active roosting sites may be removed. Roosting initiated during construction is presumed to be unaffected, and no buffer would be necessary.

Section 3.8, Protection of Birds Protected under the Migratory Treaty Act and Roosting Bats, of EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements, will be implemented as part of the Project, which addresses impacts to roosting bats and includes provisions for pre-construction roosting bat surveys, delineation of avoidance buffer zones, and roosting monitoring during construction. As such, the construction impact related to roosting bats would be less than significant. The EBMUD Practices and Procedures Monitoring and Reporting Plan (Appendix A of this Initial Study/Mitigated Negative Declaration) lists the applicable standard specifications language. Once operational, the Project security lighting would be shielded such that no light is directed off the site or into the sky, and would require one worker vehicle trip per week for operation and maintenance. Because the light would be shielded away from potential roosting habitat and the operation and maintenance of the pump station would not result in human intrusion to potential roosting habitat, operation-related impacts to common roosting bats would be less than significant. (**Less than Significant**)

Nesting Birds

Special-Status and Common Nesting Birds. The Migratory Bird Treaty Act (MBTA) and California Fish and Game Code protect raptors (Section 3503.5), most native migratory birds (Section 3513), and resident breeding birds (Section 3503) that may migrate through and/or nest in the Project Study Areas. Migratory and resident birds, which breed locally in Dougherty Valley, have the potential to nest in mature trees, grasslands, and ornamental landscaping within the Project's Study Areas. Common and special-status breeding birds that may nest in the Project's Study Areas could be adversely affected by Project construction through increased noise disturbance, tree removal, or visual disturbance.

Mature trees within the Dougherty Road Study Area and Crow Canyon Road Study Area provide suitable nesting habitat for Cooper's hawk (*Accipiter cooperii*), a state species of special concern; Swainson's hawk (*Buteo swainsoni*), a state threatened and federal Bird of Conservation Concern; Red-tailed hawk (*Buteo jamaicensis*), a state species of special concern, and common passerines and raptors. Lilac Ridge Road and Crow Canyon Road study areas provide ground nesting habitat for common birds, while Lilac Ridge Road provides ground nesting habitat for western burrowing owl (*Athene cunicularia*) in the grassland portions of the study area. As a result of Project construction, any nesting raptors within 250 feet and nesting passerine birds within 150 feet could be disrupted by Project construction activities. The displacement of actively nesting birds would constitute a significant impact.

The western burrowing owl is a state species of special concern and federal Bird of Conservation Concern. The nearest western burrowing owl occurrence documented in CNDDB is located over two miles east of the proposed sites A2 and A4 (CDFW, 2017). Nesting western burrowing owls have a moderate potential to occur in the low non-native grasslands in the Lilac Ridge Road Study Area. Western burrowing owl burrow sites are found in low grasslands that are created by other mammals such as ground squirrels. The few mammal burrows identified during the site reconnaissance survey were either located within the Reservoir R200 site or in the tall grassland in the vicinity of the proposed Site A4. All other proposed Project sites do not display western burrowing owl nesting habitats due to lack of mammal burrows or suitable grassland habitat. Due to routine mowing of the grasslands at the Reservoir R200 site, which would be used as the Project's Staging Area 2, western burrowing owls are unlikely to have the opportunity to occupy and nest in burrows in this area due to the visual and noise disturbance caused by EBMUD operations. Although the grasslands in Site A4 could be used by foraging western burrowing owls, the tall height of the grass is not characteristic of that used for nesting habitat. Foraging western burrowing owls are not protected. The majority of the proposed Site A4 is not routinely mowed, only the margin bordering the access road. However, if western burrowing owls utilize mammal burrows located in low grassland habitat in the Lilac Ridge Road Study Area, Project construction, visual and noise disturbance could cause significant impacts to nesting sites if burrowing owl individuals abandon their nests.

As detailed in the Project Description, a number of EBMUD standard practices and procedures, applicable to all EBMUD projects, have been incorporated into the Project, including EBMUD Standard Construction Specification 01 35 44, Environmental Requirements, Section 3.8, Protection of Birds Protected under the Migratory Treaty Act and Roosting Bats, which includes the following provisions:

- Before beginning construction, all Contractor construction personnel are required to attend an environmental training program provided by EBMUD of up to one-day for site supervisors, foreman and project managers, and up to

30-minutes for non-supervisory contractor personnel. The training program will be completed in person or by watching a video at an EBMUD-designated location, conducted by a qualified biologist provided by EBMUD. The program will discuss all sensitive habitats and sensitive species that may occur within the project work limits, including nesting birds, and the responsibilities of Contractor's construction personnel, applicable mitigation measures, and notification requirements. The Contractor is responsible for ensuring that all workers requiring training are identified to EBMUD.

- It is unlawful to pursue, hunt, take, capture, or kill any migratory bird without a permit issued by the U.S. Department of the Interior.
- If construction commences between February 1 and August 31, during the nesting season, EBMUD will conduct a preconstruction survey for nesting birds within 7 days prior to construction to ensure that no nest will be disturbed during construction.
- If active nests of migratory bird species (listed in the MBTA) are found within the project site, or in areas subject to disturbance from construction activities, an avoidance buffer to avoid nest disturbance shall be constructed. The buffer size will be determined by EBMUD in consultation with CDFW and is based on the nest location, topography, cover and species' tolerance to disturbance.
- If an avoidance buffer is not achievable, a qualified biologist provided by EBMUD will monitor the nest(s) to document that no take of the nest (nest failure) has occurred. Active nests shall not be taken or destroyed under the MBTA and, for raptors, under the CDFW Code. If it is determined that construction activity is resulting in nest disturbance, work should cease immediately and the Contractor shall notify the Engineer who will consult with the qualified biologist and appropriate regulatory agencies.

If preconstruction surveys indicate that nests are inactive or potential habitat is unoccupied during the construction period, no further action is required. Trees and shrubs within the construction footprint that have been determined to be unoccupied by special-status birds or that are located outside the avoidance buffer for active nests may be removed. Nests initiated during construction (while significant disturbance from construction activities persist) may be presumed to be unaffected, and only a minimal buffer, determined by EBMUD's biologist, would be necessary. Because Section 3.8, Protection of Birds Protected under the Migratory Treaty Act and Roosting Bats, of EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements, will be implemented as part of the Project, and includes provisions for pre-construction nesting bird surveys, delineation of avoidance buffer zones, and monitoring during construction, construction impacts related to special status and common nesting birds would be less than significant. The EBMUD Practices and Procedures Monitoring and Reporting Plan (Appendix A of this Initial Study/Mitigated Negative Declaration) lists the applicable standard specifications language. (**Less than Significant**)

Once the Project is completed and operational, the construction easement at Site A2 would be restored similar to preconstruction conditions with the planting of native shrubs. The proposed outdoor security lighting would be installed with motion detectors and luminaire shields such that no light is directed off the site or into the sky. Permanent reduction in bird foraging habitat would not constitute a significant impact in consideration of comparable foraging habitat available in the vicinity. Because habitat would be restored and no light would be directed towards the site or sky, operational impacts to nesting birds would be considered less than significant. (**Less than Significant**)

b) Both Site A2 and A4, as well as Staging Area 1 and Staging Area 2 lack riparian vegetation or other sensitive natural communities; therefore, the Project would not impact these communities. (**No Impact**)

c) Staging Area 1 and Staging Area 2 do not contain protected wetlands. Site A2 is located less than 100 feet from the west branch of Alamo Creek, however, due to Site A2's distance from Alamo Creek, no impacts to this creek are anticipated. During the reconnaissance-level site visit, slight variations of non-native grasslands were observed in the vegetation within the proposed Site A4. However, the absence of wetland hydrology, wetland vegetation, or hydric soils indicate no presence of wetlands. Furthermore, aerial imagery displays construction-related earthwork disturbance at this location during the construction of DERWA's Reservoir R200 project. Directly southeast of the proposed Site A4 access road intersection with Lilac Ridge Road, an approximate 50 feet x 25 feet pool feature has historically been observed at this location, per *DERWA Tank R-200 Project Mitigated Negative Declaration – Issues Raised in Comments* (ESA, 2003). Since that document's publication, the pool is no longer present and active construction of a residential community is occurring at this location. Because no wetlands occur at Site A2 or Site A4, or within either staging area, the Project would not result in any impacts to wetlands. (**No Impact**)

d) Project construction would not create a barrier to, or substantially interfere with, wildlife movements through the study areas or the greater Dougherty Valley. The small size and location of the potential pump station sites and staging areas make them unlikely to significantly impinge on animal movements. All trees impacted by the Project would be replaced, and 0.16 acres of grassland would be impacted at Site A2 and 0.5 acres of grasslands would be impacted at Site A4. The dense riparian habitat located 100 feet south of Site A2 surrounding the west branch of Alamo Creek, which provides cover for wildlife movement, would not be impacted. Human traffic from construction may have a temporary impact on animals dispersing or moving through the Project sites and staging areas, but this short-term impact would be less than significant, because wildlife movement impacts would be confined to work (daytime) hours, and the Project's potential pump station sites are in the vicinity of suitable habitat that would still remain available for wildlife movement during the construction and operation of the Project. After construction, the new Pump Station R3000 would be fenced to exclude wildlife, and wildlife movement could occur around the enclosed site.

Therefore, the Project is not anticipated to 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 due to the small footprint of the Project. (**No Impact**)

e) Pursuant to California Government Code §53091, EBMUD, as a utility district serving a broad regional area, is not subject to building and land use zoning ordinances (e.g., tree ordinances) for projects involving facilities for the production, generation, storage, or transmission of water. However, it is the practice of EBMUD to work with local jurisdictions and neighboring communities during project planning, and to consider local environmental protection policies for guidance.

City of San Ramon General Plan 2035

Chapter 8 Open Space and Conservation of the General Plan, includes an open space action plan that creates a structure for implementation of the General Plan by establishing and strengthening partnerships and coordination with relevant groups and agencies, securing funding sources, and establishing preservation priorities (City of San Ramon, 2015). The following General Plan policies may be applicable to the Project:

> *8.1-G-1* Protect and maintain the quality of biological resources in the San Ramon Planning Area, while also balancing the needs of growth and development.
>
> *8.3-G-1* Acquire, preserve, and maintain open space and its natural resources for future generations.
>
> *8.3-G-2* Strengthen the City's partnership with East Bay Regional Parks District, Contra Costa County, other jurisdictions and private organizations to expand the ridgeline and hillside open space system in the City's Planning Area.
>
> *8.4-G-1* Expand the ridgeline and hillside open space system in the City's Planning Area by joint efforts with East Bay Regional Parks District, Contra Costa County and nonprofit trustee agencies.

The Project would not conflict with any of the applicable guiding policies of the General Plan listed above. Impact discussions a), b) and d) above detail how incorporation of several of EBMUD practices and procedures and mitigation measures into the Project would ensure that impacts to special-status species and wildlife habitats would be less than significant, with the implementation of mitigation measures in some circumstances. In regards to expanding the ridgeline and hillside open space system, the new pump station would be located on an area of approximately 5,500 square feet within an existing developed area of the City of San Ramon, and as discussed in Section 2.2.1, *Aesthetics*, of this Initial Study, the pump station would not obstruct views of a ridgeline.

Dougherty Valley Specific Plan

The Open Space and Conservation element of the Dougherty Valley Specific Plan establishes a system of open space which improves ecological values, provides recreational opportunities, enhances the character of the region and contributes to a high quality of life in and around Dougherty Valley.

The Project would not conflict with the Open Space and Conservation element of the Dougherty Valley Specific Plan because the Project would not directly interfere with the ecological value of West Alamo Creek or significantly affect the extensive open space system.

City of San Ramon Municipal Code

The City of San Ramon provides for the protection of trees in the Municipal Code Sections C4-31 through C4-40, and C6-46. The Municipal Code outlines permit requirements for tree-related work (removal, planting or pruning). The proposed Site A2 includes trees that may be considered protected in accordance with the San Ramon Municipal Code.

City of San Ramon Zoning Ordinance, Division D5, Chapter II – Tree Preservation and Protection

The City of San Ramon Zoning Ordinance, Division D5, Chapter II – Tree Preservation and Protection provides regulations for the protection, preservation, maintenance, and replacement of native oak trees, habitat values of oak woodlands, trees of historic or cultural significance, groves and stands of mature native trees; or mature trees and native habitat in general. The ordinance defines protected trees as follows:

- A native oak tree with a diameter of six or more inches as measured 54 inches above the ground;
- A heritage, or landmark tree or grove, or significant groves or stands of trees identified by City Council Resolution;
- A tree required to be planted, relocated, or preserved that is identified as a condition of approval for a Tree Removal Permit or other discretionary permit, and/or as environmental mitigation;
- A tree within 100 feet of a perennial stream, or within 50 feet of a seasonal stream that is six inches or more in diameter as measured at 54 inches above the ground; or
- Any other mature tree that is eight inches or more in diameter as measured at 54 inches above the ground that is not otherwise exempt.

Under this Ordinance, a tree removal permit would be required prior to: the relocation, removal, cutting-down, or other act that causes the destruction of a protected tree; the issuance of building or grading permits resulting in the removal of a protected tree; or the approval of a Development Plan, Use Permit, Minor

Use Permit, Variance, or subdivision map, hereafter referred to as "discretionary projects" resulting in the removal of a protected tree. The City may condition issuance of such permits on replacement of trees in kind as set forth in Section D5-10, Table 5-1. However, this Ordinance notes that the required number of replacement trees can be reduced if the subject site cannot adequately support the total number of required replacement trees. In addition, in the case where an approved tree replacement location is characterized as non-native habitat such as an incompatible ornamental landscape, urban development, and/or narrow roadway median, the replacement tree can be a non-native species.

As stated above, pursuant to California Government Code §53091, EBMUD, as a utility district serving a broad regional area, is not subject to building and land use zoning ordinances (e.g., tree ordinances) for projects involving facilities for the production, generation, storage, or transmission of water. However, as detailed in the Project Description, EBMUD has worked with the City of San Ramon during project planning to consider local environmental protection policies for guidance.

Existing trees to be retained at Site A2 and Staging Area 1 could be adversely affected by Project-related construction activities. Potential impacts to retained trees include: mechanical damage to tree trunks and canopies from inadvertent contact by construction equipment, vehicles or construction materials; root damage resulting from grading or excavation activities; or, root damage resulting from soil compaction caused by heavy equipment or vehicle traffic. These impacts to retained trees would conflict with City of San Ramon Zoning Ordinance and would constitute a significant impact. As detailed in the Project Description, a number of EBMUD standard practices and procedures, applicable to all EBMUD projects, have been incorporated into the Project, including EBMUD Standard Construction Specification 01 35 44, Environmental Requirements, 3.7, Protection of Native and Non-native Protected Trees, which includes best practices for protecting trees that are not to be removed within the Project construction limits, including indicating tree protection on the construction drawings, pruning pursuant to Tree Pruning Guidelines of the International Society of Arboriculture, installation of exclusion fencing, exclusion of work or storage inside of the tree protection zone, and consulting with an arborist for pruning or tree replacement. The EBMUD Practices and Procedures Monitoring and Reporting Plan (Appendix A of this Initial Study/Mitigated Negative Declaration) lists the applicable standard specifications language. As such, impacts to retained trees during construction and operation of the Project are considered less than significant.

Up to thirteen trees (Live Oak, Valley Oak and Elm), ranging in size between four and eighteen inches' DBH, would be removed during pump station construction at Site A2, including two trees located within the temporary construction easement, and one tree within the landscape strip between the curb and the sidewalk. The construction easement has adequate room to support the replacement of the two trees that would be removed in this easement. No tree removal would be needed

for construction at Site A4, or use of either Staging Area 1 or Staging Area 2. Tree removal could conflict with City of San Ramon Zoning Ordinance, and if so, would constitute a significant impact. As detailed in the Project Description, however, Site A2 includes a landscape design consistent with the ARB review comments, that is based on the property's post-construction capacity to accommodate new trees. This landscape design includes planting of a mixture of tree species, including coast live oak, evergreen and Crape Myrtle within the pump station landscape areas and the temporary construction easement. In accordance with the City of San Ramon Zoning Ordinance for tree preservation, the proposed landscaping would accommodate as many trees in kind as is feasible [14] and the remainder would match the existing tree landscaping along Dougherty Road. In addition, the construction easement at Site A2 would be restored with shrubbery. Site A4 includes a landscape design similar to Site A2 although no tree removal is required for Site A4. No operational tree-related impacts are expected to occur as a result of the Project. Because the landscape design for the Project maximizes the sites' post-construction capacity for new trees that would match the existing nearby landscaping, impacts resulting from tree removal during construction and operation of the Project are considered less than significant. (**Less than Significant**)

f) West Alamo Creek, which is approximately 100 feet south of Site A2, is surrounded by a City of San Ramon designated Critical Wildlife Habitat. The Critical Wildlife Habitat area extends to approximately 50 feet south of proposed Site A2 construction activities. However, there is no critical habitat designated at Site A2. No habitat conservation plans, natural community conservation plan, or other approved conservation plans have been approved for lands that include the Project Study Areas. (**No Impact**)

References

California Department of Fish and Wildlife (CDFW), *California Natural Diversity Database Summary Table Report for Antioch South, Clayton, Diablo, Dublin, Hayward, Las Trampas Ridge, Livermore, Tassajara, and Walnut Creek Quadrangles. Commercial Version,* April 18, 2018.

California Native Plant Society (CNPS), Rare Plant Program, *Inventory of Rare and Endangered Plants* (online edition, v8-02). California Native Plant Society, Sacramento, CA. Available online at http://www.rareplants.cnps.org. Accessed on April 18, 2018.

City of San Ramon, *City of San Ramon General Plan 2035*, adopted by the San Ramon City Council on April 28, 2015.

City of San Ramon, *Zoning Ordinance, Division D5 - Resource Management*, Chapter II. Adopted October 27, 2015.

[14] Per ESA's arborist and landscape architect, coast live oaks need approximately 40 feet of space between each tree.

Contra Costa County, *Dougherty Valley Specific Plan*, Contra Costa County, City of San Ramon, February 11, 2014.

Dublin San Ramon Services District, East Bay Municipal Utility District Recycled Water Authority (DERWA), *Tank R-200, Recycled Water Program Environmental Checklist Form*, prepared for Dublin San Ramon Services District, East Bay Municipal Utility District Recycled Water Authority (DERWA), 2003.

EBMUD, Standard Construction Specification, Section 01 35 44, Environmental Requirements, March 2, 2018.Environmental Science Associates (ESA), 2016, *SRVRWP Pump Station R3000 Project Site Reconnaissance Survey*, performed by Liz Hill, July 28, 2016.

ESA, 2003. *DERWA Tank R-200 Project Mitigated Negative Declaration – Issues Raised in Comments.* Memorandum to Dublin San Ramon Services District/East Bay Municipal Utility District Recycled Water Authority. May 19, 2003.

United States Fish and Wildlife Service (USFWS), 2018. *Official Species list for the EBMUD Pump Station R3000: Lilac Ridge Road Study Area, Crow Canyon Study Area, and Dougherty Road Study Area in San Ramon*, CA. April 2018.

USFWS, 2016. Alameda whipsnake (*Masticophis lateralis euryxanthus*) Basic Species Information. Accessed online: https://www.fws.gov/sacramento/es_species/Accounts/Amphibians-Reptiles/es_alameda-whipsnake.htm. Last updated: September 16, 2016.

2.2.5 Cultural Resources

Issues (and Supporting Information Sources):		*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 as defined in §15064.5?	☐	☐	☐	☒
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☒	☐
c)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐
d)	Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

Discussion

Information in the following sections is based on background research and a surface reconnaissance conducted in August 2016 (Koenig, 2017). Once operational, the Project site would not include any ground disturbing activities that would result in the potential inadvertent discovery of archaeological resources or human remains, or the destruction of a unique paleontological resource or site or unique geologic feature. As there would be no ground disturbing activities during the operation of Pump Station R3000, the following discussion focuses on construction-related impacts.

a) **Site A2 and Site A4**

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. This section discusses architectural resources; archaeological resources that are potential historical resources are discussed in Section b) below.

There are no architectural resources on Site A2, Site A4, or the staging areas. In addition, there are no known architectural resources potentially eligible for listing in the California Register (that meet the 45-year-old minimum age threshold for consideration), including buildings, structures, objects, or districts, immediately adjacent to Site A2, Site A4, or the staging areas. As there are no historical resources present, the Project would not cause a substantial adverse change in the significance of a historical resource. (**No Impact**)

b) **Site A2 and Site A4**

This section discusses archaeological resources, both as historical resources according to Section 15064.5 of the CEQA Guidelines as well as unique

archaeological resources as defined in Section 21083.2(g) of the CEQA Guidelines. A significant impact would occur if the Project would cause a substantial adverse change to an archaeological resource through physical demolition, destruction, relocation, or alteration of the resource.

EBMUD maintains an Archaeological Resources Geographic Information System (GIS) database that is updated annually with the results of a records search of the NWIC of the California Historical Resources Information System. A Project specific records search was completed utilizing the GIS database that included a 0.5-mile radius around the two alternative pump station locations in order to: (1) determine whether known cultural resources had been recorded within or adjacent to the Project sites; (2) assess the likelihood of unrecorded cultural resources based on historical references and the distribution of environmental settings; and (3) develop a context for identification and preliminary evaluation of cultural resources.

No prehistoric archaeological resources or historic-era sites eligible for inclusion in the California Register or eligible as a unique archaeological resource have been previously identified in or within a 0.5-mile radius of Site A2, Site A4, or the staging areas.

Staging Area 1 is an unpaved area adjacent to Crow Canyon Road that has been used as a staging area previously. Staging Area 2 is a paved area next to Reservoir R200. No cultural resources were identified at these locations and there is a very low sensitivity for buried or previously undiscovered archaeological resources.

An archaeological surface survey was completed to determine whether previously undocumented archaeological resources were located at either of the alternative pump station sites (Koenig, 2017). Site A2 is located on a steep (45 degree) slope. Landscaped trees and shrubs provided the vegetation. Bare areas provided moderate visibility (approximately 50 percent). Soil is light brown silty clay (classified as Diablo clay, 15 to 30 percent slopes). No cultural resources or other evidence of past human use was identified during the archaeological survey effort at Site A2, and Site A2 has a very low sensitivity for buried or previously undiscovered archaeological resources because of the existing environmental setting, slope, distance to natural resources, and scarcity of known archaeological sites in the vicinity.

Site A4 is located on a moderate to very steep (20 to 45 degree) slope. Non-native grassland habitat in undisturbed areas adjacent to the road and water tank area limited visibility (approximately 10 percent). Soil is light brown silty clay (classified as Diablo clay, 30 to 50 percent slopes). No cultural resources or other evidence of past human use was identified during the archaeological survey effort at Site A4, and Site A4 has a very low sensitivity for buried or previously undiscovered archaeological resources because of the existing environmental setting, slope, distance to natural resources, and scarcity of known archaeological sites in the vicinity.

Based on the results of the records search, surface survey, and the geologic context there is a low potential for the presence of subsurface prehistoric and historic-era archaeological deposits within Site A2, Site A4, or the staging areas. While unlikely, the inadvertent discovery of archaeological resources during construction cannot be entirely discounted, and disturbance of an archaeological resource could cause a significant impact.

As detailed in the Project Description, a number of EBMUD standard practices and procedures, applicable to all EBMUD projects, have been incorporated into the Project, including EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements. Section 3.9, Protection of Cultural and Paleontological Resources, of this standard specification, which includes appropriate cultural resources management practices and complies with statutory requirements, outlines the following procedures:

- Preconstruction cultural resources training is required for all construction personnel.
- In the event that a cultural or paleontological resource is identified during preconstruction activities or during excavation for construction activities, all work within 100 feet of the resource shall be halted until a qualified archaeologist can review, identify, and evaluate the resource for its significance. Should the archaeologist determine that an archaeological resource has the potential to be a tribal cultural resource, a Native American monitor shall be retained by EBMUD to monitor work in the area where the tribal cultural resource was discovered.

Because Section 3.9, Protection of Cultural and Paleontological Resources, of EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements, has been incorporated into the Project, and it requires implementation of archaeological resources procedures that address the inadvertent discovery of archaeological resources and ensures compliance with legal requirements regarding the protection of such resources, the Project's construction impacts related to archaeological resources are less than significant. (**Less than Significant**)

c) **Site A2 and Site A4**

Both Sites A2 and A4, associated pipelines, and the staging areas are located within the rolling East Bay Hills adjacent to San Ramon Valley. The Project sites have no unique geologic features. Therefore, there is no impact related to destruction of a unique geologic feature.

As discussed below in Section 2.2.6, *Geology and Soils*, both Sites A2 and A4, associated pipelines, and the staging areas are located on a ridge underlain by overturned sedimentary strata of Green Valley and Tassajara formations which was deposited in the Miocene and Pliocene epochs of the Tertiary era. A search of the paleontological locality database of the University of California Museum of

Paleontology (UCMP) identified three ancestral horse fossil localities in Miocene-aged sediments at Blackhawk Ranch 3 approximately 4.5-mile north of the Project sites (UCMP, 2016). In addition, fossils at the Blackhawk Ranch include plants, skulls, long bones, teeth, tusks, ribs and foot bones of a great variety of animals including gomphotherium simpsoni (an ancestor of later mastodons and elephants), beavers, mice, squirrels, foxes, hayaenoid dogs, cats (including a saber-toothed variety), skinks, weasels, otters, horses, camels, rhinoceros, llamas, antelopes, salmon, turtles and cranes. Plants recovered include leaves of poplar, willow, oaks, elm, sycamore, mahogany and sumac. Further, Miocene and Pliocene age sediments have yielded numerous vertebrate fossils throughout Contra Costa County. In accordance with Society of Vertebrate Paleontology criteria for assigning paleontological potential ratings to rock units (SVP, 2010), the Miocene and Pliocene-aged Green Valley and Tassajara formations would have a high paleontological potential because vertebrate fossils have been recovered from similarly aged sediments within 5 miles of the Project sites.

Excavation during construction within Green Valley and Tassajara formations at either Sites A2, A4, or associated pipelines could potentially encounter paleontological resources. As detailed in the Project Description, a number of EBMUD standard practices and procedures, applicable to all EBMUD projects, have been incorporated into the Project, including EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements. Section 3.9, Protection of Cultural and Paleontological Resources, of this standard specification, which includes appropriate cultural resources management practices and complies with statutory requirements. However, because the Green Valley formation has a high paleontological sensitivity there is a high potential to encounter paleontological resources and this impact would be significant. Implementation of **Mitigation Measure CUL-1: Paleontological Resources Monitoring and Mitigation Program**, would reduce this impact to a less than significant level by requiring that excavation activities within the bedrock units at the Project site be monitored by a qualified paleontologist and that any substantial find be adequately curated. (**Less than Significant with Mitigation**)

Mitigation Measure CUL-1: Paleontological Resources Monitoring and Mitigation Program.

a. A professional paleontologist shall provide sensitivity training to supervisory staff to alert construction workers to the possibility of exposing significant paleontological resources within the Project area. The training shall be conducted as defined by the Society of Vertebrate Paleontology's Conformable Impact Mitigation Guidelines Committee (1995), to recognize fossil materials in the event that any are uncovered during construction. This training shall be specific to paleontological resources and supplement the cultural resources training required by EBMUD specification 01 35 44, Environmental Requirements, Section 3.9, Protection of Cultural and Paleontological Resources.

b. An "Alert Sheet" shall be posted in staging areas, such as in construction trailers, to alert personnel to the procedures and protocols to follow for the discovery of unique paleontological resources.

c. During construction, earth-moving activities shall be monitored by a qualified paleontological consultant having expertise in California paleontology. In the event that a paleontological resource is uncovered during Project construction, all ground disturbing work within 100 feet shall be halted. A qualified paleontologist shall inspect the discovery and determine whether further investigation is required.

d. If the discovery can be avoided and no further impacts will occur, no further effort shall be required. If the resource cannot be avoided and may be subject to further impact, a qualified paleontologist shall evaluate the resource and determine whether it is "unique" under CEQA, Appendix G, part V.

e. If the resource is determined not to be unique, work may commence in the area. If the resource is determined to be a unique paleontological resource, work shall remain halted, and the paleontologist shall, if necessary, develop appropriate treatment measures in conformance with Society of Vertebrate Paleontology (SVP) standards, and in consultation with EBMUD.

f. Treatment would ensure that the fossils are recovered, prepared, identified, catalogued, and analyzed according to current professional standards under the direction of a qualified paleontologist. All recovered fossils shall be offered to be curated at an accredited and permanent scientific institution according to SVP standard guidelines for curation. Work may commence upon completion of treatment.

d) **Site A2 and Site A4**

There is no indication from the archival research that any parts of Site A2, Site A4, associated pipelines, or the staging areas have been used for human burial purposes in the recent or distant past. Therefore, it is unlikely that human remains would be encountered during construction of the Project. However, the possibility of inadvertent discovery cannot be entirely discounted, and could result in a potentially significant impact. As detailed in the Project Description, a number of EBMUD standard practices and procedures, applicable to all EBMUD projects, have been incorporated into the Project, including EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements. Section 3.9, Protection of Cultural and Paleontological Resources, of this standard specification, which includes appropriate cultural resources management practices and complies with statutory requirements and outlines procedures in regards to the discovery of human remains:

- Discovery of human remains requires that all construction activities shall immediately cease at the location of discovery and within 100 feet of the

discovery. EBMUD shall contact the County Coroner to determine whether or not the remains are Native American. If the remains are determined to be Native American, the Coroner shall contact the Native American Heritage Commission (NAHC). The NAHC shall then identify the person or persons it believes to be the most likely descendant from the deceased Native American, who in turn would make recommendations to EBMUD for the appropriate means of treating the human remains and any associated funerary objects.

Because EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements. Section 3.9, Protection of Cultural and Paleontological Resources requires implementation of procedures that address the inadvertent discovery of human remains and follows statutory law; the Project's impact related to disturbance of human remains is less than significant. (**Less than Significant**)

References

EBMUD, Standard Construction Specification, Section 01 35 44, Environmental Requirements, March 2, 2018.

Koenig, Heidi, *East Bay Municipal Utility District, R3000 Pump Station, San Ramon Valley Recycled Water Program, Contra Costa County, Phase I Cultural Resources Survey Report.* Prepared for East Bay Municipal Utility District, June 2017.

Society of Vertebrate Paleontology (SVP), *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources*, 2010.

University of California Museum of Paleontology, *UCMP Specimen Search*. Available online at http://ucmpdb.berkeley.edu/. Accessed on July 21, 2016.

2.2.6 Geology, Soils, and Seismicity

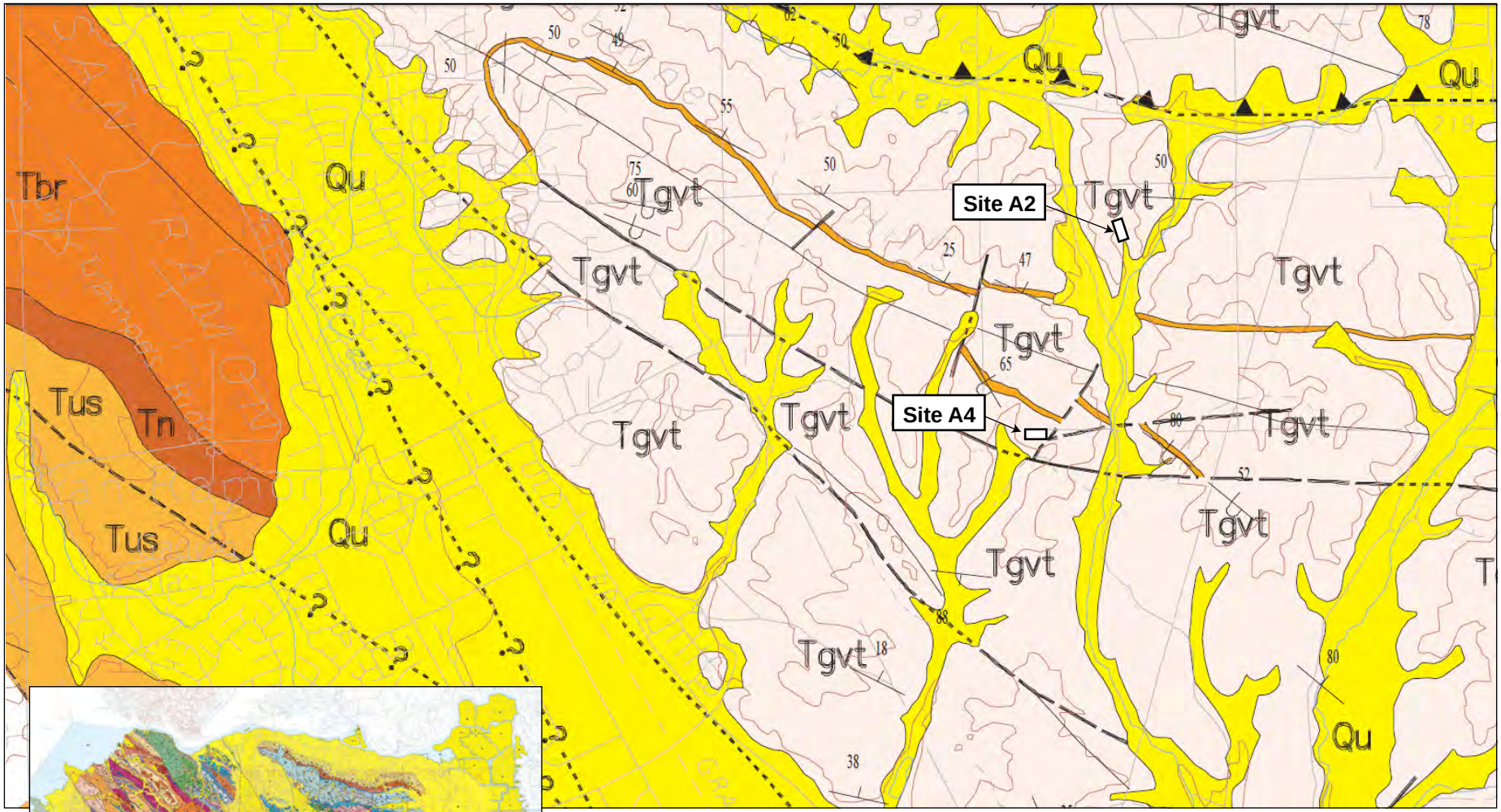
Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
6. GEOLOGY and Soils — Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Section 1803.5.3 of the Building Code, creating substantial risks to life or property? [15]	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

Discussion

Sites A2, Site A4, associated pipelines, and the staging areas are south of Mt. Diablo, on the north end of the Diablo Range, within the Coast Range province. Mt. Diablo developed over the last several million years as a core of Franciscan age rocks that was pushed up into younger sedimentary rocks. Since that uplift, rivers have eroded channels into the underlying bedrock, and deposited alluvial sediment in valleys.

The proposed sites are located on a ridge underlain by overturned sedimentary strata of Green Valley and Tassajara Formations as shown on Figure 8 (USGS, 1994). These formations were deposited in the Miocene and Pliocene epochs of the Tertiary era. Regionally, the sedimentary rocks of the Green Valley and Tassajara Formations consist of poorly consolidated beds of sandstone, siltstone, and conglomerate with interbedded volcanic ash and tuff layers, all of which are continental in origin. The rock units are faulted and folded, and in some locations overturned.

[15] The California Building Code, based on the International Building Code and the now defunct Uniform Building Code, no longer includes a Table 18-1-B. Instead, Section 1803.5.3 of the CBC describes the criteria for analyzing expansive soils.



Qu: Surficial deposits, undivided (Pleistocene and Holocene)
Tgvt: Green Valley and Tassajara Formations (Miocene and Pliocene)
Tus: Unnamed sedimentary and volcanic rocks (Miocene and Pliocene)
Tn: Neroly Sandstone (Miocene)
Tbr: Briones Formation (Miocene)

NORTH

SOURCE: USGS, Preliminary Geologic Map Emphasizing Bedrock Formations in Contra Costa County, California, Compiled by R.W. Graymer, D.L. Jones, and E.E. Brabb, 1994.

SRVRWP Pump Station R3000 . 160455

Figure 8
Geologic Hazards Map

EBMUD conducted a geologic hazard assessment of Sites A2 and A4 and concluded that both sites are suitable for the construction of a pump station from a geotechnical standpoint (EBMUD, 2016). The assessment states that a geotechnical investigation consisting of test pits and/or test borings should be conducted at the time of design, and the recommendations of the geotechnical report should be incorporated into the design assumptions for the Project, including earthwork activities, retaining wall design, and foundation design.

a.i) **Setting**

Surface fault rupture occurs when movement on a fault deep within the earth breaks through to the surface. Fault rupture almost always follows preexisting faults, which are zones of relative weakness in the earth's crust, and can cause substantial damage to structures located where rupture occurs.

Impacts Site A2 and Site A4

Neither Site A2, A4, their associated pipelines, or either staging area are within an Alquist-Priolo Earthquake Fault Zone as established by the California Geological Survey (CDMG, 1982). Further, no known active[16] faults cross the Project sites or staging areas, or their immediate vicinities (CGS, 2010). While the trace of the Sherburne Hills fault is near both sites, this is a late Quaternary fault that has not exhibited fault displacement in the last 11,000 years and it is not considered an active fault. Therefore, the potential for surface fault rupture from construction or operation of the Project at both Sites A2 and A4, and either staging area is low, and impacts related to fault rupture would be less than significant for both sites and staging areas. (**Less than Significant**)

a.ii) **Setting**

Like the rest of the San Francisco Bay Area, both Sites A2 and A4, their pipelines, and both staging areas would be subject to ground shaking in the event of a major earthquake on one of the regional faults. The intensity of seismic shaking, or strong ground motion, at the sites would depend on the distance between the site and the epicenter of the earthquake, the magnitude of the earthquake, and the geologic conditions underlying and surrounding the site. Earthquakes occurring on faults closest to the Project sites or staging areas would most likely generate the largest ground motions.

The closest active fault to the Project sites and staging areas is the Calaveras fault located approximately 2.8 miles to the west. The Mount Diablo Thrust fault is considered potentially active and is located to the northeast of the Project sites and staging areas. Both of these faults are capable of producing very strong ground shaking at the Project sites or staging areas (ABAG, 2016). Other active faults in the region that may cause strong ground shaking at the Project sites or staging areas

[16] An active fault is one that shows geologic evidence of movement within Holocene time (approximately the last 11,000 years).

are the San Andreas Fault, Hayward-Rodgers Creek Fault, Concord-Green Valley, and Greenville faults.

The USGS estimates that it is nearly certain that a magnitude (Mw) 6.7[17]or higher earthquake would occur on one of the California regional faults over the next 30-years, with a 72 percent likelihood in the San Francisco Region (USGS, 2015). The USGS considers the Hayward-Rodgers Creek and Calaveras faults to be particularly ready to rupture. The likelihood of a Mw 6.7 or higher earthquake occurring on these faults over the next 30 years is 14.3 percent and 7.4 percent, respectively. The northern segment of the San Andreas fault is considered less likely to rupture partly because of the relatively recent 1906 earthquake on that fault. The likelihood of a Mw 6.7 or higher earthquake occurring on this fault over the next 30 years is 6.4 percent.

Impacts Site A2 and Site A4

Neither Site A2 nor Site A4, associated pipelines, or the staging areas are crossed by an active fault so the potential for fault rupture is low. Both Sites A2 and A4, the associated pipelines, and the staging areas could experience strong to very strong ground shaking in the event of an earthquake on one of the regional faults. However, the Project would be constructed according to current engineering standards including the California Building Code, American Society of Civil Engineers/Structural Engineering Institute (ASCE/SEI) Standard 7-16 "Minimum Design Loads for Buildings and Other Structures," and other standard design guidelines, which would serve to limit damage as a result of seismic ground shaking. These standards provide definitions of seismic sources that could produce ground shaking at the Project sites, specify the procedures to calculate seismic forces on structures during the expected ground shaking, and specify construction standards to withstand the calculated forces. Compliance with these standards would be enforced through EBMUD's Engineering Standard Practice 550.1, Seismic Design Requirements and 512.1, Water Main and Services Design Criteria which specify the requirements for determining the potential degree of ground shaking at a project site and require that pump stations, underground structures, pipelines, and other similar types of structures are designed to withstand the estimated amount of ground shaking. The design must meet the requirements of applicable building codes at a minimum.

Incorporation into the Project of the appropriate engineering and design features, and EBMUD's Engineering Standard Practice 550.1, Seismic Design Requirements and 512.1, Water Main and Services Design Criteria, would ensure that the Project would be able to withstand the calculated seismic forces at either

[17] An earthquake is classified by the amount of energy released, expressed as the magnitude of the earthquake. Traditionally, magnitudes have been quantified using the Richter scale. However, seismologists now use a moment magnitude (Mw) scale because it provides a more accurate measurement of the size of major and great earthquakes. Earthquake magnitude is a logarithmic measure of earthquake size. In simple terms, this means that at the same distance from the earthquake, the shaking will be 10 times as large during a Mw 5 earthquake as during a Mw 4 earthquake. The total amount of energy released by the earthquake, however, goes up by a factor of 32. Depending on their location, earthquakes with a magnitude of 7 and greater are capable of causing large amounts of damage.

Site A2 or A4, and would also ensure that the pump station and pipelines would not be substantially damaged in the event of a major earthquake. Therefore, impacts related to fault rupture and ground shaking would be less than significant for both sites. (**Less than Significant**)

a.iii) **Setting**

Liquefaction is a phenomenon in which saturated granular sediments temporarily lose their shear strength in response to an applied stress, usually earthquake-induced ground shaking. Lateral spreading is the lateral movement of gently to steeply sloping, saturated soil deposits that is caused by earthquake-induced liquefaction. The susceptibility of a site to liquefaction and lateral spreading is a function of the depth, density, and water content of the granular sediments, as well as the magnitude of an earthquake. Saturated, unconsolidated silts, sands, silty sands, and gravels within 50 feet of the ground surface are most susceptible to liquefaction. Liquefaction-related phenomena include vertical settlement from densification, lateral spreading, ground oscillation, flow failures, loss of bearing strength, subsidence, and buoyancy effects. The soils most susceptible to liquefaction and other sources of seismic-related ground failure such as lateral spreading, are clean, loose, uniformly graded, saturated, fine-grained soils that occur close to the ground surface, usually at depths of less than 50 feet.

Impacts Site A2 and Site A4

As shown on Figure 8, Sites A2 and A4 are underlain by bedrock of the Green Valley and Tassajara Formations, which consist of poorly consolidated beds of sandstone, siltstone, and conglomerate with interbedded volcanic ash and tuff layers. The USGS has estimated that this bedrock has a very low liquefaction susceptibility (USGS, 2006). Further, Site A2 and Site A4 are not located in an area of liquefaction potential identified by the California Department of Conservation under the Seismic Hazards Mapping Act of 1990 (CGS, 2016). For these reasons, there is a low potential for liquefaction and other sources of seismic-related ground failure such as lateral spreading, and impacts related to liquefaction would be less than significant for both sites. (**Less than Significant**)

a.iv) **Setting**

Earthquake motions can also induce substantial stresses in slopes, causing earthquake-induced landslides or ground cracking when the slope fails. Earthquake-induced landslides can occur in areas with steep slopes that are susceptible to strong ground motion during an earthquake. The 1989 Loma Prieta earthquake triggered thousands of landslides over an area of 770 square miles (USGS, 1998).

Impacts Site A2 and Site A4

Neither Site A2, A4, associated pipelines, and staging areas are located near any areas of mapped earthquake-induced landslide susceptibility identified by the California Department of Conservation under the Seismic Hazards Mapping Act of 1990 (CGS, 2016). Therefore, the potential for earthquake-induced landslides

is low, and impacts related to earthquake induced landslides would be less than significant for both sites. (**Less than Significant**)

b) **Site A2 and Site A4**

Excavation for the pump station and connection pipeline would disturb approximately 0.16 acres at Site A2 and 0.5 acres at Site A4. During construction, exposed soil from stockpiles and excavated areas could be eroded by wind or stormwater if not properly managed. As detailed in the Project Description, a number of EBMUD standard practices and procedures, applicable to all EBMUD projects, have been incorporated into the Project, including EBMUD Standard Construction Specification Section 01 35 44. Section 1.1.B, Site Activities and Section 1.3.A, Storm Water Management, of this standard specification, would require the construction contractor to implement erosion control measures in accordance with a Stormwater Pollution Prevention Plan. The plan would describe measures to prevent erosion within the construction site and the runoff of sediment-laden stormwater from the construction site. The specifications would require the contractor to divert or otherwise control surface water and other waters flowing onto the work area. The contractor would also be required to maintain the construction site in a manner that ensures that drainage from the site would minimize erosion of stockpiled or stored materials and minimize erosion of the adjacent native soil. With implementation of EBMUD Standard Construction Specifications Section 01 35 44 (Sections 1.1.B and 1.3.A), there would not be substantial erosion during construction, and impacts related to erosion would be less than significant during construction. (**Less than Significant**)

Once constructed, the new pump station at either site would include approximately 0.1 acre of new impervious surfaces, and increased runoff from these surfaces would have the potential to cause off-site erosion. However, as discussed below in Section 2.2.9, *Hydrology and Water Quality*, stormwater runoff from either pump station site would be directed to the City of San Ramon storm drain system and would not runoff from the Project site to surrounding areas. As a result, the Project would not cause erosion and impacts related to erosion during operation would be less than significant for both sites. (**Less than Significant**)

Both Sites A2 and A4 are located in open space areas that have never been developed as discussed below in Section 2.2.8, *Hazardous Materials*. Therefore, it is likely that there could be a well-developed top soil horizon at each site. Construction of Pump Station R3000 could remove some of this top soil. However, the pump station and associated facilities would only involve construction within an area of up to approximately 5,500 square feet (0.1 acre), and the removal of top soil would be minimal, and impacts related to top soil loss would be less than significant. (**Less than Significant**)

c) **Setting**

As described in Item a.iii, above, liquefaction is a phenomenon in which saturated granular sediments temporarily lose their shear strength in response to an applied stress, usually earthquake-induced ground shaking. Lateral spreading is the lateral movement of gently to steeply sloping, saturated soil deposits that is caused by earthquake-induced liquefaction. Subsidence is a lowering of the ground surface that can result from both liquefaction and lateral spreading.

Slope failures, commonly referred to as landslides, include many phenomena that involve the downslope displacement and movement of material, triggered either by static (i.e., gravity) or dynamic (i.e., earthquake) forces. Exposed rock slopes undergo rockfalls, rockslides, or rock avalanches, while soil slopes experience soil slumps, rapid debris flows, and deep-seated rotational slides. Slope stability can depend on several complex variables, including the geology, structure, topography, slope geometry, and amount of groundwater present, as well as external processes such as climate and human activity. The factors that contribute to slope movements include those that decrease the resistance in the slope materials and those that increase the stresses on the slope. Excavation at the base of a slope can decrease the resistance of slope materials to sliding.

Landslides can occur on slopes of 15 percent or less, but the probability is greater on steeper slopes that exhibit old landslide features such as scarps, slanted vegetation, and transverse ridges. Landslides typically occur within slide-prone geologic units that contain excessive amounts of water or are located on steep slopes, or where planes of weakness are parallel to the slope angle.

The best available predictor of where slides and earth flows might occur is the distribution of past movements (Nilsen and Turner, 1975). In 1997, the USGS released a preliminary map and GIS database that provides a summary of the distribution of landslides evident in the landscape of the San Francisco Bay region (USGS, 1997). The map is a digitized nine-county compilation of existing landslides that has been used to divide the area into four landslide prevalence zones. Site A2 is located in an area mapped as “Many Landslides” which is defined by the USGS as areas with mapped landslides and intervening areas of more than 1,500 feet. Site A4 is located in an area mapped as “Few Landslides.” This classification is defined by the USGS as containing few, if any, large mapped landslides but locally containing scattered small landslides and questionably identified larger landslides. Both sites are immediately downhill of areas mapped as “Mostly Landslides,” defined as areas with mapped landslides, including intervening areas typically narrower than 1,500 feet, and narrow borders around landslides. Figure 9-1 of the Safety Element of the General Plan indicates that bedrock at both Sites A2 and A4 has a low potential for landslides.

Impacts Site A2 and Site A4

Liquefaction, Lateral Spreading, and Subsidence

As discussed in Impact a.iii, the potential for liquefaction at both Sites A2 and A4 is low because both sites are underlain by consolidated bedrock of the Green Valley and Tassajara Formations. Therefore, the potential for lateral spreading and subsidence, potential consequences of liquefaction, is also low. Impacts related to liquefaction, lateral spreading, and subsidence would be less than significant for both sites. (**Less than Significant**)

Landslides

As discussed above, Site A2 is located in an area of landslide susceptibility and both Sites A2 and A4 are located immediately downhill of areas of high susceptibility to landslides. As detailed in the Project Description, a number of EBMUD standard practices and procedures, applicable to all EBMUD projects, have been incorporated into the Project, including EBMUD Engineering Standard Practice 550.1, Seismic Design Requirements, which includes the following specific requirements for construction in landslide areas.

> "Steel pipe having restrained joints shall be used. Other pipe materials and joints may be used provided it is demonstrated by tests and/or calculations that the pipe can accommodate the ground movements without rupture. Isolation valves shall be provided at points where the pipeline enters a slide area. By-pass connections or hydrants may be used to permit post-earthquake connection of temporary hoses across the slide area."

Other measures specified in EBMUD Engineering Standard Practice 550.1 include:

a) Setting the line back far enough from the up slope side of unstable slopes as to avoid being included in the probable zone of slippage;

b) Setting lines back far enough from or low enough below the toe of unstable slopes as to avoid being included in the probable zone of slippage; and

c) Providing buttress or retention structures or other measures to stabilize the slope.

The EBMUD Practices and Procedures Monitoring and Reporting Plan (Appendix A of this Initial Study/Mitigated Negative Declaration) lists the applicable standard specifications language. Accordingly, the proposed design at both Sites A2 and A4 includes retaining walls along the upslope site boundary to maintain stability of the existing slopes. However, excavation into the hillside at either site could destabilize the existing slopes, which could lead to significant impacts. During the Project's design phase, EBMUD would perform a design-level geotechnical investigation to identify the potential for geologic hazards. As detailed in the Project Description, EBMUD's Pumping Plant Design Guide specifies minimum requirements to be followed in the design of pumping plants.

The Pumping Plant Design Guide requires preparation of a geotechnical investigation, and EBMUD would incorporate the recommendations outlined in the geotechnical investigation into the Project design.

With incorporation of the results and recommendations of the geotechnical investigation of the pump station site into construction and design requirements, impacts resulting from landslides would be less than significant. (**Less than Significant**)

Collapse

Settlement, and possibly collapse could occur during construction of the pump station if the excavation walls were not adequately supported, which could cause a significant impact. However, as discussed above, the site specific geotechnical investigation required by the Pumping Plant Design Guide would include recommendations for addressing collapse. Implementation of the recommendations of the geotechnical investigation, such as sloping the excavation sidewalls or supporting them by conventional shoring methods such as soldier piles and lagging, would prevent the excavation sidewalls from becoming unstable or collapsing. Impacts related to collapse would be less than significant. (**Less than Significant**)

d) **Setting**

Problematic soils, such as those that are expansive, can damage buried utilities and increase maintenance requirements. Expansive soils are characterized by their ability to undergo significant volume change (i.e., to shrink and swell) as a result of variations in moisture content. Changes in soil moisture can result from rainfall, landscape irrigation, utility leakage, roof drainage, and/or perched groundwater.[18] Expansive soils are typically very fine-grained and have a high to very high percentage of clay. Expansion and contraction of expansive soils in response to changes in moisture content can lead to differential and cyclical movements that can cause damage and/or distress to structures and equipment.

The soils underlying Site A2 consist of Diablo Clay. Two soil types underlie Site A4: Diablo Clay and Clear Lake Clay (USDA NRCS, 2016). The underlying bedrock is composed of semi-consolidated deposits that would not be considered expansive.

Impacts Site A2 and Site A4

Expansive soils can damage building foundations and pipelines when they shrink and swell in response to moisture changes. Because the expansiveness of the clays underlying Sites A2 and A4 has not been evaluated, there could be potentially significant impacts at both sites. However, the geotechnical investigation conducted in accordance with the Pumping Plant Design Guide would evaluate the expansiveness of the site soils, and would include recommendations for the proposed structures and pipelines to be resilient to expansive soil. EBMUD would

[18] Perched groundwater is a local saturated zone above the water table that typically exists above an impervious layer (such as clay) of limited extent.

design the foundation of the proposed pump station in accordance with the recommendations of the geotechnical report which would ensure compliance with the provisions for expansive soil provided in Section 1808.6 of the California Building Code. These provisions specify that foundations constructed within expansive soil must be designed to prevent uplift of the structure, and to withstand forces exerted on foundation due to soil volume changes. Alternatively, expansive soil may be removed and replaced with engineered fill that is not expansive as would occur for pipeline construction. Impacts related to construction within expansive soils would be less than significant. (**Less than Significant**)

e) **Site A2 and Site A4.** The Project would not include restrooms or other facilities that would produce wastewater, and would not use septic tanks or alternate on-site wastewater disposal systems. (**No Impact**)

References

Association of Bay Area Governments (ABAG), *Resilience Program*. Available online at http://gis.abag.ca.gov/website/Hazards/?hlyr=greenville&co=6013. Accessed on August 9, 2016.

California Division of Mines and Geology (CDMG), State of California Special Studies Zones, Diablo Quadrangle, Revised Official Map, Effective January 1, 1982.

California Geological Survey (CGS), *CGS Information Warehouse: Regulatory Maps*. Available online at http://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=regu latorymaps. Accessed on August 9, 2016.

California Geological Survey (CGS), *Fault Activity Map of California,* 2010. Available online at http://maps.conservation.ca.gov/cgs/fam/App/index.html. Accessed on August 10, 2016.

EBMUD, Engineering Standard Practice, ESP 512.1, Water Main and Services Design Criteria, effective October 9, 2006.

EBMUD, Engineering Standard Practice, ESP 550.1, Seismic Design Requirements, effective November 2, 2001.

EBMUD, Pumping Plant Design Guide, October 14, 2014.

EBMUD, *Geologic Hazards Assessment for Pump Station R3000 Alternative Site Location,* July 19, 2016.

EBMUD, Standard Construction Specification, Section 01 35 44, Environmental Requirements, March 2, 2018.

Nilsen, T.H. and B.L. Turner, *Influence of Rainfall and Ancient Landslide Deposits on Recent Landslides (1950-71) in Urban Areas of Contra Costa County, California*, U.S. Geological Survey Bulletin 1388, 1975.

United States Department of Agriculture, Natural Resources Conservation Service (USDA NRCS), *Custom Soil Resource Report for Contra Costa County, California, Pump Station R3000,* August 12, 2016.

United States Geological Survey (USGS), *Preliminary Geologic Map Emphasizing Bedrock Formations in Contra Costa County, California*. Compiled by R.W. Graymer, D.L. Jones, and E.E. Brabb, Open File Report 94-622, 1994.

United States Geologic Survey (USGS). *Summary Distribution of Slides and Earth Flows in the San Francisco Bay Region, California,* GIS database for Open File Report 97-745 Part C, by C.M. Wentworth, S.E. Graham, R.J. Pike, G.S. Beukelman, D.W. Ramsey, and A.D. Barron, 1997.

United States Geological Survey (USGS), Loma Prieta, California, Earthquake of October 17, 1989 – Landslides. David K. Keefer, Editor. U.S. Geological Survey Professional Paper 1551-C, 1998.

United States Geological Survey (USGS) in cooperation with the California Geological Society, *Maps of Quaternary Deposits and Liquefaction Susceptibility in the Central San Francisco Bay Region, California*. Geology by Robert C. Witter, Keith L. Knudsen, Janet M. Sowers, Carl M. Wentworth, Richard D. Koehler, and Carolyn E. Randolph. Digital database by Carl M. Wentworth, Suzanna K. Brooks, and Kathleen D. Gans. Open File Report 06-1037, 2006.

United States Geological Survey (USGS) and United States Department of the Interior, UCERF3: *A New Earthquake Forecast for California's Complex Fault System*, Fact Sheet 2015–3009, March 2015.

2.2.7 Greenhouse Gas Emissions

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
7.	**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

a) **Setting**

Gases that trap heat in the atmosphere are referred to as Greenhouse Gases (GHGs) because they capture heat radiated from the sun as it is reflected back into the atmosphere, similar to a greenhouse. The most abundant GHGs in the earth's atmosphere are carbon dioxide (CO_2), methane (CH_4) and Nitrous Oxide (N_2O). The accumulation of GHGs has been implicated as a driving force for Global Climate Change. Definitions of climate change vary between and across regulatory authorities and the scientific community, but in general can be described as the changing of the earth's climate caused by natural fluctuations and the impact of human activities that alter the composition of the global atmosphere. Both natural processes and human activities emit GHGs. Global Climate Change is a change in the average weather on earth that can be measured by wind patterns, storms, precipitation and temperature. Potential global warming impacts in California may include, but are not limited to, loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, larger forest fires, and more drought years. Secondary effects are likely to include a global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity.

Impacts Site A2 and Site A4

An analysis of the Project using the May 2011 BAAQMD CEQA Guidelines and Thresholds was conducted. Both BAAQMD and the California Air Pollution Control Officers Association (CAPCOA) consider GHG impacts to be exclusively cumulative impacts, in that no single project could, by itself, result in a substantial change in climate. Therefore, the evaluation of GHG emissions impacts evaluates whether the Project would make a considerable contribution to cumulative climate change effects.

For land use development projects, the threshold is compliance with a qualified GHG Reduction Strategy (BAAQMD CEQA Air Quality Guidelines, Section 4.3); or annual emissions less than 1,100 metric tons per year (MT/year) of carbon dioxide equivalent (CO_2e); or 4.6 MT CO_2e/SP/year (residents + employees). Land use development projects include residential, commercial, industrial, and public land uses and facilities.

Construction GHG Emissions

Construction activities would generate GHGs. The CalEEMod model run for the estimation of construction emissions from Sites A2 and A4 (see Section 2.2.2, *Air Quality*) also calculated the GHG emissions that would be generated by construction activities of the Project. For Site A2, construction-related emissions would total approximately 1,494 metric tons of CO_2 equivalents (CO_2e) during the entirety of the construction period. BAAQMD does not have adopted thresholds of significance for construction-related GHG emissions. Therefore, the South Coast Air Quality Management District's (SCAQMD) recommendations have been used to evaluate Project construction emissions. Because impacts from construction activities occur over a relatively short-term period of time, they contribute a relatively small portion of the overall lifetime project GHG emissions. In addition, GHG emission reduction measures for construction equipment are relatively limited. Therefore, SCAQMD recommends that construction emissions be amortized over the project lifetime, so that GHG reduction measures would address construction GHG emissions as part of the operational GHG reduction strategies (SCAQMD, 2008). Per the SCAQMD's recommendation, annualized over an assumed Project life of 40 years, construction-related GHG emissions for Site A2 would be approximately 37.3 metric tons per year of CO_2e. For Site A4, construction-related emissions would total approximately 1,756 metric tons of CO_2e over the entire construction period. Annualized over an assumed Project life of 40 years, construction-related GHG emissions for Site A4 would be approximately 43.9 metric tons per year of CO_2e. These emissions are factored along with the operational GHG emissions calculation below to determine significance.

Though the BAAQMD does not have adopted thresholds of significance for construction-related GHG emissions, it encourages lead agencies to incorporate BMPs to reduce GHG emissions during construction, as feasible and applicable. As detailed in the Project Description, a number of EBMUD standard practices and procedures, applicable to all EBMUD projects, have been incorporated into the Project. EBMUD's Standard Construction Specification 01 35 44 requires that the construction crews implement practices and procedures to reduce greenhouse gas emissions from fuel combustion including maintaining on-road and off-road vehicle tire pressures to manufacturer specifications, and maintaining construction equipment engines to manufacturer's specifications, using alternative-fueled construction equipment and recycling demolition debris for reuse to the extent feasible, as detailed below.

- The Contractor shall ensure that line power is used instead of diesel generators at all construction sites where line power is available.

- The Contractor shall ensure that for operation of any stationary, compression-ignition engines as part of construction, comply with Section 93115, Title 17, California Code of Regulations, Airborne Toxic Control Measure for Stationary Compression Ignition Engines, which specifies fuel and fuel additive requirements as well as emission standards.

- Fixed temporary sources of air emissions (such as portable pumps, compressors, generators, etc.) shall be electrically powered unless the Contractor submits documentation and receives approval from the Engineer that the use of such equipment is not practical, feasible, or available. All portable engines and equipment units used as part of construction shall be properly registered with the California Air Resources Board or otherwise permitted by the appropriate local air district, as required.
- Contractor shall implement standard air emissions controls such as:
  - Minimize the use of diesel generators where possible.
  - Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes as required by the California Airborne Toxics Control Measure (ATCM) Title 13, Section 2485 of California Code of Regulations. Clear signage shall be provided for construction workers at all access points.
  - Follow applicable regulations for fuel, fuel additives, and emission standards for stationary, diesel-fueled engines.
  - Locate generators at least 100 feet away from adjacent homes and ball fields.
  - Perform regular low-emission tune-ups on all construction equipment, particularly haul trucks and earthwork equipment.
- Contractor shall implement the following measures to reduce GHG emissions from fuel combustion:
  - On-road and off-road vehicle tire pressures shall be maintained to manufacturer specifications. Tires shall be checked and re-inflated at regular intervals.
  - Construction equipment engines shall be maintained to manufacturer specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
  - Demolition debris shall be recycled for reuse to the extent feasible (excluding wood treated with preservatives).

Because Section 3.4A, Air Quality and Emissions Control, of EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements, has been incorporated into the Project and includes measures to reduce GHG emissions from fuel combustion, the Project construction impacts related to GHG emissions would be less than significant. The EBMUD Practices and Procedures Monitoring and Reporting Plan (Appendix A) lists the applicable standard specifications language. (**Less than Significant**)

Operational GHG Emissions

The Project would include three 350 horsepower vertical turbine pumps that would be operated primarily during the off-peak nighttime hours. Assuming 12 hours of operation per day, the annual electricity demand of the Project would be about 3,429 MWh. Indirect GHG emissions that would be generated by the Project's use of electricity from PG&E's electrical grid were estimated using an emission factor of 457 pounds of CO_2 per MWh which was developed by PG&E as the average of PG&E's historical emissions from 2009 to 2013 (PG&E, 2015). PG&E does not provide emissions for CH_4 or N_2O from electricity generation. Therefore, the regional power pool emission factors supplied by US EPA eGRID that represent the average emissions rate of electric generators supplying power to the grid in the region were used to estimate CH_4 and N_2O emissions (USEPA, 2015). Total GHG emissions in the form of CO_2e were calculated by multiplying the N_2O and CH_4 emissions by their respective global warming potential, and then adding the CO_2, N_2O, and CH_4 emissions. Indirect emissions resulting from the Project-related electricity demand from PG&E's power grid of approximately 3,429 MWh per year is estimated to be about 739 metric tons (MT) of CO_2e.When construction and operational GHG emissions are factored together, annual GHG emissions for Sites A2 and A4 would be about 777 and 783 MT per year of CO_2e, respectively. Compared to the threshold of 1,100 MT CO_2e per year, GHG emissions associated with both Sites A2 and A4 would be less than the BAAQMD threshold resulting in a less than significant impact. (**Less than Significant**)

b) **Setting**

EBMUD prepared a Climate Change Monitoring and Response Plan and an Action Plan (2014) to guide decisions related to water supply and quality, infrastructure planning, and mitigation of greenhouse gas emissions. EBMUD′s goal is to reduce GHG emissions 50 percent by 2040 (as compared to year 2000). In 2013, GHG emissions generated by EBMUD were 31,244 MT of CO2e which was 31 percent below 2000 GHG emission levels (EBMUD 2014).

The City of San Ramon adopted the San Ramon Climate Action Plan to address climate change locally and to comply with the GHG reduction targets associated with Assembly Bill 32 (AB 32), the California Global Warming Solutions Act of 2006 (City of San Ramon, 2011). Although the City's Climate Action Plan is not applicable to EBMUD[19], discussion of the City's Climate Action Plan is included herein as documentation of City plans and policies. The Climate Action Plan strategy is primarily based upon the land use, transportation, and conservation policies that are part of the General Plan. The Climate Action Plan demonstrates that through land use planning/density choices, reduction in vehicle miles traveled, and energy conservation measures such as increased energy efficiency for buildings, more efficient water use and recycling programs, the City can do its

[19] Pursuant to Government Code Section 53091(d) and (e), EBMUD is not subject to the building and zoning ordinances of local jurisdictions for projects involving the transmission of water. Nonetheless, EBMUD strives to consider the regulations and ordinances of local jurisdictions during construction, where feasible and not contrary to its public purpose and responsibilities.

proportionate share to achieve the State GHG reduction targets. The Climate Action Plan has been determined to be "Qualified Greenhouse Gas Reduction Strategy" as defined by the BAAQMD guidelines. As such, it serves as a guidance document for local decision makers and staff to ensure that future actions and land use decisions are also consistent with State and local GHG reduction goals as they relate to climate change and the CEQA.

Impacts Site A2 and Site A4

In its 2014 Climate Change Monitoring and Response Plan, EBMUD developed many adaptation strategies to address climate change (EBMUD, 2014). The 2014 Climate Change Monitoring and Response Plan's recommended adaptation approach to climate change is to adjust EBMUD's water supply portfolio as the impacts of climate change manifest. Currently, the EBMUD Board of Directors has identified an approach that relies on water conservation and recycling programs to further reduce demand and lessen impacts on supplies adversely affected by climate change. As described in Section 1.2 (in Section 1, *Project Description*), the objective of the Project is to enhance delivery of recycled water consistent with EBMUD goals and policies related to recycled water. Consequently, the Project is considered consistent with EBMUD's 2014 Climate Change Monitoring and Response Plan.

The San Ramon Climate Action Plan includes strategies to achieve water efficiency improvements consistent with the State's 20-percent reduction target by 2020 through the implementation of the State's Model Water Efficient Landscape Ordinance (MWELO) that would achieve a 20-percent reduction in water used for landscaping, and expansion of the use of recycled water for landscaping. A 20-percent reduction in water use would result in a 20-percent reduction in energy use and GHG emissions generated from transporting and treating water. The Project is part of the DERWA SRVRWP which when fully implemented would increase recycled water use by more than 300 percent. The Project would also be consistent with Policy 8.6-I-5 of the Open Space and Conservation Element of the General Plan which requires the City to collaborate with EBMUD to expand the recycled water distribution system in an efficient and timely manner (San Ramon, 2015). Therefore, the Project would be consistent with the policies and programs in both the General Plan as well as the San Ramon CAP and the impact would be less than significant. (**Less than Significant**)

References

BAAQMD, 2017. *BAAQMD CEQA Air Quality Guidelines*, adopted June 2, 2010, revised May 2017.

City of San Ramon, 2011. *San Ramon Climate Action Plan*, August 23, 2011.

City of San Ramon, 2015. *General Plan 2035, Section 8 – Open Space and Conservation*, May 28, 2015.

EBMUD, 2014. *2014 Climate Change and Monitoring Response Plan*, September 2014.

EBMUD, Standard Construction Specification, Section 01 35 44, Environmental Requirements, March 2, 2018.

PG&E, 2015. *Greenhouse Gas Emission Factors: Guidance for PG&E Customers*, November, 2015. Available at https://www.pge.com/includes/docs/pdfs/shared/environment/calculator/pge_ghg_emission_factor_info_sheet.pdf

SCAQMD, Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold, October 2008. Available at http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgattachmente.pdf.

USEPA, 2015. *eGRID2012 Annual Emission Output Rates*. Available at http://www.epa.gov/sites/production/files/2015/documents/egrid2012_ghgoutputrates_0.pdf

2.2.8 Hazards and Hazardous Materials

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
8.	**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 for people residing or working in the project area?	☐	☐	☐	☒
f)	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
h)	Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐

Discussion

a, b) **Site A2 and Site A4**

With the exception of small amounts of fuels, lubricants, and solvents that would be brought to the pump station at either Site A2 or Site A4 in EBMUD trucks for maintenance purposes, operation of Pump Station R3000 would not involve the routine use of any hazardous materials. No hazardous materials would be permanently stored at the pump station at either Site A2 or Site A4. Therefore, impacts related to the routine use, storage, transport, disposal, or accidental release or spill of hazardous materials would be less than significant. (**Less than Significant**)

During construction at either Site A2 or Site A4, and use of either staging area, some hazardous materials such as fuels, petroleum lubricants, adhesives, solvents, and paints would be used during the temporary construction period and diesel fuel

could be stored to fuel the construction equipment. The hazardous materials could be released during routine use or accidental spills. As detailed in the Project Description, a number of EBMUD standard practices and procedures, applicable to all EBMUD projects, have been incorporated into the Project, including EBMUD's Standard Construction Specifications Section 01 35 44, Environmental Requirements. Section 1.1.B, Site Activities, of this specification would require the contractor to implement specific measures for the management of hazardous materials during construction. These measures include:

- Prevent the discharge of asphalt, rubbish, paint, oil or petroleum products, cement and concrete or washings thereof. These materials may also not be stored where they can be washed outside of the construction limits by rainfall or runoff. When construction is completed, these materials must be disposed of in accordance with the Construction and Demolition Waste Disposal Plan.
- Clean up spills immediately, and notify EBMUD in the event of a spill.
- Equip stationary equipment such as motors, pumps, and generators with drip pans.
- Handle, store, apply, and dispose of any chemical or hazardous material in accordance with federal, state, and local laws and regulations.

To further address hazardous materials spills, the contractor must submit a Spill Prevention and Response Plan to EBMUD detailing the means and methods for preventing and controlling the spilling of known hazardous substances used on the jobsite or staging areas in accordance with EBMUD's Standard Construction Specifications Section 01 35 44, Environmental Requirements, Section 1.3.D, Spill Prevention and Response Plan. The plan must include a list of the hazardous substances proposed for use or generated by the Contractor on site, including petroleum products, and measures that would be taken to prevent spills, monitor hazardous substances, and provide immediate response to spills. Spill response measures shall address notification of the EBMUD Engineer and appropriate agencies; spill-related worker, public health, and safety issues; spill control; and spill cleanup. The EBMUD Practices and Procedures Monitoring and Reporting Plan (Appendix A of this Initial Study/Mitigated Negative Declaration) lists the applicable standard specifications language.

In addition, the vendors and contractors responsible for delivery of hazardous materials would comply with the regulations of the California Highway Patrol and the California Department of Transportation related to the transportation of hazardous materials during construction which would ensure the safe transport of these materials.

Implementation of regulations of the California Highway Patrol and the California Department of Transportation pertaining to the transport of hazardous materials and the requirements specified in EBMUD's Standard Construction Specifications Section 01 35 44, which require the contractor to implement measures for the

management of hazardous materials during construction, including prevention of spills, would ensure that construction impacts related the routine use, storage, transport, disposal, or accidental release or spill of hazardous materials during construction would be less than significant. (**Less than Significant**)

c) For projects located within one-fourth mile of a school that involve construction or alteration of a facility that may emit hazardous air emissions or handle extremely hazardous materials, Section 15186 of the CEQA Guidelines requires the lead agency to consult with the affected school district and notify it of the project at least 30 days prior to adoption of certification of the CEQA document for the project, if the project might reasonably be anticipated to emit hazardous air emissions, or that would handle an extremely hazardous substance or a mixture containing extremely hazardous substances in a quantity equal to or greater than the state threshold quantity specified in subdivision (j) of Section 25532 of the Health and Safety code, that may impose a health or safety hazard to persons who would attend or would be employed at the school.

Site A2

Site A2 is not located within one-fourth mile of a school, therefore there would be no impact related to this topic for Site A2. (**No Impact**)

Site A4

Site A4 is located within approximately 0.2 miles of Coyote Creek Elementary School. However, no hazardous materials would be permanently stored at the pump station site. With the exception of small amounts of fuels, lubricants, and solvents that would be brought to the pump station in EBMUD trucks for maintenance purposes, operation of Pump Station R3000 would not involve the use of any hazardous or acutely hazardous materials substances, or wastes, or emit hazardous emissions. While diesel particulate matter, a Toxic Air Contaminant, would be emitted during construction, the impacts of these emissions would be less than significant, as described above in Section 2.2.3, *Air Quality*. As described in the Project Description, there would be no pipeline construction activity for the pipeline associated with Site A4 on North Gale Ridge Road during the normal school year for Coyote Creek Elementary School. Because construction of the pipeline would take place outside of the school year and operation of the pump station would not involve hazardous materials, the Project would not be anticipated to emit hazardous air emissions or include hazardous substances in a quantity equal to or greater than the state threshold. Therefore, the Project would not be expected to impose a health or safety hazard to persons who would attend or would be employed at the school and EBMUD would not be anticipated to consult with the school district regarding the Project. Impacts would be less than significant. (**Less than Significant**)

d) **Setting**

Review of aerial photographs of Sites A2 and A4 between 1939 and 2012 indicates that these sites have never been developed (EDR, 2016a).

Environmental Data Resources conducted an environmental database to determine if Sites A2 and A4 or either staging area is included on a government list of hazardous materials sites, or if there are other sites in the vicinity that could potentially affect soil or groundwater quality at the Project sites (EDR, 2016b). Neither site nor staging area is listed in any of the government lists searched. The only site within one-quarter mile of the Project sites is a historic auto station, almost one-quarter mile to the northwest of Site A2 which does not have documented soil or groundwater contamination. The environmental database review did not identify any hazardous materials sites along either pipeline alignment.

Impacts Site A2 and Site A4

Because the Project sites have not been previously developed, are not identified on a government list of hazardous materials sites, and there are no identified hazardous materials sites in close proximity to either site or staging area or the pipeline alignments, the potential to encounter hazardous materials in the soil or groundwater during construction is low and impacts related to construction on a listed site would be less than significant. (**Less than Significant**)

Operation of Pump Station R3000 would not involve soil disturbance for any reason, other than possible maintenance activities. If maintenance were required, the potential to encounter hazardous materials would be low and the impact would be less than significant. (**Less than Significant**)

e, f) **Site A2 and Site A4**

The nearest public airport is the Livermore Municipal Airport located approximately nine miles to the southeast of Sites A2 and A4, and there are no private airstrips in the vicinity of either site. Therefore, there would be no impact related to these topics for either site. (**No Impact**)

g) **Setting**

The San Ramon Emergency Operations Plan (City of San Ramon, 2009) addresses planned response to extraordinary emergency situations associated with natural disasters, technological (human caused) emergencies, and war emergency operations in, or affecting, the City of San Ramon. The plan describes the City of San Ramon's Emergency Management Organization; policies, responsibilities, and procedures for public safety; operational concepts and procedures associated with field response to emergencies; and the organizational framework for implementing emergency systems in the city. The plan does not include designated emergency evacuation routes.

Impacts Site A2 and Site A4

The Project could impede implementation of the Emergency Operations Plan if it increased traffic or altered the street system in a manner that could interfere with emergency vehicular access. As discussed in Section 2.2.16, *Transportation and Traffic*, the Project would not result in a substantial increase in traffic during

construction. Proposed pipeline construction in Lilac Ridge Road, North Gale Ridge Road and Dougherty Road would involve temporary lane closures during construction. The construction of the pump station at Site A2 would also require a temporary lane closure in Dougherty Road. However, these closures would not impede emergency vehicular access because, as discussed further in Section 2.2.16, *Transportation and Traffic,* a number of EBMUD standard practices and procedures, applicable to all EBMUD projects, have been incorporated into the Project, including EBMUD's Standard Construction Specification 01 55 26, Traffic Regulation. This specification would require implementation of a Traffic Control Plan that shall include a description of emergency response vehicle access. If the road or area is completely blocked, preventing access by an emergency responder, a contingency plan must be included as well. For complete road closures, immediate access for emergency response vehicles would be provided at all times. With implementation of these traffic control measures, in accordance with EBMUD's Standard Construction Specification 01 55 26, Traffic Regulation, impacts related to interference with an emergency response plan would be less than significant during construction. (**Less than Significant**)

As discussed in Section 2.2.16, *Transportation and Traffic,* operation of Pump Station R3000 at either Site A2 or A4 would not substantially increase truck traffic in the Project area and would not involve any road closures or alteration of street alignments. Therefore, operation of the Project would not interfere with an adopted emergency response plan or emergency evacuation and this impact would be less than significant during operation. (**Less than Significant**)

h) **Setting**

The Project area's Mediterranean climate is characterized by long, dry, hot summers and cool, rainy winters. Most measurable rainfall occurs from mid-October to mid-April and in most years, this rainfall results in abundant grass growth. May to October is the main fire season, and July is the time of highest fire danger. In that period, the grasses dry and provide a fuel source for fires, with fire conditions exacerbated by warm air temperatures and the lack of precipitation.

Both Sites A2 and A4 are located in open space areas near residential neighborhoods. The sites are mapped in an area of moderate fire severity hazards as shown on Figure 9-3 of the Safety Element of the General Plan. Because of an extended dry season with low humidity, San Ramon has many days where fire danger is critical. Fire protection services in the City of San Ramon are provided by the San Ramon Valley Fire Protection District. There are two hydrants located near the Project sites to provide water for firefighting purposes; one approximately 150 feet north of Site A2 on the on west side of Dougherty Road, and one approximately 350 feet southeast of Site A4 on the corner of Laurelspur Loop and Lilac Ridge Road.

The California Public Resources Code and California Code of Regulations include requirements for construction activities within high fire hazard areas, as

further described below. In addition, the San Ramon Valley Fire Protection District has established an Exterior Hazard Abatement Program for the management of fire risks at built out sites which are also described further below.

Impacts Site A2 and Site A4

The use of construction equipment and temporary onsite and offsite storage of diesel fuel during construction at either Site A2 or A4 would pose a wildfire risk, a potentially significant impact. The time of the greatest fire danger is during the clearing phase, when workers and machines are working in vegetated areas that can be highly flammable. If piled onsite, the cleared dry vegetation could also become a fire fuel. Potential sources of ignition include equipment with internal combustion engines, gasoline-powered tools, and equipment or tools that produce a spark, fire, or flame. Such sources include sparks from blades or other metal parts scraping against rock, overheated brakes on wheeled equipment, heated emissions-control devices or vehicles, friction from worn or unaligned belts and drive chains, and burned-out bearings or bushings. Sparking as a result of scraping against rock is difficult to prevent. The other hazards result primarily from poor maintenance of the equipment. Smoking by construction personnel is also a potential source of ignition during construction.

As detailed in the Project Description, a number of EBMUD standard practices and procedures, applicable to all EBMUD projects, have been incorporated into the Project, including EBMUD's Standard Construction Specifications Section 01 35 24, Project Safety Requirements. Section 1.6, Fire Prevention and Protection, of this specification mandates that the site would be supplied and maintained with adequate firefighting equipment capable of extinguishing incipient fires. All work would comply with applicable federal, local, and state fire-prevention regulations, including, applicable parts of the National Fire Prevention Standards for Safeguarding Building Construction Operations (NFPA No. 241). Equipment including a long-handled, round-point shovel, or a fire extinguisher shall be kept at an accessible (unlocked) location on the construction site at all times. Earthmoving and portable equipment with internal combustion engines shall be equipped with a spark arrestor and all equipment shall be maintained to ensure proper functioning of spark arrestor. For any work occurring between April 1 and December 1, or any other periods during which a high fire danger has been identified, this specification includes measures for equipment use within the vicinity of flammable materials. This specification also includes measures for vegetation management and creation of a defensible space around the construction site, as well as clearance at access drives. The EBMUD Practices and Procedures Monitoring and Reporting Plan (Appendix A of this Initial Study/Mitigated Negative Declaration) lists the applicable standard specifications language.

Because Section 1.6, Fire Prevention and Protection, of EBMUD's Standard Construction Specification 01 35 24, Project Safety Requirements, has been incorporated into the Project and mandates that the site would be supplied and maintained with adequate firefighting equipment capable of extinguishing

incipient fires and complies with applicable fire code regulations and include provisions for fuel management, defensible space, access for firefighting, and portable fire extinguishers, the Project construction impacts related to hazards resulting from wildland fires is less than significant. (**Less than Significant**)

Once constructed, the new facilities at either site could provide a source of fuel for wildfires during operation of Pump Station R3000 if surrounding vegetation is not appropriately managed. However, as part of EBMUD's Standard Construction Specifications Section 01 35 24, Project Safety Requirements Section 1.6, Fire Prevention and Protection, the site would include a defensible space, as well as would be supplied and maintained with firefighting equipment. This defensible space would be maintained throughout the year and for the entirety of operations.

Because the sites are located in moderate fire severity hazards and Section 1.6, Fire Prevention and Protection, of EBMUD's Standard Construction Specification 01 35 24, Project Safety Requirements, has been incorporated into the Project, the Project operational impacts related to hazards resulting from wildland fires is less than significant. (**Less than Significant)**

References

City of San Ramon, Emergency Operations Plan, March 2009.

EBMUD, Standard Construction Specification, Section 01 35 24, Project Safety Requirements, November 23, 2017.

EBMUD, Standard Construction Specification, Section 01 35 44, Environmental Requirements, March 2, 2018.

EBMUD, Standard Construction Specification, Section 01 55 26, Traffic Regulation, February 9, 2017.

Environmental Data Resources, *The EDR Aerial Photo Decade Package*, EBMUD Pump Station R3000, San Ramon, CA 94582, Inquiry No. 4692139.5, August 4, 2016a.

Environmental Data Resources, *The EDR Radius Map Report™ with Geocheck®*, EBMUD Pump Station R3000, San Ramon, CA 94582, Inquiry No. 4692139.2s, August 4, 2016b.

2.2.9 Hydrology and Water Quality

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
9.	**HYDROLOGY AND WATER QUALITY — Would the project:**				
a)	Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b)	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
d)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	☐	☐	☒	☐
e)	Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f)	Otherwise substantially degrade water quality?	☐	☐	☒	☐
g)	Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h)	Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	☐	☐	☐	☒
i)	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☒	☐
j)	Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

Discussion

a, f) **Setting**

Both Sites A2 and A4, as well as the staging areas, are located in open space areas served by the City of San Ramon storm drain system. Both sites are in the Upper Alameda Creek watershed (Contra Costa Clean Water Program, 2004). The west branch of Alamo Creek parallels the east side of Dougherty Road, across the road from Site A2. West Alamo Creek crosses Dougherty Road in a culvert, and resurfaces approximately 100 feet south of Site A2. Alamo Creek is not listed as an impaired water body (SWRCB, 2010).

Impacts Site A2 and Site A4

Excavation for construction of the pump station and connection pipelines would disturb an area of approximately 0.16 acres at Site A2 and approximately 0.5 acres at Site A4. Exposed soil from stockpiles and excavated areas could be transported by wind or stormwater and, if not properly managed, could accumulate in storm drains. The accumulated soil could increase the sediment load (turbidity) in the stormwater runoff as well as reduce the flood carrying capacity of the storm drains. In addition, construction activities that would use hazardous materials such as fuels, petroleum lubricants, adhesives, solvents, and paints which, if not managed appropriately, could become mobilized by run-off. Temporary storage of construction materials and equipment in work areas and staging areas also creates the potential for a release of hazardous materials or sediment to the storm drain system.

As detailed in the Project Description, a number of EBMUD standard practices and procedures, applicable to all EBMUD projects, have been incorporated into the Project, including EBMUD's Standard Construction Specifications Section 01 35 44, Environmental Requirements. Section 1.1.B, Site Activities, of this specification would require the contractor to implement specific measures to control construction-related erosion and sedimentation and the discharge of pollutants in stormwater runoff. These measures include:

- Prevent the discharge of debris, soil, silt, sand, and any other organic or earthen materials to a surface water or storm drain system. Discharges of asphalt, rubbish, paint, oil or petroleum products, cement and concrete or washings thereof are also prohibited. These materials may also not be stored where they can be washed outside of the construction limits by rainfall or runoff. When construction is completed, these materials must be disposed of in accordance with the Construction and Demolition Waste Disposal Plan.

- Prevent creation of a nuisance pollution as defined in the California Water Code, and may not cause a violation of water quality standards for receiving waters adopted by the Regional Water Quality Control Board (RWQCB) or State Water Resources Control Board (SWRCB).

- Clean up spills immediately, and notify EBMUD in the event of a spill.

- Equip stationary equipment such as motors, pumps, and generators with drip pans.

- Divert or otherwise control surface water and other waters flowing onto the work areas. The methods of diversions or control must be adequate to ensure the safety of stored materials and personnel in the work area. At the completion of work, ditches, dikes, and other ground alterations made by the contractor must be removed and ground conditions must be returned to their former condition.

- Maintain construction sites to ensure that drainage from the site will minimize erosion of stockpiled or stored materials and the adjacent native soil material.
- Conduct dust control measures in a manner to prevent runoff from the site.
- Handle, store, apply, and dispose of any chemical or hazardous material in accordance with federal, state, and local laws and regulations.

EBMUD's Standard Construction Specifications Section 01 35 44, Environmental Requirements, Section 1.3.A, Storm Water Management also requires contractors to submit a Stormwater Pollution Prevention Plan (SWPPP) to EBMUD and the RWQCB for coverage under the state Construction General Permit that describes measures to prevent the runoff of polluted stormwater from the construction site. Pollutants to be addressed include, but are not limited to, soil, sediment, concrete residue, pH of less than 6.5 or greater than 8.5, chlorine residual, and all other pollutants known to exist at the project site.

To further address hazardous materials spills, the contractor must submit a Spill Prevention and Response Plan to EBMUD detailing the means and methods for preventing and controlling the spilling of known hazardous substances used on the jobsite or staging areas in accordance with EBMUD's Standard Construction Specifications Section 01 35 44, Environmental Requirements, Section 1.3.D, Spill Prevention and Response Plan. The plan must include a list of the hazardous substances proposed for use or generated by the Contractor on site, including petroleum products, and measures that would be taken to prevent spills, monitor hazardous substances, and provide immediate response to spills. Spill response measures shall address notification of the EBMUD Engineer and appropriate agencies; spill-related worker, public health, and safety issues; spill control; and spill cleanup. The EBMUD Practices and Procedures Monitoring and Reporting Plan (Appendix A of this Initial Study/Mitigated Negative Declaration) lists the applicable standard specifications language.

Implementation of the measures specified in EBMUD's Standard Construction Specifications Section 01 35 44, including Section 1.1.B, Site Activities, Section 1.3.A, Storm Water Management, and Section 1.3.D, Spill Prevention and Response Plan, which require which require the contractor to implement measures for the management of stormwater runoff during construction, including the prevention of discharge of pollutants in stormwater runoff, and prevention of spills would ensure that water quality impacts related to soil erosion and use of hazardous materials during construction would be less than significant. (**Less than Significant**)

Other than stormwater runoff which is discussed below under Item e, operation of Pump Station R3000 would not include discharges of recycled water, potable water, or other discharges that could exceed water quality criteria or otherwise degrade water quality and the impact would be less than significant. (**Less than Significant**)

b) **Site A2 and Site A4**

Construction of Pump Station R3000 would not require any excavation dewatering, and operation of the pump station would not use groundwater for any purposes. The new pump station at Site A2 would create approximately 5,500 square feet of new impervious surfaces and the new pump station at Site A4 would create approximately 5,000 square feet of new impervious surfaces. This small increase would not substantially interfere with groundwater recharge and the impact would be less than significant. (**Less than Significant**)

c, d) **Site A2 and Site A4**

Both Sites A2 and A4 are in the Upper Alameda Creek watershed. Neither Site A2 nor A4 are located within an existing drainage. The nearest drainage to either Project site is the west branch of Alamo Creek, which parallels the east side of Dougherty Road, across the road from Site A2. West Alamo Creek crosses Dougherty Road in a culvert, and resurfaces approximately 100 feet south of Site A2.

During construction, short-term alterations in drainage patterns at both sites may occur. As detailed in the Project Description, a number of EBMUD standard practices and procedures, applicable to all EBMUD projects, have been incorporated into the Project, including Standard Construction Specification 01 35 44, Environmental Requirements. As described in Impact Discussion a) above, Standard Construction Specification 01 35 44 includes Section 1.3.A, which requires submittal of an SWPPP, and Section 1.1.B, which requires implementation of specific measures to control construction-related erosion and sedimentation. The EBMUD Practices and Procedures Monitoring and Reporting Plan (Appendix A of this Initial Study/Mitigated Negative Declaration) lists the applicable standard specifications language. Because Section 1.3.A, Storm Water Management, and Section 1.1.B, Site Activities, of EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements, have been incorporated into the Project, and the required SWPPP and specific measures require controls regarding stormwater runoff from the Project site, short-term Project impacts related to alteration of the existing drainage pattern of the site area during construction, in a manner which would: a) result in substantial erosion or siltation on or off site, or b) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on site or off site would be less than significant. (**Less than Significant**)

The new pump station at Site A2 would create approximately 5,500 square feet of new impervious surfaces and the new pump station at Site A4 would create approximately 5,000 square feet of new impervious surfaces. As discussed in the Project Description, runoff from both sites would drain into the existing storm drain system. Stormwater runoff at either site would be allowed to infiltrate over the new landscaping and existing pervious surfaces surrounding the sites. Drainage would divert stormwater runoff ultimately to the same existing natural drainage pathways that conveyed stormwater runoff before construction and into

the existing drainage system. Therefore, there would be no alteration of the existing drainage pattern of the site area in a manner which would: a) result in substantial erosion or siltation on or off site, or b) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on site or off site. Operational impacts would be less than significant. (**Less than Significant**)

e) **Setting**

Urban stormwater runoff, such as runoff that would occur from Pump Station R3000, can contain many types of pollutants, including polynuclear aromatic hydrocarbons from vehicle emissions; heavy metals such as copper from brake pad wear and zinc from tire wear; dioxins as products of combustion; and mercury resulting from atmospheric deposition. These materials and others can be deposited on paved surfaces and rooftops as fine airborne particles, thus causing stormwater runoff pollution that is unrelated to the particular activity or land use.

The Municipal Regional Stormwater Permit issued by the RWQCB (Order No. R2-2015-0049) addresses stormwater runoff from development projects in Contra Costa County as well as four other counties and two cities. Provision C.3 of this permit requires development projects to address pollutants in stormwater runoff and to prevent increases in runoff flows from new development and redevelopment projects. To meet the permit requirements, development projects that create 10,000 square feet or more of impervious surfaces must incorporate Low Impact Design (LID) features such as source control, site design, and stormwater treatment measures into their project design. For projects that do not meet this threshold, the permit encourages municipalities to enforce similar requirements.

Impacts Site A2 and Site A4

During construction at either site, short-term creation or contribution of runoff water could occur which would provide substantial additional sources of polluted runoff. As described in Impact Discussion a, f) above, Standard Construction Specification 01 35 44 includes: Section 1.1.B which requires specific measures to control construction-related erosion and sedimentation and the discharge of pollutants in stormwater runoff, Section 1.3.A which requires submittal of a SWPPP, and Section 1.3.D which requires a Spill Prevention and Response Plan. These incorporated components of Specification 01 35 44 would ensure that runoff from the Project would not contribute substantial additional sources of polluted runoff.

Because EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements, has been incorporated into the Project, and the practices achieve controls to prevent the discharge of contaminated stormwater runoff from the Project site, and prevent the accidental release of hazardous materials during Project construction, the Project construction impacts related to creation or contribution of runoff water which would provide substantial additional sources of polluted runoff would be less than significant. The EBMUD Practices and Procedures Monitoring and Reporting Plan (Appendix A of this Initial

Study/Mitigated Negative Declaration) lists the applicable standard specifications language. (**Less than Significant**)

The new pump station at Site A2 would create approximately 5,500 square feet of new impervious surfaces and the new pump station at Site A4 would create approximately 5,000 square feet of new impervious surfaces. Because the amount of new impervious surfaces at either site would be less than 10,000 square feet, Pump Station R3000 would not be subject to Provision C.3 of the Municipal Regional Stormwater Permit at either site. As discussed in the Project Description, runoff from both sites would drain into the existing storm drain system. Runoff from Site A2 would drain into a new pipeline at the southeast corner of the site that would connect into an existing 36-inch storm drain line north of the site that runs perpendicular to Dougherty Road. Runoff from Site A4 would drain into a new pipeline that would then connect into the existing storm drain system for Reservoir R200. The Project would also include new landscaping in the unpaved area of both sites. Stormwater runoff at either site would be allowed to infiltrate over the new landscaping and existing pervious surfaces surrounding the sites. Drainage would divert stormwater runoff ultimately to the same existing natural drainage pathways that conveyed stormwater runoff before construction and into the existing drainage system. Also, operation of Pump Station R3000 would not include long-term storage of potential pollutants or serve as long-term parking. For these reasons, there would be no creation or contribution of runoff water which would: a) exceed the capacity of existing or planned stormwater drainage systems, or b) provide substantial additional sources of polluted runoff. The impact would be less than significant. (**Less than Significant**)

g, h) **Site A2 and Site A4**

The Project does not include the construction of housing. While Site A2 is located adjacent to 100-year flood zone associated with Alamo Creek, neither Site A2 nor A4 is located within a 100-year flood zone (FEMA, 2009). (**No Impact**)

i) **Site A2 and Site A4**

Neither Site A2 nor A4 are located within a dam inundation zone (ArcGIS, 2015). EBMUD's Reservoir R200 is located uphill of Site A4 and while this site could be inundated in the event that the tank failed, the likelihood of tank rupture is low because the Reservoir R200 was designed in accordance with EBMUD's Reservoir Design Guide, which details design criteria and conditions for above- and below-ground water reservoirs and outlines applicable codes and design standards. Complete and sudden failure of the pump station and associated pipelines due to an earthquake or other condition is extremely unlikely due to the application of standard EBMUD practices, procedures and current engineering standards for construction that dictate engineering requirements for water facilities and seismic design. As detailed in the Project Description, a number of EBMUD standard practices and procedures, applicable to all EBMUD projects, have been incorporated into the Project, including Engineering Standard Practice

550.1, Seismic Design Requirements which dictates design standards for facilities to withstand seismic hazards. Further, even if Pump Station R3000 were to be inundated, it would pump only recycled water for irrigation purposes, and would not be critical to any life-safety operations that would be required in the event of a regional emergency. In addition, the connection pipeline would be constructed below ground and would not be vulnerable to flooding hazards. The pump station also would not house any human occupants. Because the new pump station and associated pipelines would be built in compliance with EBMUD standard practices and current engineering practices and building codes, the potential for exposure of people or structures to significant risk of loss, injury or death involving flooding is less than significant. The EBMUD Practices and Procedures Monitoring and Reporting Plan (Appendix A of this Initial Study/Mitigated Negative Declaration) lists the applicable standard specifications language. (**Less than Significant**)

j) **Site A2 and Site A4**

Tsunamis (seismic sea waves) are long-period waves that are typically caused by underwater seismic disturbances, volcanic eruptions, or submerged landslides. Seiches are standing waves that can form on confined bodies of water such as reservoirs and lakes in the event of an earthquake. Both Sites A2 and A4 are located at an elevation of 550 feet or higher, approximately 15 miles inland from the San Francisco Bay shoreline; therefore, there would be no risk associated with tsunamis which are large sea waves. Neither Site A2 nor A4 is located in the vicinity of any confined water bodies and would not be subject to a seiche; therefore, there is no impact. Neither Site A2 nor A4 is not located near a volcano or other geologic feature capable of producing mudflows; therefore, there is no impact. (**No Impact**)

References

ArcGIS, *Inundation Maps for Dams Operated by Contra Costa County Flood Control and Water Conservation District*. Available online at http://www.arcgis.com/home/item.html?id= 8fe15fd6b8284957a043c138729fdd30. Accessed on August 10, 2016.

Contra Costa Clean Water Program, *Contra Costa Creeks Inventory and Watershed Characterization Report*, March 31, 2004.

EBMUD, Standard Construction Specification, Section 01 35 44, Environmental Requirements, March 2, 2018.

Federal Emergency Management Agency (FEMA), FEMA Map Service Center: Search by Address. *Flood Insurance Rate Map No. 0613C0466F*, Effective June 16, 2009. Available online at https://msc.fema.gov/portal/search#searchresultsanchor. Accessed on August 10, 2016.

State Water Resources Control Board (SWRCB), *2010 Integrated Report (Clean Water Act Section 303(d) List / 305(b) Report)* — Statewide. Available online at http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml. Accessed August 16, 2015

2.2.10 Land Use and Land Use Planning

Issues (and Supporting Information Sources):		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
10.	**LAND USE AND LAND USE PLANNING — Would the project:**				
a)	Physically divide an established community?	☐	☐	☐	☒
b)	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c)	Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

Discussion

Site A2

Site A2 is currently owned by the City of San Ramon and located adjacent to Dougherty Road, a 50 MPH six lane roadway. Nearby land uses include residences located approximately 150 feet to the west and 300 feet to the east. In terms of planning designations, the site is zoned RM-Medium Density Residential by the San Ramon Zoning Ordinance, and the General Plan designation is Multi-Family High Density Residential developments, with densities between 14 to 30 dwelling units per acre (San Ramon, 2015). Site A2 is within the City's Urban Growth Boundary (UGB). The purpose of the UGB is to limit the extent to which urban development and services are provided as well as to serve as a tool to preserve open space, protect natural and scenic resources, encourage infill development, and encourage the efficient development of municipal services such as sewer and water for a specific period of time.

Site A4

Site A4 is currently owned by DERWA and is part of the property containing the Reservoir R200 facility. Nearby existing land uses in addition to Reservoir R200 include open space, and two residential subdivisions: Bridges at Gale Ranch, approximately 350 feet to the south of the site; and the Capella at Gale Ranch located at Laurelspur Loop, approximately 170 feet to the east of the site. In terms of planning designations, Site A4 is zoned Open Space by the San Ramon Zoning Ordinance and designated in the General Plan as Open Space for Natural State and Passive Recreation (San Ramon, 2015). Site A4 also is within the City of San Ramon's UGB.

a) **Site A2 and Site A4**

Construction of Pump Station R3000 and associated pipelines at either Site A2 or A4 would not result in the physical division or isolation of any established community because of the nature of the Project and proposed locations. Site A2 is located on the west side of Dougherty Road and given its size and location, construction of Pump Station R3000 would not result in the division of any

established communities in the area. Site A4 is located on a hillside above an established community, but would not divide or isolate any this established community because there are none currently located on the hillside next to the site. (**No Impact**)

b) Regarding land use plans and policies, the General Plan and zoning designations of the City of San Ramon for Sites A2 and A4 are presented above; there are no other land use plans in effect in the vicinity of the Project sites. The Project does not conflict with any applicable land use plan, policy, or regulation. Pursuant to Government Code Section 53091(d) and (e), EBMUD is not subject to the building and zoning ordinances of local jurisdictions for projects involving the transmission of water. Nonetheless, EBMUD strives to consider the regulations and ordinances of local jurisdictions during construction, where feasible and not contrary to its public purpose and responsibilities. Although not applicable pursuant to the exemptions found in Section 53091, the Project is consistent with San Ramon's General Plan and zoning code. The City of San Ramon Zoning Code Section D2-4 - Exemptions from Land Use Permit Requirements, Part B7 states that, "*the erection, construction, alteration, or maintenance by a public utility or public agency of utilities intended to service existing or nearby approved developments shall be permitted in any zone.*"

Site A2 and Site A4 are also located within the City of San Ramon's UGB. As noted above, part of the purpose of the City of San Ramon's UGB is to encourage the efficient development of municipal services such as sewer and water. The construction of Pump Station R3000 at either Site A2 or A4 would be consistent with this purpose by enhancing the provision of recycled water to areas served only by EBMUD.

Site A2

As described above, the City of San Ramon Zoning Code allows construction of a public utility intended to service existing or nearby approved developments in any zoning designation. Because the Project includes the construction of a recycled water pump station to serve areas in the City of San Ramon, the Project is consistent with the current designation for Site A2. As stated above, the General Plan designation for Site A2 is Multi-Family High Density Residential developments. The land adjacent to Site A2 is developed with residential homes and Dougherty Road, and construction of Pump Station R3000 would not change or conflict with these existing land uses. The southern boundary of Site A2 also abuts an open space recreational area. Site A2 is located on a landscape maintained parcel (APN 217-430-097) associated with the adjacent residential development. The proposed footprint for Site A2 would occupy less than a quarter of an acre of this landscaped area, preserving the landscaping and adjacent open space to the extent possible, and not depriving the opportunity for future residential development.

Site A4

As described above, the City of San Ramon Zoning Code allows construction of a public utility intended to service existing or nearby approved developments in any zoning designation. Because the Project includes the construction of a recycled water pump station to serve areas in the City of San Ramon, the Project would be allowed within the current designation for Site A4. Site A4 is located on land that is designated by the General Plan as Open Space for Natural State and Passive Recreation. DERWA currently owns the land where Pump Station R3000 would be constructed at Site A4 adjacent to Reservoir R200 (APN 222-240-031); Site A4 is located adjacent to the access road for the existing Reservoir R200, and construction of Pump Station R3000 at Site A4 would be consistent with the existing land uses for Reservoir R200. The proposed footprint for Site A4 would occupy less than a quarter of an acre of this open space area, preserving the open space to the extent possible, and not depriving the opportunity for use of the open space facilities, including the northern portion of the City of San Ramon's West Alamo Creek Trail, which is a 10-foot-wide earthen trial that is used for hiking and biking throughout the Dougherty Hills.

Because the Project would not preclude the use of lands consistent with the City of San Ramon's General Plan and zoning code, and is consistent with the purpose of the UGB, it would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project. (**No Impact**)

c) **Site A2 and Site A4**

West Alamo Creek, which is approximately 100 feet south of Site A2, is surrounded by a City of San Ramon designated Critical Wildlife Habitat. The Critical Wildlife Habitat area extends to approximately 50 feet south of proposed Site A2 construction activities. However, there is no critical habitat designated at Site A2. No habitat conservation plans, natural community conservation plan, or other approved conservation plans have been approved for lands that include either Site A2 or Site A4 (USFWS, 2016). (**No Impact**)

References

The City of San Ramon, *San Ramon General Plan 2035,* Open Space Element, adopted by the City Council April 28 2015. Available online at http://www.ci.san-ramon.ca.us/gprc/gprcindex.htm. Accessed on August 15, 2016.

The City of San Ramon, *San Ramon Zoning Map*, August 13, 2015.

United States Department of Fish and Wildlife, Environmental Conservation Online System, *Habitat Conservations Plans, Region 8.* Available online at http://ecos.fws.gov/ecp0/conservationPlan/region/summary?region=8&type=HCP. Accessed on September 8, 2016.

2.2.11 Mineral Resources

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
11. MINERAL RESOURCES — Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

Discussion

a, b) **Site A2 and Site A4**

According to the United States Geological Survey (USGS), there are no known mineral resources located in the Project vicinity that would be of value to the region and the residents of the state at either of the potential Project site locations. The General Plan did not identify any locally-important mineral resource recovery sites at the either of the potential Project site locations. (**No Impact**)

References

The City of San Ramon, *San Ramon General Plan 2035,* adopted by the City Council April 28 2015. Available online at http://www.ci.san-ramon.ca.us/gprc/gprcindex.htm. Accessed on August 15, 2016.

United States Department of the Interior, United States Geological Survey, *Mineral Resources On-Line Spatial Data Interactive Map,* October 23, 2015. Available online at http://mrdata.usgs.gov/general/map.html. Accessed on August 16, 2016.

2.2.12 Noise

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
12.	**NOISE — Would the project result in:**				
a)	Exposure of persons to or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b)	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c)	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d)	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
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 expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f)	For a project located in the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Technical Background and Noise Terminology

Noise can be generally defined as unwanted sound. Sound, traveling in the form of waves from a source, exerts a sound pressure level (referred to as sound level) which is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing and 120 to 140 dB corresponding to the threshold of pain.

Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude (sound power). The sound pressure level, therefore, constitutes the additive force exerted by a sound corresponding to the frequency/sound power level spectrum.

The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. As a consequence, when assessing potential noise impacts, sound is measured using an electronic filter that de-emphasizes the frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human ear's decreased sensitivity to low and extremely high frequencies instead of the frequency mid-range. This method of frequency weighting is referred to as A-weighting and is expressed in units of A-weighted decibels (dBA). Frequency A-weighting follows an international standard methodology of frequency de-emphasis and is typically applied to community noise measurements.

Noise exposure is a measure of noise over a period of time. Noise level is a measure of noise at a given instant in time. Community noise varies continuously over a period of time with respect to the contributing sound sources of the community noise environment.

Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure, with the individual contributors unidentifiable. The background noise level changes throughout a typical day, but does so gradually, corresponding with the addition and subtraction of distant noise sources such as traffic and atmospheric conditions. What makes community noise constantly variable throughout a day, besides the slowly changing background noise, is the addition of short duration single event noise sources (e.g., aircraft flyovers, motor vehicles, sirens), which are readily identifiable to the individual receptor. These successive additions of sound to the community noise environment vary the community noise level from instant to instant, requiring the measurement of noise exposure over a period of time to legitimately characterize a community noise environment and evaluate cumulative noise impacts.

This time-varying characteristic of environmental noise is described using statistical noise descriptors. The most frequently used noise descriptors are summarized below:

L_{eq}: the energy-equivalent sound level is used to describe noise over a specified period of time, typically one hour, in terms of a single numerical value. The L_{eq} is the constant sound level, which would contain the same acoustic energy as the varying sound level, during the same time period (i.e., the average noise exposure level for the given time period).

L_{max}: the instantaneous maximum noise level for a specified period of time.

L_{50}: the noise level that is equaled or exceeded 50 percent of the specified time period. The L_{50} represents the median sound level.

L_{90}: the noise level that is equaled or exceeded 90 percent of the specific time period. This is considered the background noise level during a given time period.

DNL: The day-night noise level (DNL; also referred to as L_{dn}) or the energy average of the A-weighted sound levels occurring during a 24-hour period and which accounts for the greater sensitivity of most people to nighttime noise by weighting noise levels at night (“penalizing” nighttime noises). Noise between 10:00 p.m. and 7:00 a.m. is weighted (penalized) by adding 10 dBA to take into account the greater annoyance of nighttime noises.

CNEL: Similar to the DNL, the Community Noise Equivalent Level (CNEL) adds a 5-dBA “penalty” for the evening hours between 7:00 p.m. and 10:00 p.m. in addition to a 10-dBA penalty between the hours of 10:00 p.m. and 7:00 a.m.

Discussion

The Project does not introduce any new noise sensitive land uses and the following discussion focusses on the Project’s potential to result in noise impacts on existing sensitive receptors, which include residences located within the vicinity of the two potential sites. Applicable noise regulations, the location of sensitive receptors with respect to proposed facilities and the existing ambient noise levels at the two proposed pump station sites are provided below.

The General Plan contains guidelines for determining the compatibility of various land uses with different noise environments (San Ramon, 2015). For residential uses, an exterior noise environment of up to 60 dBA DNL or CNEL is considered "normally acceptable" while a noise environment between 60 to 70 dBA DNL or CNEL is considered "conditionally acceptable". Construction activities are exempt from these land use/noise compatibility standards, but must implement all practical noise attenuation measures and practices to limit adverse impacts on nearby land uses (San Ramon, 2015).

For the purpose of noise analyses, the General Plan considers a project to result in a significant increase in ambient noise level if:

- The ambient noise level is less than 60 dB DNL and the project increases noise levels by five dB or more.
- The ambient noise level is 60-65 dB DNL and the project increases noise levels by three dB or more.
- The ambient noise level is greater than 65 dB DNL and the project increases noise levels by 1.5 dB or more.

These thresholds are applicable to the permanent noise increase in ambient levels from the operation of the Project, primarily from transportation sources. Thresholds for the analysis of temporary construction noise are usually included in the Municipal Code. However, the San Ramon Municipal Code does not provide quantitative noise standards for construction or operation of noise sources within the City. Section B6-100 of the San Ramon Municipal Code restricts construction within a residential zone to the hours between 7:30 a.m. and 7:00 p.m. on weekdays, and 9:00 a.m. and 6:00 p.m. on weekends. Section B6-97 of the Municipal Code prohibits the operation or any machinery such as pumps or other mechanical equipment without any noise control devices to muffle the noise (San Ramon, 2016).

Site A2

Sensitive receptors in the vicinity of Site A2 are single family residences. The closest residences are located approximately 150 feet to the west of the site. A short term ambient noise measurement (ST-1) was taken adjacent to the nearest residential receptor to the west of Site A2, approximately 250 feet west of the edge of Dougherty Road (refer to Figure 9). Traffic on Dougherty Road was the predominant noise source that contributed to noise at this location. The measured average noise level, (L_{av} was 49.6 dBA while the L_{90} (the noise level exceeded 90 percent of the time, which can be used as a proxy for nighttime noise level) was 42 dBA.

Another short term measurement (ST-2) was taken 25 feet west of Site A2 and approximately 50 feet from the western edge of Dougherty Road to represent the ambient noise level at the site, as shown on Figure 9. Measured noise levels at this location were higher with a L_{av} of 63.1 dBA and L_{90} of 54 dBA due not only to the closer proximity of the roadway but also because direct line-of sight with the roadway is not blocked. Noise levels at the residential receptor (ST-1) are reduced by over 13 dBA when compared to

SRVRWP Pump Station R3000 . 160455

SOURCE: Google Earth, 2017; EBMUD, 2017; Adapted by ESA, 2017

Figure 9
Site A2 and Site A4 Noise Measurement Locations

the pump site (ST-2). While part of this reduction is attributable to the increased distance from Dougherty Road, the remaining noise reduction would be attributable to topographical block of the line-of-sight. Given that ST-1 is twice the distance from Dougherty Road than ST-2, for a line source this this would account for a reduction of three dBA to four dBA. Consequently, the additional 9 dBA of attenuation[20] achieved at ST-1 can be attributed to the intervening topography between the road and the residences. Therefore, it was concluded that operational noise from the pump station at A2 would attenuate by an additional nine dbA at the nearest residences from topographical shielding in addition to attenuation due to distance.

Site A4

Site A4 is located within an open space area. Nearby existing land uses include open space and two residential subdivisions approximately 350 feet to the south and 170 feet southeast of the site. Residences as close as 170 feet on Laurelspur Loop would be the nearest sensitive receptors to Site A4. A short term ambient noise measurement (ST-3) was taken at the southern boundary of the open space across the street from the nearest residences on Lilac Ridge Road and Lantana Way to capture the existing noise environment these receptors (refer to Figure 9). Existing noise sources consisted of intermittent vehicle travel on Lilac Ridge Road. While an active multi-home construction site was observed to the north, activity during the monitoring period was negligible with a few spates of distant hammering. The measured L_{av} was 50.4 dBA and L_{90} was 42 dBA. The line of sight between Site A4 and its nearest receptors is interrupted by topography which offers additional noise attenuation conservatively estimated to be five dBA. Sensitive receptors along the proposed pipeline alignment include residences on Lantana Way, Sky Jasmine Way, Laurelspur Loop and the receptors in the Coyote Creek Elementary School.

a, c, d) **Setting**

Construction Noise

Construction activity noise levels at and near the Project sites would fluctuate depending on the particular type, number, and duration of use of various pieces of construction equipment. Construction-related vehicle trips would raise ambient noise levels along haul routes, depending on the number of haul trips made and types of vehicles used. Table 9 shows typical maximum noise levels produced by various types of construction equipment.

Noise impacts from construction generally result when construction activities occur during the noise-sensitive times of the day (early morning, evening, or nighttime hours), in areas immediately adjacent to sensitive receptors, or when construction noise lasts over extended periods of time. Noise from construction activities generally attenuates at a rate of 6.0 to 7.5 dB per doubling of distance (Caltrans, 1998).

[20] The gradual loss in intensity.

TABLE 9
TYPICAL NOISE LEVELS FROM CONSTRUCTION EQUIPMENT

Construction Equipment	Noise Exposure Level, dB L_{max} @ 50 Feet
Auger Drill Rig	84
Backhoe	78
Compactor	83
Concrete Mixer Truck	79
Concrete Pump Truck	81
Concrete Pump	82
Concrete Saw	90
Chain Saw	84
Crane	81
Drill rig truck	79
Excavator	81
Front End Loader	79
Grader	85
Jackhammer	89
Paver	77
Pumps	81
Roller	80
Scraper	84
Truck	84
Welder	74

SOURCE: Federal Highway Administration (FHWA), 2006. *Construction Noise Handbook*, August 2006. (Chapter 9)

For the purposes of the noise analysis, the Project is considered to have a significant impact if it would substantially increase the ambient noise levels for adjoining areas. As both the San Ramon General Plan and the Municipal Code do not contain quantitative significance thresholds specific to construction activities, this construction noise analysis uses the speech interference thresholds to define the significance of a predicted increase in noise levels. Speech interference is an indicator of impact on typical daytime and evening activities. A speech interference criterion of 70 dBA is used to evaluate daytime construction noise and is based on an assumed 25 dBA reduction in interior noise levels for a typical building with the windows closed (U.S. EPA, 1974).

Article 1, Section B6-100 of the San Ramon Municipal Code prohibits operation of construction equipment within residential land use districts on holidays celebrated by the federal government, and on Monday through Friday, prior to 7:30 a.m. and after 7:00 p.m. on each day and on Saturdays and Sundays, prior to 9:00 a.m. and after 6:00 p.m. The Project would limit construction activities associated with the pump station and pipeline to these hours consistent with the

San Ramon Municipal Code, to the extent feasible. There would be a need for, possible exceptions for work after 7:00 p.m. (e.g., for system connections and/or emergencies) for which EBMUD would coordinate with the City to ensure a less than significant impact to receptors.

Site A2

Construction activities associated with the pump station and pipelines at Site A2 would be temporary and is expected to last about 24 months. Assuming an attenuation rate of six dB per doubling of distance, construction equipment noise levels of 87.5 dBA from the simultaneous operation of the two most noise generating equipment as shown in Table 9 would attenuate to about 78 dBA at the nearest residences located 150 feet west of Site A2. As discussed earlier, the intervening topography between Site A2 and the residences would further attenuate noise by 9 dBA to 69 dBA, which would be less than the speech interference threshold of 70 dBA at the residences; therefore, the impact from pump station construction noise would be less than significant. The alignment of the 150 feet pipeline segment connecting the pump station to the recycled water header located directly in front of the pump station would be located away (and farther) from the nearest sensitive residences than the pump station. Therefore, the impact from pipeline construction would be less than that analyzed for the pump station, and would be less than significant. (**Less than Significant**)

Site A4

Pump station and pipeline construction associated with Site A4 would also take about 24 months to be completed. Assuming an attenuation rate of six dB per doubling of distance, maximum construction equipment noise levels of 87.5 dBA from pump station construction (assuming simultaneous operation of the two noisiest pieces of equipment shown in Table 9) would attenuate to about 71 dBA at the nearest occupied residences to the south of Lilac Ridge Road. Intervening topography would provide an additional five dB attenuation reducing maximum construction equipment noise levels at these receptors to 66 dBA, which would be below the 70 dBA speech interference threshold. Maximum construction noise levels would attenuate to 77 dBA at the nearest, future residences on Laurelspur Loop. As these residences have an uninterrupted line of sight to Site A4, there would be no additional attenuation due to topography and the distance-attenuated noise level of 77 dBA would exceed the speech interference threshold of 70 dBA.

Pipeline construction along Lilac Ridge Road and North Gale Ridge Road would lead to increased noise levels and potential exceedance of the speech interference threshold at the residences on Lantana Way, Sky Jasmine Way, Laurelspur Loop and the receptors in the Coyote Creek Elementary School. However, as pipeline construction progresses along an alignment (rather than persisting at one location), any given sensitive receptor would not be subject to construction noise for the entire duration of construction activity. Moreover, pipeline construction would be scheduled during periods when the school would not be in session to avoid impacts to students. Pipeline construction would progress at the rate of 80 LF to 200 LF per construction workday. As pipeline construction would take

place less than 100 feet from sensitive receptors in some locations, the noise impact would be significant.

A number of EBMUD standard practices and procedures, applicable to all EBMUD projects, would apply to the Project, including Standard Construction Specification 01 14 00, Work Restrictions. Section 1.4, Work Hours, of this standard construction specification includes minimization measures for restricting hours of construction equipment, including:

- Truck operations (haul trucks and concrete delivery trucks) will be limited to the daytime hours (between 9:00 a.m. and 4:00 p.m.).

Section 1.8, Construction Noise, of EBMUD's Standard Construction Specification 01 14 00, Work Restrictions, also includes minimization measures for restricting hours of construction equipment, including:

- Noise-generating activities greater than 90 dBA (impact construction such as concrete breaking, concrete crushing, tree grinding, etc.) shall be limited to the hours of 8:00 a.m. and 4:00 p.m., Monday through Friday.

Section 3.6, Noise Control, of EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements, includes minimization measures for noise control of construction equipment, including:

- Contractor is responsible for taking appropriate measures, including muffling of equipment, selecting quieter equipment, erecting noise barriers, modifying work operations, and other measures as needed to bring construction noise into compliance.
- Each internal combustion engine, used for any purpose on the job or related to the job, shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated on the project without said muffler.
- Best available noise control techniques (including mufflers, intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds) shall be used for all equipment and trucks, as necessary.
- Truck operations (haul trucks and concrete delivery trucks) will be limited to the daytime hours specified in Section 01 14 00.
- Stationary noise sources (e.g. chippers, grinders, compressors) shall be located as far from sensitive receptors as possible. If they must be located near receptors, adequate muffling (with enclosures) shall be used. Enclosure opening or venting shall face away from sensitive receptors. Enclosures shall be designed by a registered engineer regularly involved in noise control analysis and design.

- Material stockpiles as well as maintenance/equipment staging and parking areas (all on-site) shall be located as far as practicable from residential receptors.

- If impact equipment (e.g., jack hammers, pavement breakers, rock drills etc.) is used during project construction, Contractor is responsible for taking appropriate measures, including but not limited to the following:

  A. Hydraulically or electric-powered equipment shall be used wherever feasible to avoid the noise associated with compressed-air exhaust from pneumatically powered tools. However, where use of pneumatically powered tools is unavoidable, an exhaust muffler on the compressed-air exhaust shall be used (a muffler can lower noise levels from the exhaust by up to about 10 dB). External jackets on the tools themselves shall be used, where feasible, which 05/03/17 <Spec No.> 01 35 44 - 19 Environmental Requirements could achieve a reduction of 5 dB. Quieter procedures, such as drilling rather than impact equipment, will be used whenever feasible. It is the Contractor's responsibility to implement any mitigations necessary to meet applicable noise requirements.

  B. Impact construction including jackhammers, hydraulic backhoe, concrete crushing/recycling activities, vibratory pile drivers etc. shall be limited to the day time hours specified in Section 01 14 00.

  C. Erect temporary noise barriers or noise control blankets around the construction site, particularly along areas adjacent to residential buildings.

  D. Utilize noise control blankets around the major noise sources to reduce noise emission from the site.

  E. Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings by the use of sound blankets for example.

  F. Limit the noisiest phases of construction to 10 work days at a time, where feasible.

  G. Notify neighbors/occupants within 300 feet of project construction at least thirty days in advance of extreme noise generating activities about the estimated duration of the activity.

  H. Noise Monitoring shall be conducted periodically during noise generating activities. Monitoring shall be conducted using a precision sound-level meter that is in conformance with the American National Standards Institute (ANSI) Standard S1.4, Specification for Sound Level Meters. Monitoring results shall be submitted weekly to the Engineer.

By requiring use of noise control devices on construction equipment, location of noise sources farthest from receptors and limiting construction to the less noise sensitive daytime hours, compliance with these measures would provide the

7 dBA reduction needed to reduce the noise generated by pump station and pipeline construction to below the speech interference thresholds at the nearest residences. Any required nighttime construction activities would be conducted in coordination with the City and with adequate noise control measures to ensure a less than significant impact. Use of exhaust mufflers on the compressed air exhaust, along with external noise jackets on tools, would reduce noise levels at the source by as much as 10 dBA. Using a muffler on the equipment that produces 87.5 dBA would reduce noise generated by the equipment to 77.5 dBA, which would attenuate to 66.7 dBA at 170 feet from the equipment (distance to nearest receptor). Constructing temporary barriers around noise sources and/or the construction site could reduce construction noise by another 5 dBA resulting in a less than significant impact. (**Less than Significant**)

Operational Noise

Once operational, the Project would generate noise from the operation of three 350 horsepower turbine pumps and a transformer. The pumps would operate for up to 12 hours a day typically during off-peak evening and nighttime hours.

The noise analysis below uses noise data measured at other enclosed pump stations for the EBMUD Water Treatment and Transmission Improvements Program (WTTIP) EIR (EBMUD, 2006). The combined noise level from the operation of three 350 horsepower pumps was estimated to be 55 dBA at a distance of 50 feet, based on measurements taken at a distance of six feet from the louvered door (generally the only opening to the enclosure) and represents the maximum exterior noise level. Noise levels measured at the pump stations were found to be 20 dB lower on the sides of the enclosure where no vents or openings were located. Transformer noise levels were estimated to be 38 dBA based on National Electrical Manufacturers Association standards (NEMA, 1994). Since distance is not specified in NEMA standards, for the purpose of this analysis, levels were conservatively applied at the far-field noise distance of 50 feet. The 55 dBA pump noise levels estimated at 50 feet already assume noise reduction from an enclosure as the measured reference noise level for pumps already included noise reduction provided by louvers. For the transformer however, an additional 10-dB noise reduction would be provided from an appropriately designed sound barrier reducing noise at 50 feet to 28 dBA. Due to the logarithmic nature of sound, the combined noise from the simultaneous operation of the three pumps and the transformer (with attenuation for enclosures) would still be 55 dbA at 50 feet. Essentially the transformer noise would not be audible over the pump noise and therefore does not contribute to the combined noise level.

Site A2

Assuming a 6 dBA reduction for every doubling of distance and the previously discussed 9 dBA reduction for intervening topography, operational noise from the simultaneous operation of the three pumps and transformer at Site A2 would result in a noise level of 36.5 dBA at the residences closest to Site A2. This level of noise would not be audible over the existing ambient noise level of 49.6 dBA, L_{av} and would therefore not increase the total ambient noise level at the

residences. Noise from the pump station at Site A2 would increase the existing nighttime noise level at the nearest receptors (estimated to be 42 dBA) by 1.1 dB. According to the General Plan standards, in noise environments less than 60 dBA DNL, a project noise increase of up to 5 dB would not be considered significant. Pipelines would be located underground and operation of the pipelines would not generate any noise. Therefore, no operational noise impact would occur from the pipelines. The Project would generate about one worker round trip per week for the maintenance of the pump plant and associated facilities and would not result in an increase in traffic noise. (**Less than Significant**)

Site A4

The nearest sensitive receptors at Site A4 are residences on Laurelspur Loop that would be as close as 170 feet to the site. Assuming the same 6 dBA attenuation for every doubling of distance and the previously discussed 5 dBA attenuation for site topography, operational noise from the simultaneous operation of the three pumps and transformer at Site A4 would result in a noise level of 39.4 dBA at the existing residences closest to Site A4. This level of noise would not be audible over the existing ambient noise level of 50.4 dBA, L_{av}. Noise from the pump station at Site A4 would increase the existing nighttime noise level at the nearest receptors (42 dBA) by 1.9 dB. According to the General Plan standards, in noise environments less than 60 dBA DNL, a project noise increase of up to 5 dB would not be considered significant. Hence, this increase in noise level from the operation of the pumps would be less than significant. Pipelines would be located underground and operation of the pipelines would not generate any noise. Therefore, no operational noise impact would occur from the pipeline. The Project would generate about one vehicle round trip per week for the maintenance of the pump plant and associated facilities and would not result in an increase in traffic noise. (**Less than Significant**)

b) **Setting**

Vibrations caused by construction activities can be interpreted as energy transmitted in waves through the ground. These energy waves generally dissipate with distance from the vibration source. Since energy is lost during the transfer of energy from one particle to another, vibration that is distant from a source is usually less perceptible than vibration closer to the source. Vibration from construction equipment could be perceptible in the immediate vicinity of the construction areas. Activities such as pavement breaking and pile drilling are the major sources of groundborne noise and vibration during construction. Ground borne vibration levels from other types of construction equipment would not be perceptible to receptors especially if they operate at distances beyond 25 feet from sensitive receptors (FTA, 2006).

Impacts Site A2 and Site A4

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods employed. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength

with distance. Buildings founded on the soil in the vicinity of the construction site respond to these vibrations, with varying results ranging from no perceptible effects at the lowest levels, low rumbling sounds and perceptible vibrations at moderate levels, and slight damage at the highest levels

The Federal Transit Administration (FTA) Transit Noise and Impact Assessment Report recommend a construction vibration criterion of 0.5 inch/sec PPV to assess impacts from construction activities to reinforced-concrete, steel or timber buildings (FTA, 2006). The report also includes vibration levels for various types of construction equipment measured under a wide variety of construction activities. Construction activities that typically generate the most severe vibrations are blasting and impact pile driving. No such activities are proposed as part of the project and most of the equipment proposed to be used as part of Project construction would generate very minimal vibration that would be perceptible only within 25 feet from the equipment. As none of the affected receptors would be located within 25 feet of construction activity at both proposed pump station sites and the pipeline alignment locations, the temporary impact of vibration and groundborne noise from construction equipment would not be considered significant.

Further, a number of EBMUD standard practices and procedures, applicable to all EBMUD projects, have been incorporated into the Project, including Standard Construction Specification 01 35 44, Environmental Requirements. Sections 3.5 and 3.6 of this standard construction specification include the following measures to control vibration from construction equipment and ensure compliance with the FTA vibration criterion:

- Limit surface vibration to no more than 0.5 in/sec PPV, measured at the nearest residence or other sensitive structure.
- Upon homeowner request, and with homeowner permission, the District will conduct preconstruction surveys of homes, sensitive structures and other areas of concern within 15 feet of continuous vibration-generating activities (i.e., vibratory compaction). Any new cracks or other changes in structures will be compared to preconstruction conditions and a determination made as to whether the proposed Project could have caused such damage. In the event that the Project is demonstrated to have caused the damage, the District will have the damage repaired to the pre-existing condition.
- If impact equipment is used, the Contractor is responsible for taking appropriate measures, including but not limited to the following:
  - Hydraulically or electrically powered equipment shall be used wherever feasible to avoid the noise associated with compressed-air exhaust from pneumatically powered tools. However, where use of pneumatically powered tools is unavoidable, an exhaust muffler on the compressed-air exhaust shall be used (a muffler can lower noise levels from the exhaust by up to about ten dB). External jackets on the tools themselves shall be

used, where feasible, which could achieve a reduction of five dB. Quieter procedures, such as drilling rather than impact equipment, will be used whenever feasible.

- Impact construction, including jackhammers, hydraulic backhoe, concrete crushing/recycling activities, vibratory pile drivers, etc., shall be limited to the daytime hours specified in Standard Construction Specification 01 14 00.
- Erect temporary noise barriers or noise control blankets around the construction site, particularly along areas adjacent to residential buildings.
- Utilize noise control blankets around the major noise sources to reduce noise emission from the site.
- Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings by the use of sound blankets for example.
- Limit the noisiest phases of construction to ten workdays at a time, where feasible.
- Notify neighbors/occupants within 300 feet of Project construction at least 30 days in advance of extreme noise-generating activities about the estimated duration of the activity.
- Noise monitoring shall be conducted periodically during noise-generating activities. Monitoring shall be conducted using a precision sound-level meter that is in conformance with the American National Standards Institute (ANSI) Standard S1.4, Specification for Sound Level Meters. Monitoring results shall be submitted weekly to the Engineer.

Implementation of Sections 3.5, Vibration Control, and 3.6, Noise Control, of Standard Construction Specification 01 35 44 would require vibration controls for construction equipment and provide for preconstruction surveys if necessary.

Section 1.4 of EBMUD's Standard Construction Specification 01 14 00, Work Restrictions, restricts the hours impact construction equipment can be used on site, including the following provisions:

- Truck operations (haul trucks and concrete delivery trucks) will be limited to the daytime hours (between 9:00 a.m. and 4:00 p.m.).

Section 1.8, Construction Noise, of EBMUD's Standard Construction Specification 01 14 00, Work Restrictions, also includes minimization measures for restricting hours of construction equipment, including:

- Noise-generating activities greater than 90 dBA (impact construction such as concrete breaking, concrete crushing, tree grinding, etc.) shall be limited to the hours of 8:00 a.m. and 4:00 p.m., Monday through Friday.

Implementation of Section 1.4, Work Hours, and Section 1.8, Construction Noise, of EBMUD's Standard Construction Specification 01 14 00 would limit construction activity work hours, including the hours when impact equipment can be used on site.

Because Sections 3.5, Vibration Control, and 3.6, Noise Control, of EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements, and Section 1.4, Work Hours, and Section 1.8, Construction Noise, of EBMUD's Standard Construction Specification 01 14 00, Work Restrictions, have been incorporated into the Project, and these sections require vibration controls for construction equipment and restrict construction activity work hours, the Project impacts from exposure to or generation of excessive ground-borne vibration or ground-borne noise levels are less than significant. Specifically, implementation of the standard construction specification to limit surface vibration to no more than 0.5 in/sec PPV, as measured at the nearest residence or other sensitive structure would ensure compliance with the FTA vibration criterion and result in a less than significant impact. (**Less than Significant**)

Operation of the pump station and pipeline would not be expected to affect nearby land uses because of the limited potential for vibration from sources at these facilities and the distance to sensitive receptors resulting in a less than significant impact. (**Less than Significant**)

e, f) **Site A2 and Site A4**

Neither Site A2 nor Site A4 is located within two miles of a public airport, private airstrip, or is within an airport land use plan. (**No Impact**)

References

California Department of Transportation (Caltrans), *Traffic Noise Analysis Protocol for New Highway Construction and Highway Reconstruction Projects*, October 1998.

City of San Ramon, *General Plan 2035, Chapter 10. Noise*, adopted on April 28, 2015.

City of San Ramon, *Municipal Code, Title B - Regulations, Division B6 – Health, Sanitation and Environmental Quality, Chapter V – Noise Control*, revised on March 29, 2016.

East Bay Municipal Utility District (EBMUD), *EBMUD Water Treatment and Transmission Improvements Program DEIR, Section 3.10 – Noise and Vibration*, June 2006.

EBMUD, Standard Construction Specification, Section 01 14 00, Work Restrictions, May 3, 2017.

EBMUD, Standard Construction Specification, Section 01 35 44, Environmental Requirements, March 2, 2018.

Federal Highway Administration (FHWA), 2006. *Construction Noise Handbook, Chapter 9,* August 2006.

Federal Transit Administration (FTA), *Transit Noise and Vibration Impact Assessment (Guidance Manual), Chapter 12*, May 2006.

National Electrical Manufacturers Association (NEMA), *NEMA Standards Publication No. TR 1-1993, Transformers, Regulators and Reactors*, 1994.

U.S. Environmental Protection Agency (USEPA), *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety, EPA/550-9-74-004*, 1974.

USEPA, *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*, 1971.

2.2.13 Population and Housing

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
13. POPULATION AND HOUSING — Would the project:				
a) Induce substantial 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 housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Discussion

a) **Site A2 and Site A4**

Pump Station R3000 would serve Pressure Zone 3 of the SRVRWP. The pump station would provide peak flows of about 5.6 MGD of recycled water for commercial irrigation purposes. Although the pump station would reduce the amount of potable water used for irrigation, allowing it to be available for drinking water instead, the Project would not induce substantial population growth. The additional water does not accommodate unexpected or unplanned development. The recycled water offsets potable water use and reduces the need for severe rationing during droughts. (**Less than Significant**)

b, c) **Site A2 and Site A4**

The Project would not displace existing housing or people; therefore, the Project would not necessitate the construction of replacement housing elsewhere. (**No Impact**)

References

DERWA, *Draft Environmental Impact Report for the San Ramon Valley Recycled Water Program,* State Clearinghouse No. 96013028, August 1996.

2.2.14 Public Services

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

Discussion

a) **Site A2 and Site A4**

The Project would not result in the construction of a major housing development or other action that could drive increases in demand for public services. The Project would not require additional fire or police protection, need for schools, demand for parks, or need for other public facilities, such that new or physically altered public facilities would be needed. The General Plan discusses the standards and capital improvements and facilities that are needed to serve the City during future growth, as well as the guiding and implementing policies to ensure collaboration with the City and service providers. By following these guiding policies and implementing policies, the City maintains acceptable service ratios response times, and other performance objectives. For further discussion of the potential for pipeline construction in public roadways to temporarily affect emergency vehicle response time, refer to Checklist item e in Section 2.2.16, *Transportation and Traffic*. (**No Impact**)

References

The City of San Ramon, *San Ramon General Plan 2035,* Public Utilities Element, adopted by the City Council April 28 2015. Available online at http://www.ci.san-ramon.ca.us/gprc/gprcindex.htm. Accessed on August 15, 2016.

2.2.15 Recreation

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

Discussion

a) **Site A2 and Site A4**

The Project would not result in new housing development or other activities that would increase use, alter usage patterns, or increase demand for existing recreational facilities, thereby causing increased physical deterioration of recreation related facilities or demand for new facilities. (**No Impact**)

b) **Site A2 and Site A4**

Both sites are located in the Gale Ranch area in the City of San Ramon. Residential development exists to the east and west of Site A2 and to the north and south of Site A4. The northern portion of the City of San Ramon's West Alamo Creek Trail passes near both Site A2 and Site A4. West Alamo Creek Trail begins approximately two miles south of Site A4. Figure 10 shows the trail route through the site area. The trail continues north through Coyote Creek Elementary School and Lilac Ridge Road, and then goes east from the bottom of the EBMUD access road, around the new housing development and ends at Ivy Pointe Circle, directly west and uphill of Site A2. The closest section of the trail would be approximately 300 feet away from the pump station at Site A2 and 70 feet away from the pump station at Site A4. The segment of trail that runs between Site A2 and Site A4 is a 10-foot wide earthen trial that is used for hiking and biking throughout the Dougherty Hills. Construction of pipelines at Site A4 may temporarily interfere with a small portion of West Alamo Creek Trail that runs down Lilac Ridge Road and N. Gale Ridge Road, but the trail would still be accessible during construction. (**Less than Significant**)

References

The City of San Ramon, City Map, *Exploring San Ramon*. Available online at http://www.sanramon.ca.gov/parks/parks_facilities/citymap.htm. Accessed on September 7, 2016.

SOURCE: The City of San Ramon, City Map, Exploring San Ramon; Google Earth, 2017; adapted by ESA, 2017

SRVRWP Pump Station R3000 . 160455

Figure 10
Surrounding Recreational Uses

2.2.16 Transportation and Traffic

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
16. TRANSPORTATION/TRAFFIC — Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
e) Result in inadequate emergency access?	☐	☐	☒	☐
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☒	☐

Discussion

Setting

Major roadways passing through the City of San Ramon in the north-south direction include Interstate 680, Camino Tassajara, Alcosta Boulevard, and Dougherty Road. Major east-west roadways in San Ramon include Bollinger Canyon Road, Crow Canyon Road, and Norris Canyon Road (refer to Figure 11). Site A2 is located on the west side of Dougherty Road. Site A4 is located on open space land north off of Lilac Ridge Road.

Transit service in San Ramon is provided by the Central Contra Costa Transit Authority (County Connection), but there are currently no bus routes that travel on Dougherty Road (where Site A2 is located), or on North Gale Ridge Road or Lilac Ridge Road (access roads for Site A4) (County Connection, 2016).

There are several Class II bike lanes surrounding the Project locations. A Class II bike lane is a one-way striped and signed lane on a street (San Ramon, 2015). Dougherty Road has a Class II bike lane. Access to Site A2 is in Dougherty Road. Crow Canyon Road, Monarch Road, and Bollinger Canyon Road are different ways to access Site A4, and all contain Class II bike lines.

SRVRWP Pump Station R3000 . 160455

SOURCE: Google Earth, 2018; ESA, 2018

Figure 11
Major Roadways Around the Potential Project Sites

The Project would not cause long-term effects on transportation or traffic because, once installed, the pump station would generally be operated remotely via the EBMUD's Supervisory Control and Data Acquisition (SCADA) system. One worker vehicle trip per week is anticipated for pump station operation and maintenance.

The duration of the potential significant impacts would be limited to the period of time needed to construct the Project. Existing traffic conditions plus various Project peak-hour traffic conditions were calculated and compared to the CEQA Guidelines significance criteria to determine significance of impact.

a, b) **Site A2 and Site A4**

Based on the existing roadway network serving the Project area, trucks and construction workers traveling to and from the Project sites would use a combination of highways (Interstate 680), City streets (two-lane Lilac Ridge Road, two-lane North Gale Ridge Road), and County roads (six-lane divided Dougherty Road) to reach other local points and/or regional locations.

Construction activities that would generate traffic include trucks hauling equipment and materials to and from Sites A2 and A4 and the pipeline alignments, equipment brought to the work sites for excavation and grading, and the daily arrival and departure of construction workers. The maximum number of truck and construction worker vehicle trips that would be needed for pump station and pipeline construction are shown in Table 10.

TABLE 10
MAXIMUM TRUCK AND WORKER TRIPS DURING CONSTRUCTION

Construction Phase	Site A2			Site A4		
	Approximate Duration (months)	Maximum Trucks (per day; one way trips)	Maximum Worker Vehicles (per day; one way trips)	Approximate Duration	Maximum Trucks (per day; one way trips)	Maximum Worker Vehicles (per day; one way trips)
Pump Station Construction	24	64	10	24	64	10
Excavation	0.5	46	--	0.5	232	--
Pipeline Construction[a]	--	--	--		4	26

NOTE:

[a] Pipeline construction for Site A2 would occur in concurrence with the pump station construction, so the haul trucks and trips per day are included as part of the total estimate provided for the Site A2 pump station construction.

The total volume of soil that would be hauled during excavation at Site A2 is approximately 200 CY. The soil would be hauled away in approximately 23 nine-CY trucks (46 one-way trips) over approximately 14 days. The total volume of soil that would be hauled during excavation at Site A4 is approximately 1,040 CY. The soil would be hauled away in approximately 116 nine-CY trucks (232 one-way trips) over approximately 14 days. Pump

station construction would occur during a period of approximately 24 months. It is anticipated that approximately 100 feet of one of the three southbound lanes on Dougherty Road would be closed daily during non-commute hours for the pump station excavation and concrete pumping activities. Construction staff for the pump stations primarily would work eight-hour shifts sometime between 7:30 am to 7:00 pm each weekday (Monday through Friday) with the rare exception of work occurring outside of normal work hours, such as work in excess of eight hours per day, and work on weekends (9:00 am to 6:00 pm).

Pipeline construction is estimated to proceed at a rate between 80 LF and 200 LF of pipeline per workday in paved areas. Pipeline construction for Site A2 would occur in concurrence with the pump station construction described above, so the haul trucks and trips per day are included as part of the total estimate provided above for the Site A2 pump station construction. Pipeline construction for Site A4 would require approximately 14 nine-CY haul trucks (28 one-way trips) per day for trench pavement, soil disposal, and fill import deliveries. Four trucks would be used per day for deliveries of pipeline, appurtenance, paving, and other equipment. There would be approximately 13 workers (26 one-way trips) and four one-way truck trips per day for pipeline construction for Site A4. Pipeline construction would occur primarily Monday through Friday from 7:30 am to 7:00 pm.

Detailed construction phasing has not yet been developed; however, pipeline construction would not overlap with peak truck trips (off-hauling of soils) for pump station development. Consequently, there would be a maximum of ten one-way worker vehicle trips per day (five commute trips in the morning and five commute trips in the afternoon) and a maximum of eight one-way truck trips per hour (assuming an eight-hour work day, this equals 64 trips per day) to either Site A2 or Site A4 for the pump station construction. The total maximum of one-way worker vehicle trips and truck trips combined for the pump station construction would be 74 trips per day.

The proposed pipeline alignment from Site A4 to the recycled water transmission main in Dougherty Road traverses open space (within the existing access road for Reservoir R200) and the following public streets: Lilac Ridge Road, North Gale Ridge Road, and Dougherty Road. EBMUD anticipates that one lane of the two-lane Lilac Ridge Road and two-lane North Gale Ridge Road would be closed during pipeline construction and connection. Alternate one-way traffic control around the construction area would be implemented in order to maintain two-way traffic flow on these roads. It is expected that one or two lanes would be closed (daily during non-commute hours) on either the southbound or northbound side of Dougherty Road during pipeline construction, with traffic being funneled into the remaining available lane(s). The proposed pipeline alignment for Site A2 would be installed beneath the southbound travel lanes of Dougherty Road and would require temporary lane closures. It is expected that one or two lanes would be closed (daily during non-commute hours) on the southbound side of Dougherty Road during pipeline construction, with traffic being funneled into the remaining

available lane(s). Traffic control measures (e.g., signage, cones, flaggers) would be implemented in order to route traffic around the construction area. Prior to pipeline construction, EBMUD would obtain an encroachment permit from the City of San Ramon.

Construction-generated traffic, and lane closures, would be temporary (i.e., would end when construction is completed), and therefore would not result in any long-term degradation in operating conditions (level of service) on any Project roadways. The primary offsite impacts from the movement of construction trucks would include short-term and intermittent lessening of roadway capacities due to slower movements of the trucks and larger turning radii of the trucks compared to passenger vehicles. The temporary increase in traffic caused by Project-generated traffic is considered less than significant in relation to the existing traffic load and capacity of the street system because (1) the percent increase in traffic volumes on area arterials and freeways (up to about 0.4 percent[21]) would not be substantial relative to background traffic conditions, and would not significantly disrupt traffic flow on these roadways, and (2) while traffic volume increases would be noticeable on local-serving roadways, the increased traffic volumes would remain at levels less than the carrying capacity of the affected roads. Therefore, these local roads would accommodate the Project-generated truck and worker vehicle trips, which would be dispersed throughout the day.

Temporary closure of one or two lanes in either the southbound or northbound direction on Dougherty Road would cause delays for vehicles that currently travel on three lanes. Limiting the lane closures to non-commute hours (i.e., between 9:00 am and 4:00 pm) would reduce the amount of delay that would occur during commute hours because of the lower traffic volumes during off-peak hours. This portion of Dougherty Road is not part of the Alameda County Transportation Commission (CTC) designated Congestion Management Program (CMP) roadway network (Alameda CTC, 2017). Therefore, the Project would not conflict with an applicable congestion management program. Dougherty Road, has a daily traffic volume of about 18,290 vehicles (based on an automatic machine traffic count on Thursday, October 26, 2017). The hourly traffic volumes on Dougherty Road between 9:00 am and 4:00 pm range from 423 to 746 vehicles in each direction. The generalized per-lane capacity for six-lane divided arterials ranges from 58,400 to 59,900 (FDOT, 2013). The daily traffic volume on Dougherty Road, as well as the hourly traffic volumes between 9:00 am and 4:00 pm, are lower than this generalized per-lane capacity. On that basis, the delays during temporary lane closures would be less than substantial.

As detailed in the Project Description, a number of EBMUD standard practices and procedures, applicable to all EBMUD projects, have been incorporated into the Project, including Standard Construction Specification 01 14 00, Work

[21] The arterial closest to the Project, Dougherty Road, has a daily traffic volume of about 18,290 vehicles (based on an automatic machine traffic count on Thursday, October 26, 2017), and the Project's total maximum of 74 trips per day would represent an 0.4 percent increase.

Restrictions, and Standard Construction Specification 01 55 26, Traffic Regulation, which would further reduce potential traffic impacts.

Standard Construction Specification 01 14 00, Work Restrictions, limits the work hours for the Project; haul hours would be limited to between 9:00 am and 4:00 pm to prohibit haul truck traffic on Lilac Ridge Road, North Gale Ridge Road, and Dougherty Road during commute hours, so construction haul and material trucks trips occur outside of the peak morning and evening commute hours. By prohibiting haul and material trucks during the peak morning and evening commute hours, potential short-term construction impacts on traffic due to the Project alone would be less than significant.

EBMUD's Standard Construction Specification 01 55 26, requires a Traffic Control Plan that conforms to the most current version of the Caltrans Manual of Traffic Controls for Construction and Maintenance Work Zones and requires that the Traffic Control Plan include:

- Circulation and detour plans to minimize impacts to local street circulation. Use haul routes minimizing truck traffic on local roadways to the extent possible.
- A description of emergency response vehicle access. If the road or area is completely blocked, preventing access by an emergency responder, a contingency plan must be included.
- Procedures, to the extent feasible, to schedule construction of Project elements to minimize overlapping construction phases that require truck hauling.
- Designated contractor staging areas for storage of all equipment and materials in such a manner to minimize obstruction to traffic.
- Locations for parking by construction workers.

Implementation of EBMUD's Standard Construction Specification 01 55 26, Traffic Regulation, would minimize impacts to local circulation during construction of the Project by requiring circulation and detour plans (for automobiles, bicycles and pedestrians), providing emergency response vehicle access, and designating parking sites for construction workers.

Because EBMUD's Standard Construction Specifications 01 14 00, Work Restrictions, and 01 55 26, Traffic Regulation, have been incorporated into the Project and include provisions for limiting haul and material trucks during construction to time periods outside of peak commute hours, and require implementation of a Traffic Control Plan that minimizes impacts to traffic circulation, Project impacts related to short-term construction traffic from the Project alone would be less than significant. Therefore, the Project would not conflict with an applicable plan, ordinance or policy establishing measures of

effectiveness for the performance of the circulation system. The EBMUD Practices and Procedures Monitoring and Reporting Plan (Appendix A of this Initial Study/Mitigated Negative Declaration) lists the applicable standard specifications language. (**Less than Significant**)

c) **Site A2 and Site A4**

The proposed facilities would be limited in height to approximately one story, with a radio antenna that would extend approximately 10 feet above the roof of the building. The proposed facilities are not located near an existing airport. Additionally, the Project would not introduce new air traffic or interfere with existing air traffic. Therefore, the Project would have no impact on air traffic patterns. (**No Impact**)

d) **Site A2 and Site A4**

Neither Project construction nor operation would alter the physical configuration of the existing roadway network serving the area, and would not introduce unsafe design features. There is a Class II bike lane and sidewalk on Dougherty Road, and the pipeline construction in Dougherty Road for both Sites A2 and A4 would result in a temporary lane closure and disruption of the bike lane and sidewalk. In addition, the construction truck traffic along Dougherty Road for both Sites A2 and A4 would increase the potential for conflicts and increased traffic safety hazards for bicyclists and pedestrians. Also, although Project construction for Site A4 would temporarily increase the type of vehicles (i.e., trucks) that can be incompatible with the existing predominantly passenger vehicles on North Gale Ridge Road and Lilac Ridge Road, that change to the mix of vehicles would stop when Project construction is completed. The proposed pipeline construction for Site A4 in North Gale Ridge Road and Lilac Ridge Road would pass by Coyote Creek Elementary School. However, there would be no pipeline construction activity on North Gale Ridge Road when the Coyote Creek Elementary School is in session.

As detailed in the Project Description, a number of EBMUD standard practices and procedures, applicable to all EBMUD projects, have been incorporated into the Project, including Section 3.4, Temporary Traffic Control, of EBMUD's Standard Construction Specification 01 55.26, Traffic Regulation, which shall include:

- Sidewalks for pedestrians will remain open if safe for pedestrians. Alternate routes and signing will be provided if pedestrian routes are to be closed.

Also, Section 3.1, General, of EBMUD's Standard Construction Specification 01 55.26, Traffic Regulation, includes the following:

- When leaving a work area and entering a roadway carrying public traffic, the Contractor's equipment, whether empty or loaded, shall in all cases yield to public traffic.

- In addition, pipeline construction methodology would include T-cut repair, a replacement of the roadway to one foot beyond the edge of pipeline trench.

Because EBMUD's Standard Construction Specification 01 55 26, Traffic Regulation, has been incorporated into the Project and include provisions for traffic circulation and detour plans (for automobiles, bicycles and pedestrians), and the Project would include replacement of the roadway, Project impacts related to short-term traffic safety impacts from the Project alone would be less than significant, and the Project would not result in permanent changes to existing traffic design features. The EBMUD Practices and Procedures Monitoring and Reporting Plan (Appendix A) lists the applicable standard specifications language. (**Less than Significant**)

e) **Site A2 and Site A4**

Construction activities at the pump station sites would not obstruct emergency access; however, installation of the proposed pipeline in Lilac Ridge Road, North Gale Ridge Road and Dougherty Road could result in delays to emergency vehicles (though access around the construction areas would be maintained at all times).

As detailed in the Project Description, a number of EBMUD standard practices and procedures, applicable to all EBMUD projects, have been incorporated into the Project, including Section 1.2, Submittals, and Section 3.1, General (Execution), of EBMUD's Standard Construction Specification 01 55 26, Traffic Regulation.

Section 1.2, Submittals, requires preparation of a Traffic Control Plan that conforms to the most current version of the Caltrans Manual of Traffic Controls for Construction and Maintenance Work Zones, and requires that the Traffic Control Plan include:

- A description of emergency response vehicle access. If the road or area is completely blocked, preventing access by an emergency responder, a contingency plan must be included.

Section 3.1, General (Execution) includes the following provisions:

- For complete road closures, immediate emergency access to be provided if needed to emergency response vehicles.
- A minimum of 12-foot-wide travel lanes must be maintained unless otherwise approved by EBMUD.

Because Section 1.2, Submittals, and Section 3.1, General (Execution), of EBMUD's Standard Construction Specification 01 55 26, Traffic Regulation, has been incorporated into the Project and requires maintenance of emergency

roadway access at all times, Project impacts related to emergency access would be less than significant. The EBMUD Practices and Procedures Monitoring and Reporting Plan (Appendix A) lists the applicable standard specifications language. (**Less than Significant**)

f) **Site A2 and Site A4**

Implementation of the Project would neither directly nor indirectly eliminate existing or planned alternative transportation corridors or facilities (e.g., bike paths, lanes), including changes in polices or programs that support alternative transportation, nor construct facilities in locations which future alternative transportation facilities are planned. The Project would not conflict with adopted polices, plans and programs supporting alternative transportation. Regarding the Project's effects on the performance of public transit, there is no existing transit service on roads that would be used to access either Site A2 or Site A4; and therefore no impact. Regarding the Project effects on the performance of bicycle or pedestrian facilities, there is a Class II bike lane and sidewalk on Dougherty Road, the use of which would be temporarily disrupted during Project construction. All adverse impacts to alternative transportation would be temporary, and would not affect any adopted policies, plans, or programs regarding public transit, bicycle or pedestrian facilities.

As described above, implementation of Section 1.2, Submittals, of EBMUD's Standard Construction Specification 01 55 26, Traffic Regulation, would minimize impacts to local circulation during construction of the Project by requiring circulation and detour plans (for automobiles, bicycles and pedestrians).

Because EBMUD's Standard Construction Specification 01 55 26, Traffic Regulation, have been incorporated into the Project and requires implementation of a Traffic Control Plan that minimizes impacts to traffic circulation, Project impacts related to short-term construction traffic from the Project alone would be less than significant. The EBMUD Practices and Procedures Monitoring and Reporting Plan (Appendix A) lists the applicable standard specifications language. (**Less than Significant**)

References

Alameda County Transportation Commission. 2017. *Congestion Management Program*. December 2017.

Central Contra Costa Transit Authority (County Connection), *Maps and Schedules*. Available online at http://countyconnection.com/maps-schedules/. Accessed on September 12, 2016.

City of San Ramon, *San Ramon General Plan 2035*, Traffic and Circulation Element, April 28 2015. Available online at http://www.ci.san-ramon.ca.us/gprc/gprcindex.htm. Accessed on August 16, 2016.

EBMUD, Standard Construction Specification, Section 01 14 00, Work Restrictions, May 3, 2017.

EBMUD, Standard Construction Specification, Section 01 55 26, Traffic Regulation, February 9, 2017.

Personal communication, Deborah Fehr, City of San Ramon, Associate Engineer, email correspondence on March 15, 2018 providing Traffic Counts on Dougherty Road.

State of Florida Department of Transportation, 2013 Quality / Level of Service Handbook (Generalized Service Volume Tables).

2.2.17 Tribal Cultural Resources

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
17. Tribal Cultural Resources — Would the project cause a substantial adverse change in the significance of a tribal cultural resource as 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 tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historic Resources, or in a local register of historic resources as defined in Public Resources Code section 5020.1(k), or	☐	☐	☒	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☒	☐

Discussion

a, b) **Site A2 and Site A4**

CEQA requires the lead agency to consider the effects of a project on tribal cultural resources. As defined in Public Resources Code Section 21074, tribal cultural resources are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are listed, or determined to be eligible for listing, on the national, state, or local register of historical resources.

ESA submitted a Sacred Lands File search request to the NAHC on July 25, 2016. ESA received a response on August 3, 2016. The NAHC provided a list of six Native American individuals and organizations who might have additional information or concerns. On behalf of EBMUD, ESA sent a letter to the tribes identified by the NAHC and did not receive any replies.

Based on the results of the NWIC records search, surface survey, and the geologic context described in Section 2.2.5 of this Initial Study, there is a low potential for the presence of subsurface prehistoric archaeological deposits and there are no tribal cultural resources at Site A2, Site A4, or the staging areas. While unlikely, the inadvertent discovery of a tribal cultural resource cannot be entirely discounted. Disturbance to a tribal cultural resource would be a significant impact.

As detailed in the Project Description, a number of EBMUD standard practices and procedures, applicable to all EBMUD projects, have been incorporated into the Project, including EBMUD's Standard Construction Specification 01 35 44,

Environmental Requirements. Section 3.9, Protection of Cultural and Paleontological Resources, of this standard specification, which includes appropriate cultural resources management practices and complies with statutory requirements, outlines the following procedures:

- Preconstruction cultural resources training is required for all construction personnel.
- In the event that a cultural or paleontological resource is identified during preconstruction activities or during excavation for construction activities, all work within 100 feet of the resource shall be halted until a qualified archaeologist can review, identify, and evaluate the resource for its significance. Should the archaeologist determine that an archaeological resource has the potential to be a tribal cultural resource, a Native American monitor shall be retained by EBMUD to monitor work in the area where the tribal cultural resource was discovered.

Because Section 3.9, Protection of Cultural and Paleontological Resources, of EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements, has been incorporated into the Project, and it requires implementation of procedures that address the inadvertent discovery of tribal cultural resources and follows statutory law, the Project's impact related to tribal cultural resources is less than significant. (**Less than Significant**)

References

EBMUD, Standard Construction Specification, Section 01 35 44, Environmental Requirements, March 2, 2018.

Koenig, Heidi, *East Bay Municipal Utility District, R3000 Pump Station, San Ramon Valley Recycled Water Program, Contra Costa County, Phase I Cultural Resources Survey Report.* Prepared for East Bay Municipal Utility District, June 2017.

2.2.18 Utilities and Service Systems

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
17.	**UTILITIES AND SERVICE SYSTEMS — Would the project:**				
a)	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b)	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c)	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
d)	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
e)	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?	☐	☐	☐	☒
f)	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g)	Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐

Discussion

a) **Site A2 and Site A4**

The Project is limited to construction and operation of a recycled water pump and distribution facilities and would not generate wastewater during operation. Implementation of the Project would not exceed wastewater treatment requirements of the San Francisco Bay Regional Water Quality Control Board. (**No Impact**)

b, e) **Site A2 and Site A4**

The Project consists of construction and operation of recycled water distribution facilities, and would have a beneficial effect on water supplies. The Project would not require additional water supplies, and would not result in the construction of a major housing development or other action that could drive increases in demand for water or wastewater treatment facilities. The construction of new water or wastewater treatment facilities or expansion of existing facilities would not be required. (**No Impact**)

c) **Site A2**

Runoff from Site A2 would drain into a new storm drain pipeline at the southeast corner of the site that would then connect into an existing 36-inch stormdrain

pipeline north of the site that runs perpendicular to Dougherty Road. These existing facilities are sufficiently sized so as to enable stormwater management from the Project area without further modification. (**Less than Significant**)

Site A4

Runoff from Site A4 would drain into a new pipeline that would then connect into the existing storm drain system for Reservoir R200. These existing facilities are sufficiently sized so as to enable stormwater management from the Project area without further modification. (**Less than Significant**)

d) **Site A2 and Site A4**

The Project would require limited water during construction in support of dust suppression and on site earth moving activities. During operations, no potable water would be required, as the equipment to be installed does not require potable water for operations and the new building would not be manned. The new landscaping would be watered with recycled water. Therefore, existing water supplies would be sufficient to enable construction and operation and the Project does not require new water entitlements or resources. (**No Impact**)

f) **Site A2 and Site A4**

The City of San Ramon currently contracts with Valley Waste Management (VWM) for the collection and hauling of franchised solid waste, residential recycling, and green waste. San Ramon also contracts with Republic Services of Northern California to send its solid waste to the company's Vasco Road Sanitary Landfill in Alameda County (San Ramon, 2015). Vasco Road Sanitary Landfill has a remaining capacity of 7,379,000 cubic yards as of October 31, 2016 (CalRecycle, 2018). The amount of soil to be hauled off site during construction and the percentage of remaining landfill capacity that solid waste from Project construction would fill is shown below in Table 11.

TABLE 11
CONSTRUCTION SOIL GENERATION AND PERCENTAGE OF LANDFILL CAPACITY

	Construction Activity	Cubic Yards of Soil Hauled	Percentage of Landfill Capacity
Site A2	Pump Station	200	$2.51\ e^{-4}$
	Pipeline	250	$3.14\ e^{-5}$
Site A4	Pump Station	1,040	$1.31\ e^{-3}$
	Pipeline	4,160	$5.22\ e^{-4}$

Construction at Site A2 would require approximately 200 cubic yards of soil to be hauled away during pump station construction and approximately 250 cubic yards during pipeline construction. Construction at Site A4 would require approximately 1,040 cubic yards of soil to be hauled away during pump station construction and approximately 4,160 cubic yards during pipeline construction. Solid waste generation would be limited to construction activities. As detailed in the Project Description, a number of EBMUD standard practices and procedures,

applicable to all EBMUD projects, have been incorporated into the Project, including Standard Construction Specification 01 35 44, Environmental Requirements. Section 1.3.C, Construction and Demolition Waste Disposal Plan, of this standard construction specification includes submittal of a Construction and Demolition Waste Disposal Plan that:

- Requires measures for removing, handling, transporting, and disposing of any waste material (except liquid wastes addressed in the Water Control and Disposal Plan).
- Includes a sampling and analytical program for characterizing any waste material, as needed, prior to reuse, recycling or disposal.
- Identifies the disposal method for soil and the approved disposal site, and includes written documentation that the disposal site will accept the waste. Prior to disposition of wastes, the Contractor must submit copies to EBMUD of waste profile forms and correspondence between the contractor and the disposal facility. Prior to disposal of hazardous wastes, the contractor must submit copies of the waste manifests to EBMUD and provide documentation that the waste hauler is regulated by the state to transport hazardous wastes.

Because Section 1.3.C, Construction and Demolition Waste Disposal Plan, of EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements, have been incorporated into the Project and include provisions for identifying disposal methods for soil and the approved disposal site, Project impacts from potential insufficient landfill capacity for the Project would be less than significant. The EBMUD Practices and Procedures Monitoring and Reporting Plan (Appendix A) lists the applicable standard specifications language. No long-term solid waste generation would be associated with the Project. (**Less than Significant**)

g) **Site A2 and Site A4**

Operation of the Project would not involve the routine use of any hazardous materials. While some hazardous materials such as fuels, petroleum lubricants, adhesives, solvents, and paints would be used during the temporary construction period, Project construction would comply with all applicable regulatory requirements related to solid waste. Specifications for Project construction would contain requirements for the handling, storage, cleanup, and disposal of hazardous materials including cement or other construction pollutants. For additional discussion of hazardous materials and potential hazardous materials handling and impacts, please refer to Section 2.2.8, *Hazards and Hazardous Materials* discussion above. (**Less than Significant**)

References

CalRecycle, Solid Waste Information System (SWIS), *Facility/Site Summary Details: Vasco Road Sanitary Landfill* (01-AA-0010), 2018. Available online at http://www.calrecycle.ca.gov/SWFacilities/Directory/01-AA-0010/Detail/. Accessed on July 23, 2018.

City of San Ramon, *San Ramon General Plan 2035, Public Facilities and Utilities Element*, adopted by the City Council April 28 2015. Available online at http://www.ci.san-ramon.ca.us/gprc/gprcindex.htm. Accessed on August 16, 2016.

EBMUD, Standard Construction Specification, Section 01 35 44, Environmental Requirements, March 2, 2018.

2.2.19 Mandatory Findings of Significance

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
18.	**MANDATORY FINDINGS OF SIGNIFICANCE —**				
a)	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b)	Does the project have impacts that are individually limited but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐
c)	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Discussion

a) The Project has the potential to degrade the quality of the environment. However, as described in the Project Description, a number of EBMUD standard practices and procedures, applicable to all EBMUD projects, have been incorporated into the Project. For impacts related to Air Quality, Greenhouse Gas Emissions, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, Tribal Cultural Resources, and Transportation and Traffic, the relevant EBMUD standard practices and procedures discussed in the MND ensure that impacts would be less than significant. Further, as described in the MND above, the Project has the potential to cause significant impacts related to Aesthetics, Biological Resources and Cultural Resources. Mitigation measures have been identified to reduce these impacts to less than significant levels. No further mitigation would be required, and the Project would not degrade the quality of the environment (see sections 2.2.1 to 2.2.18 above, for detailed analysis).

The Project has the potential to degrade the quality of the environment. The impact from construction night lighting on nighttime views could be potentially significant. However, this impact would be reduced to less than significant levels through implementation of Mitigation Measure AES-1. For additional discussion, please refer to Section 2.2.1, *Aesthetics*. No further mitigation would be required.

The Project has the potential to impact biological resources. As discussed above in Section 2.2.4, *Biological Resources*, depending upon the site chosen, the

Project could result in impacts to CRLF, roosting bats, nesting birds, and existing trees at Site A2 during construction. However, compliance with EBMUD's Standard Construction Specifications described in Section 2.2.4, along with implementation of the mitigation measures BIO-1 and BIO-2, would ensure that all impacts to biological resources would be less than significant. No other biological resources would be substantially affected, and the Project would not 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, or reduce the number or restrict the range of a rare or endangered plant or animal. For additional discussion, please refer to Section 2.2.4, *Biological Resources*. No further mitigation would be required.

The Project has the potential to impact cultural and paleontological resources. As discussed above in Section 2.2.5, *Cultural Resources*, there are no documented historical resources or archaeological resources in the Project area. Compliance with EBMUD's Standard Construction Specifications described in Section 2.2.5, along with implementation of the mitigation measure CUL-1, would ensure that all impacts to cultural and paleontological resources would be less-than-significant, and the Project would not eliminate important examples of the major periods of California history or prehistory. For additional discussion, please refer to Section 2.2.5, *Cultural Resources*. No further mitigation would be required.

b) As described in the document above, the Project has the potential to cause significant impacts related to Aesthetics, Biological Resources and Cultural Resources. Mitigation measures have been identified that would reduce these impacts to less than significant levels.

A number of EBMUD standard practices and procedures, applicable to all EBMUD projects, have been incorporated into the Project. For impacts related to Air Quality, Greenhouse Gas Emissions, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, Tribal Cultural Resources, and Transportation and Traffic, the relevant EBMUD standard practices and procedures discussed in the MND ensure that impacts would be less than significant.

Cumulative environmental effects are multiple individual effects that, when considered together are considerable or compound or increase other environmental impacts. The individual effects may result from a single project or a number of separate projects and may occur at the same place and point in time or at different locations and over extended periods of time.

As discussed in the Initial Study Checklist above, individual project-related significant impacts have been identified for the Pump Station R3000, all of which would be mitigated to less-than-significant levels through implementation of the mitigation measures described in the Initial Study Checklist. The Project has

limited impacts on the physical environment and most of the impacts associated with implementation of the Project would occur during construction, and thus would be short-term.

The potential for Project-generated impacts to contribute to a significant cumulative impact would arise if they are located within the same geographic area. In addition to the geographic scope, cumulative impacts can be determined by timing of the other projects relative to the Project. Schedule is particularly important for construction-related impacts. For a group of projects to generate cumulative construction impacts, they must be temporally as well as spatially proximate. There are no projects identified by the City of San Ramon near the Pump Station R3000 sites that would be under construction at the same time as Pump Station R3000 (City of San Ramon, 2016). EBMUD has identified pipeline installations that would occur in Red Willow Road, Tassajara Ranch Road, and Crow Canyon Road west of Dougherty Road, all of which are located approximately three miles north of the potential Pump Station R3000 sites. These pipelines were included in the San Ramon Valley Recycled Water Program (SRVRWP) EIR[22] as future EBMUD recycled water pipelines. The Tassajara Ranch Road and Crow Canyon Road locations were classified as transmission pipelines in the SRVRWP EIR, and the Red Willow Road location was classified as a distribution pipeline in the SRVRWP EIR. The EIR included mitigation measures to address significant impacts, which would be incorporated into these pipeline projects. Construction of these pipeline installations could occur in Spring 2024 or later. Construction of Pump Station R3000 is anticipated to take approximately 24 months and would occur anytime between 2020 and 2024. Therefore, there is a potential for Project construction to overlap with these pipeline projects.

The construction activities associated with these pipeline projects were described in the SRVRWP EIR as similar to that for the Pump Station R3000. The pipeline construction would occur within existing roadways, using an open trench construction technique. The impacts occurring during construction are likely to be similar to those of the Pump Station R3000 (i.e., effects of lighting on nighttime views if nighttime construction occurs, increased noise and dust, disruption of transportation via temporary loss of travel lanes, and increased traffic on area roadways).

If pipeline construction is necessary during nighttime hours for these pipeline projects, lighting would be used to illuminate the construction area. The construction lighting may be visible to adjacent residences and along public roadways, and the impact from night lighting on nighttime views could be potentially significant. This impact from the Pump Station R3000 would be reduced to less than significant levels through implementation of Mitigation

[22] San Ramon Valley Recycled Water Program EIR (State Clearinghouse No 96013028, December 1996).

Measure AES-1. None of these pipeline projects are close enough to the Pump Station R3000 project sites such that the same residents would be adversely affected by lighting from multiple projects. Therefore, there would be no significant cumulative impact associated with nighttime lighting.

Construction of these EBMUD pipeline projects, in conjunction with the Pump Station R3000, could cause wind-blown dust that would contribute particulate matter into the local atmosphere. EBMUD implements a number of standard practices and procedures for all its projects, which include appropriate construction emission management practices and all the BAAQMD recommended control measures to reduce impacts from fugitive dust. Implementation of these standard practices and procedures would ensure that short-term air quality construction-related impacts are less-than-significant. Therefore, there would be no significant cumulative impact associated with dust.

Construction of the EBMUD pipeline projects, in conjunction with the Pump Station R3000, could result in affects to the same biological resources as the Project, primarily the Alamo Creek riparian corridor and wildlife that uses this habitat, and trees, in the short term. Impacts from the Pump Station R3000 would be reduced to less than significant levels through implementation of mitigation measures BIO-1 and BIO-2. Construction of these pipeline projects would occur within the existing roadways and would not include the removal of trees. Therefore, there would be no significant cumulative impact associated with removal of trees. The Crow Canyon Road pipeline alignment is not located near Alamo Creek, but this creek is adjacent to the proposed Tassajara Ranch Road and Red Willow Road pipeline alignments. The SRVRWP EIR included mitigation measures to address impacts to habitat and wildlife associated with the Alamo Creek corridor, which would reduce impacts to a less than significant level. Therefore, there would be no significant cumulative impact to biological resources.

Construction of the EBMUD pipeline projects, in conjunction with the Pump Station R3000, could result in impacts to unknown paleontological resources. Impacts for the Pump Station R3000 would be reduced less than significant levels through implementation of Mitigation Measure CUL-1. Excavation for these pipeline projects would occur within or adjacent to the Green Valley formation, which has a high paleontological sensitivity. However, due to the small amount of excavation associated with the pipeline construction (i.e., up to eight feet deep assuming a maximum pipelines size of 16 inches[23]) and the fact that these pipeline project would occur within existing roadways, there is a low likelihood of encountering native soils associated with the Green Valley formation.

[23] In the SRVRWP EIR, the distribution pipelines would range in size from six to 18 inches and the transmission pipelines would range in size from 12 to 36 inches. The maximum size of the Pump Station R3000 pipelines would be 16 inches.

Therefore, there would be no significant cumulative impact associated with paleontological resources.

Construction of the EBMUD pipeline projects, in conjunction with the Pump Station R3000, could result in noise impacts on existing sensitive receptors. However, none of these pipeline projects are close enough to the Pump Station R3000 project sites such that the same residents would be affected by noise from multiple projects. Therefore, there would be no significant cumulative impact associated with construction-related noise.

Construction activities that would generate traffic include trucks hauling equipment and materials, and the daily arrival and departure of construction workers. The number of vehicles that would be required for the construction of these pipeline projects is not quantifiable at this time because it is unknown how many vehicles or equipment could be used by these projects. It is likely that construction vehicles for these projects would use the same major routes that would be required by the Project (i.e., Interstate 680, Bollinger Canton Road, Crow Canyon Road, and Dougherty Road); therefore, it is likely that traffic from construction of the Project and these pipeline projects could overlap spatially and temporally. Impacts from the movement of construction vehicles would include short-term and intermittent lessening of roadway capacities due to slower movements of the trucks and larger turning radii of the trucks compared to passenger vehicles. EBMUD implements a number of standard practices and procedures in all its projects, which limits the work hours so construction haul and material truck trips occur outside of the peak morning and evening commute hours. EBMUD standard practices and procedures also require development of Traffic Control Plans for all construction projects that identify the circulation and detour plans (for automobiles, bicycles and pedestrians). Implementation of these standard practices and procedures would ensure that short-term construction traffic impacts would be less-than-significant. Therefore, there would be no significant cumulative impact with respect to construction-related traffic.

Based on the discussion above, cumulative impacts related to construction would be less than significant. No further mitigation would be required.

c) As described in a) above, the Project has the potential to cause significant impacts related to Aesthetics, Biological Resources and Cultural Resources. Mitigation measures have been identified to reduce these impacts to less than significant levels. Impacts to air quality, water quality, and hazardous materials by the Project could directly affect human beings, and all CEQA impacts discussed above could indirectly affect human beings. As detailed in the Project Description, a number of EBMUD standard practices and procedures, applicable to all EBMUD projects, have been incorporated into the Project. For impacts related to Air Quality, Greenhouse Gas Emissions, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, Tribal Cultural Resources, and Transportation and Traffic, the relevant EBMUD standard

practices and procedures discussed in the MND ensure that impacts would be less than significant. No further mitigation would be required.

References

City of San Ramon, Planning Services, *Current Projects List.* Available online at http://www.ci.san-ramon.ca.us/UserFiles/Servers/Server_10826046/File/Our%20City/Departments/Community%20Development/Planning/Current%20Project%20List/projectlist.pdfAccessed August 23, 2018.

Personal communication, Reena Thomas, EBMUD, Associate Civil Engineer, email correspondence on April 10, 2018.

SECTION 3.0
Report Preparation

3.1 Lead Agency

EBMUD is the lead agency under CEQA for the preparation of the SRVRWP Pump Station R3000 Project.

Staff Member	Role
Reena Thomas	Project Manager
Cindy Hunt	Superintendent Water Treatment Distribution Quality
Sharon Hu	Associate Electrical Engineer
Linda Hu	Senior Civil Engineer
Mike Tognolini	Water Supply Improvements Division Manager
David Rehnstrom	Engineering Manager
Tim McGowan	Senior Civil Engineer
Rachel Jones	Attorney III, Office of General Counsel

3.2 Project Coordinator

EBMUD retained ESA to prepare this Initial Study/Mitigated Negative Declaration. Project support analyses and architectural renderings were provided by Orion Environmental Associates and MWA Architects, Inc., respectively.

ESA

Staff Member	Role
Jill Hamilton	Project Director
Meryka Dirks	Project Manager
Alena Maudru	Deputy Project Manager
Matthew Russell	Cultural Resources Lead
Heidi Koenig	Cultural Resources Technical Analyst
Chris Rogers	Biological Resources Lead
Elizabeth Hill	Biological Resources Technical Analyst
Jack Hutchison	Transportation and Traffic Lead
Shadde Rosenblum	Transportation and Traffic
Chris Sanchez	Air Quality, Noise, and GHG Emissions Lead

Staff Member	Role
Jyothi Iyer	Air Quality, Noise, and GHG Emissions Technical Analyst
Tracy Johnson	Landscape Design and Renderings
Thomas Fischer	Landscape Design and Renderings

Orion Environmental Associates

Staff Member	Role
Joyce Hsiao	Principal
Mary Lucas McDonald	Sr. Geologist

MWA Architects, Inc.

Staff Member	Role
Greg Robley	MWA Project Manager
Elizabeth Surya	Job Captain
Brittany Williams	Job Captain

APPENDIX A

EBMUD Practices and Procedures Monitoring and Reporting Plan

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APPENDIX A
EBMUD PRACTICES AND PROCEDURES MONITORING AND REPORTING PLAN

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Aesthetics						
Aesthetics b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** *Section 3.7, Protection of Native and Non-Native Protected Trees* A. Tree Protection 1. Locations of trees to be removed and protected are shown in the construction drawings. Pruning and trimming shall be completed by the Contractor and approved by the Engineer. Pruning shall adhere to the Tree Pruning Guidelines of the International Society of Arboriculture. 2. Erect exclusion fencing five feet outside of the drip lines of trees to be protected. Erect and maintain a temporary minimum 3-foot high orange plastic mesh exclusion fence at the locations as shown in the drawings. The fence posts shall be six-foot minimum length steel shapes, installed at 10-feet minimum on center, and be driven into the ground. The Contractor shall be prohibited from entering or disturbing the protected area within the fence except as directed by the Engineer. Exclusion fencing shall remain in place until construction is completed and the Engineer approves its removal. 3. No grading, construction, demolition, trenching for irrigation, planting or other work, except as specified herein, shall occur within the tree protection zone established by the exclusion fencing installed shown in the drawings. In addition, no excess soil, chemicals, debris, equipment or other materials shall be dumped or stored within the tree protection zone. 4. In areas that are within the tree drip line and outside the tree protection zone that are to be traveled over by vehicles and equipment, the areas shall be covered with a protective mat composed of a 12-inch thickness of wood chips or gravel and covered by a minimum ¾-inch-thick steel traffic plate. The protective mat shall remain in place until construction is completed and the Engineer approves its removal. 5. Tree roots exposed during trench excavation shall be pruned cleanly at the edge of the excavation and treated to the satisfaction of a certified arborist provided by the District. 6. Any tree injured during construction shall be evaluated as soon as possible by a certified arborist provided by the District, and replaced as deemed necessary by the certified arborist.	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Air Quality						
Air Quality a) Potential to conflict with or obstruct implementation of the applicable air quality plan.	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** *Section 3.3. Dust Control and Monitoring* A. Dust Control during Abrasive Blasting 1. Provide a containment system for the structure prior to beginning abrasive blasting operations. The system shall remain in place during the abrasive blasting operations and the painting of exterior surfaces. B. Dust Control 1. Contractor shall implement all necessary dust control measures, including but not limited to the following: a. All exposed surfaces with the potential of dust-generating shall be watered at least twice daily, or be covered with coarse rock, or as directed by the Engineer to reduce the potential for airborne dust from leaving the site. b. The simultaneous occurrence of more than two ground disturbing construction phases on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time, as appropriate. c. Cover all haul trucks entering/leaving the site and trim their loads as necessary. d. Using wet power vacuum street sweepers to: *Sweep all paved access road, parking areas and staging areas at the construction site daily or as often as necessary.* *Sweep public roads adjacent to the site at least twice daily or as often as necessary.* e. The use of dry power sweeping is prohibited. f. All trucks and equipment, including their tires, shall be washed off prior to leaving the site. g. Gravel or apply non-toxic soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites. h. Water and/or cover soil stockpiles daily. i. Site accesses to a distance of 100 feet from the paved road shall be treated with 12-inches layer of compacted coarse rock. j. Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent.	EBMUD and EBMUD's Contractors	EBMUD	During Construction	X	X

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Air Quality (cont.)						
Air Quality a) Potential to conflict with or obstruct implementation of the applicable air quality plan. (cont.)	k. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. l. Building pads shall be laid as soon as possible after grading. m. Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established. n. Wind breaks (e.g., fences) shall be installed on the windward sides(s) of actively disturbed areas of construction. Wind breaks should have a maximum 50 percent air porosity. **o.** All vehicle speeds shall be limited to fifteen (15) mph or less on the **construction site and any adjacent unpaved roads.** *Section 3.4. Emissions Control* A. Air Quality and Emissions Control 1. The Contractor shall ensure that line power is used instead of diesel generators at all construction sites where line power is available. 2. The Contractor shall ensure that for operation of any stationary, compression-ignition engines as part of construction, comply with Section 93115, Title 17, California Code of Regulations, Airborne Toxic Control Measure for Stationary Compression Ignition Engines, which specifies fuel and fuel additive requirements as well as emission standards. 3. Fixed temporary sources of air emissions (such as portable pumps, compressors, generators, etc.) shall be electrically powered unless the Contractor submits documentation and receives approval from the Engineer that the use of such equipment is not practical, feasible, or available. All portable engines and equipment units used as part of construction shall be properly registered with the California Air Resources Board or otherwise permitted by the appropriate local air district, as required. 4. Contractor shall implement standard air emissions controls such as: a. Minimize the use of diesel generators where possible. b. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes as required by the California Airborne Toxics Control Measure (ATCM) Title 13, Section 2485 of California Code of Regulations. Clear signage shall be provided for construction workers at all access points. c. Follow applicable regulations for fuel, fuel additives, and emission standards for stationary, diesel-fueled engines.					

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Air Quality (cont.)						
Air Quality a) Potential to conflict with or obstruct implementation of the applicable air quality plan. (cont.)	d. Locate generators at least 100 feet away from adjacent homes and ball fields. e. Perform regular low-emission tune-ups on all construction equipment, particularly haul trucks and earthwork equipment. 5. Contractor shall implement the following measures to reduce greenhouse gas emissions from fuel combustion: a. On road and off-road vehicle tire pressures shall be maintained to manufacturer specifications. Tires shall be checked and re-inflated at regular intervals. b. Construction equipment engines shall be maintained to manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. c. All construction equipment, diesel trucks, and generators shall be equipped with Best Available Control Technology for emission reductions of Oxide of Nitrogen (NOx) and Particulate Matter (PM). d. Demolition debris shall be recycled for reuse to the extent feasible. See the Construction and Demolition Waste Disposal Plan paragraphs above for requirements on wood treated with preservatives. B. Architectural Coatings 1. Architectural coatings used shall comply with appropriate Volatile Organic Compound limits as established in the Bay Area Air Quality Management District's Regulation 8, Rule 3 and/or the San Joaquin Valley Air Pollution Control District's Regulation IV, Rule 4601, and any amendments thereto.					
Air Quality b) Potential to violate any air quality standard or contribute substantially to an existing or projected air quality violation.	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** *Section 1.3.E Dust Control and Monitoring Plan* 1. Submit a plan detailing the means and methods for controlling and monitoring dust generated by demolition and other work on the site for the Engineer's acceptance prior to any work at the jobsite. The plan shall comply with all applicable regulations including but not limited to the Bay Area Air Quality Management District (BAAQMD) visible emissions regulation and Public Nuisance Rule. The plan shall include items such as mitigation measures to control fugitive dust emissions generated by construction activities. The Plan shall outline best management practices for preventing dust emissions, provide guidelines for training of employees, and procedures to be used during operations and maintenance activities. The plan shall also include measures for the control of paint overspray generated during the painting of	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Air Quality (cont.)						
Air Quality b) Potential to violate any air quality standard or contribute substantially to an existing or projected air quality violation. (cont.)	2. exterior surfaces. The plan shall detail the equipment and methods used to monitor compliance with the plan. The handling and disposal of water used in compliance with the Dust Control Plan shall be addressed in the Water Control and Disposal Plan. 3. Containment, as described in Article 3.3, shall be utilized during any abrasive blasting of the exterior of structures. *Section 3.3.B Dust Control (Details as previously listed)* *Section 1.3.I Tuneup Logs* 1. The Contractor shall submit a log of required tune-ups for all construction equipment, particularly haul and delivery trucks, on a quarterly basis for review. *Section 3.4.A Air Quality and Emissions Control* (Details as previously listed)					
Air Quality d) Expose sensitive receptors to substantial pollutant concentrations.	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** Section 1.3.I Tune-up Logs, Section 3.3.B, Dust Control, and Section 3.4. Emissions Control (Details as previously listed)	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X
Air Quality e) Create objectionable odors affecting a substantial number of people.	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** Section 1.3.I Tune-up Logs and Section 3.4.A Air Quality and Emissions Control (Details as previously listed)	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X
Biological Resources						
Biological Resources 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.	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** *Section 3.8, Protection of Birds Protected under the Migratory Treaty Act and Roosting Bats* A. The District will conduct biological reconnaissance in advance of construction and will conduct biologic monitoring during construction as necessary. B. Protected Species 1. If protected species or suitable habitat for protected species is found during biological reconnaissance surveys: a. Before beginning construction, all Contractor construction personnel are required to attend an environmental training program provided by the District of up to one-day for site supervisors, foreman and project managers, and up to 30-minutes for non-supervisory contractor personnel. The training program will be completed in person or by	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Biological Resources (cont.)						
Biological Resources 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. (cont.)	watching a video at a District-designated location, conducted by a qualified biologist provided by the District. The program will discuss all sensitive habitats and sensitive species that may occur within the project work limits, including the responsibilities of Contractor's construction personnel, applicable mitigation measures, and notification requirements. The Contractor is responsible for ensuring that all workers requiring training are identified to the District. Prior to accessing or performing construction work, all Contractor personnel shall: 1) Sign a wallet card provided by the Engineer verifying that all Contractor construction personnel have attended the appropriate level of training relative to their position; have read and understood the contents of the _____; and shall comply with all project environmental requirements. 2) Display an environmental training hard hat decal (provided by the District after completion of the training) at all times. b. Birds Protected under the Migratory Bird Treaty Act (MBTA): 1) It is unlawful to pursue, hunt, take, capture, or kill any migratory bird without a permit issued by the U.S. Department of the Interior. 2) If construction commences between February 1 and August 31, during the nesting season, the District will conduct a preconstruction survey for nesting birds within 7 days prior to construction to ensure that no nest will be disturbed during construction. 3) If active nests of migratory bird species (listed in the MBTA) are found within the project site, or in areas subject to disturbance from construction activities, an avoidance buffer to avoid nest disturbance shall be constructed. The buffer size will be determined by the District in consultation with California Department of Fish and Wildlife (CDFW) and is based on the nest location, topography, cover and species' tolerance to disturbance. 4) If an avoidance buffer is not achievable, a qualified biologist provided by the District will monitor the nest(s) to document that no take of the nest (nest failure) has occurred. Active nests shall not be taken or destroyed under the MBTA and, for raptors, under the CDFW Code. If it is determined that construction activity is resulting in nest disturbance, work should cease immediately and the Contractor shall notify the Engineer who will consult with the qualified biologist and appropriate regulatory agencies.					

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Biological Resources (cont.)						
Biological Resources 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. (cont.)	5) If preconstruction surveys indicate that nests are inactive or potential habitat is unoccupied during the construction period, no further action is required. Trees and shrubs within the construction footprint that have been determined to be unoccupied by special-status birds or that are located outside the avoidance buffer for active nests may be removed. Nests initiated during construction (while significant disturbance from construction activities persist) may be presumed to be unaffected, and only a minimal buffer, determined by District's biologist, would be necessary. c. Roosting Bats: 1) If construction commences between March 1 and July 31, during the bat maternity period, the District will conduct a preconstruction survey for roosting bats within two weeks prior to construction to ensure that no roosting bats will be disturbed during construction. 2) If roosting surveys indicate potential occupation by a special-status bat species, and/or identify a large day roosting population or maternity roost by any bat species within 200 feet of a construction work area, a qualified biologist provided by the District will conduct focused day- and/or night-emergence surveys, as appropriate. 3) If active maternity roosts or day roosts are found within the project site, or in areas subject to disturbance from construction activities, an avoidance buffers shall be constructed. The buffer size will be determined by the District in consultation with CDFW. 4) If a non-breeding bat roost is found in a structure scheduled for modification or removal, the bats shall be safety evicted, under the direction of a qualified biologist provided by the District in consultation with CDFW to ensure that the bats are not injured. 5) If preconstruction surveys indicate that no roosting is present, or potential roosting habitat is unoccupied during the construction period, no further action is required. Trees and shrubs within the construction footprint that have been determined to be unoccupied by roosting bats, or that are located outside the avoidance buffer for active roosting sites may be removed. Roosting initiated during construction is presumed to be unaffected, and no buffer would be necessary.					

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Biological Resources (cont.)						
Biological Resources e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** Section 3.7, Protection of Native and Non-Native Protected Trees (Details as previously listed under Aesthetics)	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	
Cultural Resources						
Cultural Resources b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** *Section 3.9, Protection of Cultural and Paleontological Resources* A. Confidentiality of Information on Cultural Resources 1. Prior to, or during the course of the Contractor's performance under this contract, the Contractor may obtain information as to the location and/or nature of certain cultural resources, including Native American artifacts and remains. This information may be provided to the Contractor by the District or a third party, or may be discovered directly by the Contractor through its performance under the contract. All such information shall be considered "Confidential Information" for the purposes of this Article. 2. The Contractor agrees that the Contractor, its subcontractors of any tiers, and their respective agents and employees shall not publish or disclose any Confidential Information to any person, unless specifically authorized in advance, in writing by the Engineer. 3. The indemnity obligations of Document 00 72 00 - General Conditions Article 4.7.5 shall apply to any breach of this Article. B. Conform to the requirements of statutes as they relate to the protection and preservation of cultural and paleontological resources. Unauthorized collection of prehistoric or historic artifacts or fossils along the Work Area, or at Work facilities, is strictly prohibited. C. Before beginning construction, all Contractor construction personnel shall attend a cultural resources training course provided by the District of up to two hours for site supervisors, foreman, project managers, and non-supervisory contractor personnel. The training program will be completed in person or by watching a video, at a District designated location, conducted by a qualified archaeologist provided by the District, or by District staff. The program will discuss cultural resources awareness within the project work limits, including the responsibilities of Contractor's construction personnel, applicable mitigation measures, confidentiality, and notification requirements. The Contractor is responsible for ensuring that all workers requiring training are	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Cultural Resources (cont.)						
Cultural Resources b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5. (cont.)	identified to the District. Prior to accessing the construction site, or performing site work, all Contractor personnel shall: 1. Sign an attendance sheet provided by the Engineer verifying that all Contractor construction personnel have attended the appropriate level of training; have read and understood the contents of the training; have read and understood the contents of the "Confidentiality of Information on Archaeological Resources" and shall comply with all project environmental requirements. D. In the event that potential cultural or paleontological resources are discovered at the site of construction, the following procedures shall be instituted: 1. Discovery of prehistoric or historic-era archaeological resources requires that all construction activities shall immediately cease at the location of discovery and within 100 feet of the discovery. a. The Contractor shall immediately notify the Engineer who will engage a qualified archaeologist provided by the District to evaluate the find. The Contractor is responsible for stopping work and notifying the Engineer, and shall not recommence work until authorized to do so by the Engineer. b. The District will retain a qualified archaeologist to inspect the findings within 24 hours of discovery. If it is determined that the Project could damage a historical resource as defined by CEQA (or a historic property as defined by the National Historic Preservation Act of 1966, as amended), construction shall cease in an area determined by the archaeologist until a management plan has been prepared, approved by the District, and implemented to the satisfaction of the archaeologist (and Native American representative if the resource is prehistoric, who shall be identified by the Native American Heritage Commission [NAHC]). In consultation with the District, the archaeologist (and Native American representative) will determine when construction can resume. 2. Discovery of human remains requires that all construction activities immediately cease at, and within 100 feet of the location of discovery. a. The Contractor shall immediately notify the Engineer who will engage a qualified archaeologist provided by the District to evaluate the find. The Contractor is responsible for stopping work and notifying the Engineer, and shall not recommence work until authorized to do so by the Engineer. b. The District will contact the County Coroner to determine whether or not the remains are Native American. If the remains are determined to be Native American, the Coroner will contact the Native American Heritage					

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Cultural Resources (cont.)						
Cultural Resources b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5. (cont.)	Commission (NAHC). The NAHC will then identify the person or persons it believes to be the most likely descendant from the deceased Native American, who in turn would make recommendations to the District for the appropriate means of treating the human remains and any associated funerary objects. 3. Discovery of paleontological resources requires that all construction activities immediately cease at, and within 100 feet of the location of discovery. a. The Contractor shall immediately notify the Engineer who will engage a qualified paleontologist provided by the District to evaluate the find. The Contractor is responsible for stopping work and notifying the Engineer, and shall not recommence work until authorized to do so by the Engineer. b. The District will retain a qualified paleontologist to inspect the findings within 24 hours of discovery. The qualified paleontologist, in accordance with Society of Vertebrate Paleontology guidelines (Society of Vertebrate Paleontology 2010), will assess the nature and importance of the find and recommend appropriate salvage, treatment, and future monitoring and management. If it is determined that construction activities could damage a paleontological resource as defined by the Society of Vertebrate Paleontology guidelines (Society of Vertebrate Paleontology 2010), construction shall cease in an area determined by the paleontologist until a salvage, treatment, and future monitoring and management plan has been prepared, approved by the District, and implemented to the satisfaction of the paleontologist. In consultation with the paleontologist, the District will determine when construction can resume. E. If the District determines that the find requires further evaluation, at the direction of Engineer, the Contractor shall suspend all construction activities at the location of the find and within a larger radius, as required.					
Cultural Resources c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** Section 3.9, Protection of Cultural and Paleontological Resources (Details as previously listed)	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X
Cultural Resources d) Disturb any human remains, including those interred outside of formal cemeteries.	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** Section 3.9, Protection of Cultural and Paleontological Resources (Details as previously listed)	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Geology and Soils						
Geology and Soils a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: rupture of a known earthquake fault; strong seismic ground shaking; seismic-related ground failure; or landslides.	**EBMUD's Engineering Standard Practice 550.1, Seismic Design Requirements and 512.1, Water Main and Services Design Criteria** EBMUD uses two primary Engineering Standard Practices for the design of water pipelines in its distribution system to address geologic hazards. Engineering Standard Practice 512.1, Water Main and Services Design Criteria, establishes basic criteria for the design of water pipelines and establishes minimum requirements for pipeline construction materials. Engineering Standard Practice 550.1, Seismic Design Requirements, addresses seismic design of the pipelines to withstand seismic hazards, including fault rupture, ground shaking, liquefaction-related phenomena, landslides, seiches and tsunamis and requires that EBMUD establish project-specific seismic design criteria for pipelines with a diameter of greater than 12 inches.	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X
Geology and Soils b) Result in substantial soil erosion or the loss of topsoil.	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** *Section 1.1.B, Site Activities* 1. No debris including, but not limited to, demolition material, treated wood waste, stockpile leachate, soil, silt, sand, bark, slash, sawdust, asphalt, rubbish, paint, oil, cement, concrete or washings thereof, oil or petroleum products, or other organic or earthen materials from construction activities shall be allowed to enter into storm drains or surface waters or be placed where it may be washed by rainfall or runoff outside the construction limits. When operations are completed, excess materials or debris shall be removed from the work area as specified in the Construction and Demolition Waste Disposal Plan. 2. Excess material shall be disposed of in locations approved by the Engineer consistent with all applicable legal requirements and disposal facility permits. 3. Do not create a nuisance or pollution as defined in the California Water Code. Do not cause a violation of any applicable water quality standards for receiving waters adopted by the Regional Board or the State Water Resources Control Board, as required by the Clean Water Act. 4. Clean up all spills and immediately notify the Engineer in the event of a spill. 5. Stationary equipment such as motors, pumps, and generators, shall be equipped with drip pans. 6. Divert or otherwise control surface water and waters flowing from existing projects, structures, or surrounding areas from coming onto the work and staging areas. The method of diversions or control shall be adequate to ensure the safety of stored materials and of personnel using these areas. Following completion of Work, ditches, dikes, or other ground alterations made by the Contractor shall be removed and the ground surfaces shall be returned to their former condition, or as near as practicable, in the Engineer's opinion.	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Geology and Soils (cont.)						
Geology and Soils b) Result in substantial soil erosion or the loss of topsoil. (cont.)	7. Maintain construction sites to ensure that drainage from these sites will minimize erosion of stockpiled or stored materials and the adjacent native soil material. 8. Furnish all labor, equipment, and means required and shall carry out effective measures wherever, and as often as necessary, to prevent Contractor's operations from causing visible dust emissions to leave the work areas. These measures shall include, but are not limited to, providing additional watering equipment, reducing vehicle speeds on haul roads, restricting traffic on haul roads, covering haul vehicles, and applying a dust palliative to well-traveled haul roads. The Contractor shall provide the specifications of the dust palliative for Engineer approval prior to use. The Contractor shall be responsible for damage resulting from dust originating from its operations. The dust abatement measures shall be continued for the duration of the Contract. Water the site in the morning and evening, and as often as necessary, and clean vehicles leaving the site as necessary to prevent the transportation of dust and dirt onto public roads. Dust control involving water shall be done in such a manner as to minimize waste and runoff from the site. 9. Construction staging areas shall be graded, or otherwise protected with Best Management Practices (BMPs), to contain surface runoff so that contaminants such as oil, grease, and fuel products do not drain towards receiving waters including wetlands, drainages, and creeks. 10. All construction equipment shall be properly serviced and maintained in good operating condition to reduce emissions. Contractor shall make copies of equipment service logs available upon request. 11. Any chemical or hazardous material used in the performance of the Work shall be handled, stored, applied, and disposed of in a manner consistent with all applicable federal, state, and local laws and regulations. 12. Contaminated materials excavated and/or removed from the construction area shall be disposed of in a manner consistent with all applicable local, state, and federal laws and regulations. *Section 1.3.A, Storm Water Management* 1. Construction General Permit a. The Contractor shall create a user account on the SWRCB's Storm Water Multi-Application & Report Tracking System (SMARTS). The Engineer will link the Contractor to the District's account as a Data Submitter. The Contractor shall prepare and upload to SMARTS Permit Registration Documents (PRDs), including, but not limited to, a Notice of Intent, a Site Specific Risk Assessment, a Site Map, and a Storm Water Pollution Prevention Plan (SWPPP) for the Engineer's review which meets the requirements of the SWRCB, for coverage under the General Construction Stormwater Permit (Order No. 2009-0009-DWQ) and amendments thereto.					

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Geology and Soils (cont.)						
Geology and Soils b) Result in substantial soil erosion or the loss of topsoil. (cont.)	Upon acceptance by the Engineer, the Engineer will electronically certify and file the PRDs to gain permit coverage and the Contractor shall submit the registration and the subsequent annual fees as required by the SWRCB. b. The Contractor shall be responsible for complying with the requirements of the Construction General Permit. The Contractor's responsibilities include, but are not limited to, providing qualified professionals as described in the permit to prepare and certify all permit-required documents/submittals and to implement effective stormwater/non-stormwater management practices, and conducting inspections and monitoring as required by the permit. The Contractor shall, in compliance with the permit, prepare and upload to SMARTS all required documents, photos, data, and/or reports (including the Annual Reports) and ensure permit coverage termination upon construction completion by preparing a Notice of Termination on SMARTS. The Contractor shall inform the Engineer when documents/reports are available on SMARTS for Engineer certification and submittal. 2. Storm Water Pollution Prevention Plan a. Submit a Stormwater Pollution Prevention Plan that describes measures that shall be implemented to prevent the discharge of contaminated storm water runoff from the jobsite. Contaminants to be addressed include, but are not limited to, soil, sediment, concrete residue, pH less than 6.5 or greater than 8.5, and chlorine residual and all other contaminants known to exist at the jobsite location as described in Document 00 31 24 - Material Assessment Information.					
Geology and Soils c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.	**EBMUD Pumping Plant Design Guide** **EBMUD Engineering Standard Practice 550.1, Seismic Design Requirements** Steel pipe having restrained joints shall be used. Other pipe materials and joints may be used provided it is demonstrated by tests and/or calculations that the pipe can accommodate the ground movements without rupture. Isolation valves shall be provided at points where the pipeline enters a slide area. By-pass connections or hydrants may be used to permit post-earthquake connection of temporary hoses across the slide area." Other measures specified in EBMUD Engineering Standard Practice 550.1 include: a. Setting the line back far enough from the up slope side of unstable slopes as to avoid being included in the probable zone of slippage; b. Setting lines back far enough from or low enough below the toe of unstable slopes as to avoid being included in the probable zone of slippage; and c. Providing buttress or retention structures or other measures to stabilize the slope.	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Geology and Soils (cont.)						
Geology and Soils d) Be located on expansive soil, as defined in Section 1803.5.3 of the Building Code, creating substantial risks to life or property?	**EBMUD Pumping Plant Design Guide**	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X
Greenhouse Gas Emissions						
Greenhouse Gas Emissions a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** Section 3.4.A Air Quality and Emissions Control (Details as previously listed under Air Quality)	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X
Hazards and Hazardous Materials						
Hazards and Hazardous Materials a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Hazards and 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.	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** Section 1.1.B, Site Activities (Details as previously listed under Geology and Soils) *Section 1.3.D, Spill Prevention and Response Plan* 1. Submit plan detailing the means and methods for preventing and controlling the spilling of known hazardous substances used on the jobsite or staging areas. The plan shall include a list of the hazardous substances proposed for use or generated by the Contractor on site, including petroleum products, and measures that will be taken to prevent spills, monitor hazardous substances, and provide immediate response to spills. Spill response measures shall address notification of the Engineer and appropriate agencies including phone numbers; spill-related worker, public health, and safety issues; spill control, and spill cleanup. 2. Submit a Safety Data Sheet (SDS) for each hazardous substance proposed to be used prior to delivery of the material to the jobsite.	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X
Hazards and Hazardous Materials g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	**EBMUD's Standard Construction Specification 01 55 26, Traffic Regulation** (Details listed under Transportation and Traffic)	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Hazards and Hazardous Materials (cont.)						
Hazards and Hazardous Materials h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.	**EBMUD's Standard Construction Specifications 01 35 24, Project Safety Requirements** *Section 1.6, Fire Prevention and Protection* A. Perform all Work in a fire-safe manner and supply and maintain on the site adequate fire-fighting equipment capable of extinguishing incipient fires. Comply with applicable federal, local, and state fire-prevention regulations. Where these regulations do not apply, applicable parts of the National Fire Prevention Standards for Safeguarding Building Construction Operations (NFPA No. 241) shall be followed. B. A long-handled, round-point shovel, or a fire extinguisher shall be kept at an accessible (unlocked) location on the construction site at all times. C. Earthmoving and portable equipment with internal combustion engines shall be equipped with a spark arrestor to reduce the potential for igniting a wildfire. Such equipment shall be maintained to ensure proper functioning of spark arrestor. D. For all work occurring between April 1 and December 1, or any other periods during which a high fire danger has been identified: 1. Equipment that could produce a spark, fire, or flame shall not be used within 10 feet of any flammable materials. 2. Portable tools powered by gasoline-fueled internal combustion engines shall not be used within 25 feet of any flammable materials. E. Vegetation management for fire prevention and protection: 1. Prior to and during construction: a. Create and maintain a defensible space (100 feet or to the District property boundary, whichever is shorter) around construction site, construction ingress and egress sites through landscaping, mowing, disking, and/or spraying dry brush or native grasses to a height of 4-inches or less. b. Remove dead trees within 100-feet of construction site. c. Limb up trees within 100 feet of construction site so that no leafy foliage, twigs or branches are within 5-feet of the ground. To maintain tree health, tree limbing shall not remove more than 25 percent of a tree canopy within one growing season. d. Ensure and maintain a 5-feet of vertical clearance between roof surfaces and portions of trees overhanging all structures within construction site, and keep roofs free of leaves, needles, twigs, and other combustible matter. To maintain tree health, tree limbing shall not remove more than 25 percent of a tree canopy within one growing season. e. Keep all overhanging trees, shrubs, and other vegetation, or portions thereof, free of dead limbs, branches, and other combustible matter.	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Hazards and Hazardous Materials (cont.)						
Hazards and Hazardous Materials h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands. (cont.)	2. Neatly stack all combustible materials away from structures within construction site and have all combustible growth cleared 15-feet around the stack. F. During construction, maintain an unobstructed horizontal clearance at access drives of not less than the required width of the access drives, and an unobstructed vertical clearance of not less than 13 feet 6 inches above all roadways. G. The site address shall be clearly visible from the street. H. Any electronically-controlled gates shall have a KNOX key switch (or similar access per applicable local fire department regulations) allowing emergency access to the property.					
Hydrology and Water Quality						
Hydrology and Water Quality a) Violate any water quality standards or waste discharge requirements. Hydrology and Water Quality f) Otherwise substantially degrade water quality.	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** Section 1.1.B, Site Activities (Details as previously listed under Geology and Soils) Section 1.3.A, Storm Water Management (Details as previously listed under Geology and Soils) Section 1.3.D, Spill Prevention and Response Plan (Details as previously listed under Hazards and Hazardous Materials)	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X
Hydrology and Water Quality e) Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** Section 1.1.B, Site Activities (Details as previously listed under Geology and Soils) Section 1.3.A, Storm Water Management (Details as previously listed under Geology and Soils) Section 1.3.D, Spill Prevention and Response Plan (Details as previously listed under Hazards and Hazardous Materials)	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X
Hydrology and Water Quality i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.	**Engineering Standard Practice 550.1, Seismic Design Requirements** (Details as previously listed under Geology and Soils)	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Noise						
Noise a) Exposure of persons to or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	**EBMUD's Standard Construction Specification 01 14 00, Work Restrictions** *Section 1.4, Work Hours* A. Work or activity of any kind shall be limited to the hours from 7:00 a.m. to 6:00 p.m. Monday through Friday with the exception of required outages, as described in Section 01 35 13. B. Work in excess of eight hours per day, work on Saturdays, work on Sundays, or work on District holidays requires prior consent of the Engineer and is subject to Cost of Overtime Construction Inspection. Contractor shall notify the Engineer no less than 96 hours prior to beginning scheduled work at night or on a Saturday, Sunday or District holidays. C. District holidays 1. Holidays are: New Years Day Martin Luther King Day (3rd Monday in January) Lincoln's Birthday Washington's Birthday (3rd Monday in February) Chavez's Birthday Memorial Day (last Monday in May) Independence Day Labor Day (1st Monday in September) Admission Day Columbus Day (2nd Monday in October) Veteran's Day Thanksgiving Day and following Friday Christmas Day 2. When a holiday falls on Sunday, the following Monday shall be observed as the holiday. When a holiday falls on Saturday, the preceding Friday shall be observed as the holiday. D. Truck operations (haul trucks and concrete delivery trucks) shall be limited to the daytime hours 9:00a.m. and 4:00 p.m. *Section 1.8, Construction Noise* A. Noise-generating activities greater than 90 dBA (impact construction such as concrete breaking, concrete crushing, tree grinding, etc) shall be limited to the hours of 8:00 a.m. and 4:00 p.m., Monday through Friday. **EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** *Section 3.6, Noise Control* A. Comply with sound control and noise level rules, regulations and ordinances as required herein and in the CEQA documents which apply to any work performed pursuant to the contract.	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction		X

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Noise (cont.)						
Noise a) Exposure of persons to or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (cont.)	B. Contractor is responsible for taking appropriate measures, including muffling of equipment, selecting quieter equipment, erecting noise barriers, modifying work operations, and other measures as needed to bring construction noise into compliance. C. Each internal combustion engine, used for any purpose on the job or related to the job, shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated on the project without said muffler. D. Best available noise control techniques (including mufflers, intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds) shall be used for all equipment and trucks, as necessary. E. Truck operations (haul trucks and concrete delivery trucks) will be limited to the daytime hours specified in Section 01 14 00. F. Stationary noise sources (e.g. chippers, grinders, compressors) shall be located as far from sensitive receptors as possible. If they must be located near receptors, adequate muffling (with enclosures) shall be used. Enclosure opening or venting shall face away from sensitive receptors. Enclosures shall be designed by a registered engineer regularly involved in noise control analysis and design. G. Material stockpiles as well as maintenance/equipment staging and parking areas (all on-site) shall be located as far as practicable from residential receptors. H. If impact equipment (e.g., jack hammers, pavement breakers, rock drills etc.) is used during project construction, Contractor is responsible for taking appropriate measures, including but not limited to the following: 1. Hydraulically or electric-powered equipment shall be used wherever feasible to avoid the noise associated with compressed-air exhaust from pneumatically powered tools. However, where use of pneumatically powered tools is unavoidable, an exhaust muffler on the compressed-air exhaust shall be used (a muffler can lower noise levels from the exhaust by up to about 10 dB). External jackets on the tools themselves shall be used, where feasible, which could achieve a reduction of 5 dB. Quieter procedures, such as drilling rather than impact equipment, will be used whenever feasible. It is the Contractor's responsibility to implement any measures necessary to meet applicable noise requirements. 2. Impact construction including jackhammers, hydraulic backhoe, concrete crushing/recycling activities, vibratory pile drivers etc. shall be limited to the day time hours specified in Section 01 14 00.					

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Noise (cont.)						
Noise a) Exposure of persons to or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (cont.)	3. Erect temporary noise barriers or noise control blankets around the construction site, particularly along areas adjacent to residential buildings. 4. Utilize noise control blankets around the major noise sources to reduce noise emission from the site. 5. Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings by the use of sound blankets for example. 6. Limit the noisiest phases of construction to 10 work days at a time, where feasible. 7. Notify neighbors/occupants within 300 feet of project construction at least thirty days in advance of extreme noise generating activities about the estimated duration of the activity. 8. Noise Monitoring shall be conducted periodically during noise generating activities. Monitoring shall be conducted using a precision sound-level meter that is in conformance with the American National Standards Institute (ANSI) Standard S1.4, Specification for Sound Level Meters. Monitoring results shall be submitted weekly to the Engineer.					
Noise b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** Section 3.6, Noise Control (Details as previously listed) *Section 3.5, Vibration Control* A. Limit surface vibration to no more than 0.5 in/sec PPV, measured at the nearest residence or other sensitive structure. See Section 01 14 00. B. Upon homeowner request, and with homeowner permission, the District will conduct preconstruction surveys of homes, sensitive structures and other areas of concern within 15 feet of continuous vibration-generating activities (i.e. vibratory compaction). Any new cracks or other changes in structures will be compared to preconstruction conditions and a determination made as to whether the proposed project could have caused such damage. In the event that the project is demonstrated to have caused the damage, the District will have the damage repaired to the pre-existing condition. **EBMUD's Standard Construction Specification 01 14 00, Work Restrictions** Section 1.4, Work Hours (Details as previously listed) Section 1.8, Construction Noise (Details as previously listed)	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Transportation and Traffic						
Transportation and Traffic a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit. Transportation and Traffic b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.	**Standard Construction Specification 01 14 00, Work Restrictions** Section 1.4, Work Hours (Details as previously listed in Noise) **Standard Construction Specification 01 55 26, Traffic Regulation** 1.2 SUBMITTALS A. Submit at least 15 calendar days prior to work a detailed traffic control plan, that is approved by all agencies having jurisdiction and that conforms to all requirements of these specifications and the most recently adopted edition of the California Manual on Uniform Control Devices. Traffic Control Plan shall include: 1. Circulation and detour plans to minimize impacts to local street circulation. Use haul routes minimizing truck traffic on local roadways to the extent possible. 2. A description of emergency response vehicle access. If the road or area is completely blocked, preventing access by an emergency responder, a contingency plan must be included. 3. Procedures, to the extent feasible, to schedule construction of project elements to minimize overlapping construction phases that require truck hauling. 4. Designated Contractor staging areas for storage of all equipment and materials, in such a manner to minimize obstruction to traffic. 5. Locations for parking by construction workers.	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X
Transportation and Traffic d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).	**EBMUD's Standard Construction Specification 01 55.26, Traffic Regulation** *Section 3.4, Temporary Traffic Control* A. All traffic control devices shall conform to the latest edition of the Manual of Uniform Traffic Control Devices (MUTCD), and as amended by the latest edition of the MUTCD California supplement. Electronic signage board with changeable message shall be placed on a street in both direction 2 weeks in advance. B. The Contractor shall replace within 72 hours, all traffic signal loop detectors damaged during construction. Any work that disturbs normal traffic signal operations and ensure proper temporary traffic control (lane shifts, lane closures, detours etc.) shall be coordinated with the agency having jurisdiction, at least 72 hours prior to commencing construction.	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Transportation and Traffic (cont.)						
Transportation and Traffic d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). (cont.)	C. A minimum of twelve (12) foot travel lanes must be maintained unless otherwise approved. D. Access to driveways will be maintained at all times unless other arrangements are made. E. All traffic control devices shall be removed from view when not in use. F. Before leaving a work area, ensure the area is left orderly. Trenches must be backfilled or plated during non-working hours. G. Sidewalks for pedestrians will remain open if safe for pedestrians. Alternate routes and signing will be provided if pedestrian routes are to be closed *Section 3.1, General* A. Except where public roads have been approved for closure, traffic shall be permitted to pass through designated traffic lanes with as little inconvenience and delay as possible. B. Install temporary traffic markings where required to direct the flow of traffic. Maintain the traffic markings for the duration of need and remove by abrasive blasting when no longer required. C. Convenient access to driveways and buildings in the vicinity of work shall be maintained as much as possible. Temporary approaches to, and crossing of, intersecting traffic lanes shall be provided and kept in good condition. D. When leaving a work area and entering a roadway carrying public traffic, the Contractor's equipment, whether empty or loaded, shall in all cases yield to public traffic. E. Provide temporary signs as required by the traffic control plan and remove signs when no longer required. F. Haul routes for each construction phase shall be provided to all trucks serving the site during the construction period. G. For complete road closures, immediate emergency access to be provided if needed to emergency response vehicles. H. A minimum of twelve (12) foot travel lanes must be maintained unless otherwise approved.					
Transportation and Traffic e) Result in inadequate emergency access.	**EBMUD's Standard Construction Specification 01 55 26, Traffic Regulation** Section 1.2, Submittals (Details as previously listed) Section 3.1, General (Details as previously listed)	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Transportation and Traffic (cont.)						
Transportation and Traffic f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.	**EBMUD's Standard Construction Specification 01 55 26, Traffic Regulation** Section 1.2, Submittals (Details as previously listed)	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X
Tribal Cultural Resources						
Tribal Cultural Resources: Project cause a substantial adverse change in the significance of a tribal cultural resource a) Listed or eligible for listing in the California Register of Historic Resources, or in a local register of historic resources as defined in Public Resources Code section 5020.1(k). A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** Section 3.9, Protection of Cultural and Paleontological Resources (Details as previously listed under Cultural Resources)	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Utilities and Service Systems						
Utilities and Service Systems f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs.	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** Section 1.3.C, Construction and Demolition Waste Disposal Plan C. Construction and Demolition Waste Disposal Plan: 1. Prepare a Construction and Demolition Waste Disposal Plan and submit a copy of the plan for the Engineer's acceptance prior to disposing of any material (except for water wastes which shall be addressed in the Water Control and Disposal Plan). a. The plan shall identify how the Contractor will remove, handle, transport, and dispose of all materials required to be removed under this contract in a safe, appropriate, and lawful manner in compliance with all applicable regulations of local, state, and federal agencies having jurisdiction over the disposal of removed materials. b. The Contractor shall procure the necessary permits required by the local, state, and federal agencies having jurisdiction over the handling, transportation, and disposal of construction and demolition waste. At a minimum, the following permits are required: 1) _____ 2) _____ 3) _____ c. Include a list of reuse facilities, recycling facilities and processing facilities that will be receiving recovered materials. d. Identify materials that are not recyclable or not recovered which will be disposed of in a landfill (or other means acceptable by the State of California and local ordinance and regulations). e. Identify how the Contractor will comply with The California Department of Toxic Substances Control's (DTSC) Alternative Management Strategies (AMS) when handling and disposing of treated wood waste (TWW) in compliance with 22 CCR 66261.9.5. f. TWW records including but not limited to manifests, bills of lading should be submitted to the Engineer within 5 working days of off-haul. Records should include: (1) name and address of the TWW facility to which the TWW was sent; (2) estimated weight of TWW, or the weight of the TWW as measured by the receiving TWW facility; and (3) date of the shipment of TWW. (Cal. Code Regs., tit. 22, §§ 67386.8(a) and (e)(1)). g. List the permitted landfill, or other permitted disposal facilities, that will be accepting the disposed waste materials.	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Utilities and Service Systems (cont.)						
Utilities and Service Systems f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs. (cont.)	h. Identify each type of waste material to be reused, recycled or disposed of and estimate the amount, by weight. i. Plan shall include the sampling and analytical program for characterization of any waste material, as needed, prior to reuse, recycle or disposal. 2. Materials or wastes shall only be recycled, reused, reclaimed, or disposed of at facilities approved of by the District. 3. Submit permission to reuse, recycle, reclaim, or dispose of material from reuse, recycling, reclamation, or disposal site owner along with any other information needed by the District to evaluate the acceptability of the proposed reuse, recycling, or disposal site and obtain acceptance of the Engineer prior to removing any material from the project site. 4. All information pertinent to the characterization of the material or waste shall be disclosed to the District and the reuse, recycling, reclamation, or disposal facility. Submit copies of any profile forms and/or correspondence between the Contractor and the reuse, recycling, reclamation, or disposal facility. 5. Submit name and Environmental Laboratory Accreditation Program Certificate number of laboratory that will analyze samples for suspected hazardous substances. Include statement of laboratory's certified testing areas and analyses that laboratory is qualified to perform. Submit prior to any laboratory testing.					

NOTES:

[1] In EBMUD Standard Specifications, "District" = EBMUD; "Engineer" = EBMUD Engineer; "Contractor" = EBMUD Contractor; "Work" = Scope of Work for the Project

APPENDIX B

Air Quality and Greenhouse Gas Emissions Estimates

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Site A2

CONSTRUCTION GHG EMISSIONS

CO2e (tons)	1493.5268	
Life of project (yrs)	40	
Ave. annual emissions	37.33817	metric tons/year

OPERATIONAL GHG EMISSIONS

No. of pumps =	3			
Pump size =	350	hp =	261.0	kW
Hours used per day =	12	hours		
Electricity requirement of the Project			3429474	kW-hr/year

GHGs from Electricity Consumption			
GHG	Emission Factor (lb/kWh)	Electricity Consumption (kW-hr/year)	CO_2e* (metric tons)
CO_2	0.45700	3,429,474	710.91
CH_4	0.00003112	3,429,474	1.02
N_20	0.0000567	3,429,474	27.34
		Total =	739

NOTES:

1. The emission factor for CO_2 was obtained from PG&E, 2015. Emission factors for CH4 and N2O are USEPA's eGRID2012 Annual Emissions Output Rates
2. Proposed electricity consumption estimate for project based on data provided by SFPUC based on 7,200 AFY average annual recapture volume.
3. *Global Warming Potential for CH_4 = 21; GWP for N_2O = 310 (CCAR, 2009).

SOURCES:

1. California Climate Action Registry (CCAR), 2009. General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.1, January 2009. Tables C.3 and C.6.
2. Pacific Gas and Electric Company (PG&E), 2015. Greenhouse Gas Emission Factors - Guidance for PG&E Customers, November 2015
3. USEPA, eGRID2012 Annual Emission Output Rates. Available at http://www.epa.gov/sites/production/files/2015-10/documents/egrid2012_ghgoutputrates_0.pdf

TOTAL CO2e emissions (annualized construction + operation) = 777 metric tons per year

CONSTRUCTION EMISSIONS - CAP

Total number of construction workdays = 528

Tons per year				Pounds per day			
ROG	NOx	PM-10	PM-2.5	ROG	NOx	PM-10	PM-2.5
0.87	8.61	0.36	0.33	3.28	32.60	1.35	1.26

Site A2 - Pumping Plant and Pipeline Construction

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	1.50	1000sqft	0.13	1,500.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	4			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Site A2 - Pumping Plant and Pipeline Construction - Alameda County, Annual

Project Characteristics -

Land Use - Site A2 area

Construction Phase - Provided by EBMUD

Off-road Equipment - Equipment list provided by EBMUD

Off-road Equipment - Equipment list provided by EBMUD

Off-road Equipment - Equipment list provided by EBMUD

Off-road Equipment - Equipment list provided by EBMUD

Off-road Equipment - Equipment list provided by EBMUD

Off-road Equipment - Equipment list provided by EBMUD

Off-road Equipment - Equipment list provided by EBMUD

Off-road Equipment - Equipment list provided by EBMUD

Off-road Equipment - Equipment list provided by EBMUD

Grading - Provided by EBMUD

Trips and VMT - Provided by EBMUD

Construction Off-road Equipment Mitigation - Tier 4 equipment used for BACT

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	21.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
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tblConstructionPhase	NumDays	5.00	66.00
tblConstructionPhase	NumDays	1.00	65.00
tblConstructionPhase	NumDays	100.00	174.00
tblConstructionPhase	NumDays	1.00	64.00
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tblConstructionPhase	PhaseEndDate	3/31/2019	9/30/2019
tblConstructionPhase	PhaseEndDate	3/31/2019	12/31/2020
tblConstructionPhase	PhaseEndDate	3/31/2019	6/30/2019
tblConstructionPhase	PhaseStartDate	4/1/2019	6/1/2020

Site A2 - Pumping Plant and Pipeline Construction - Alameda County, Annual

tblConstructionPhase	PhaseStartDate	4/1/2019	7/1/2019
tblConstructionPhase	PhaseStartDate	4/1/2019	10/1/2020
tblGrading	AcresOfGrading	0.00	0.13
tblGrading	AcresOfGrading	0.00	0.13
tblGrading	AcresOfGrading	0.00	0.13
tblGrading	MaterialExported	0.00	200.00
tblLandUse	LotAcreage	0.03	0.13
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs

tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Pavers
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	5.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	PhaseName		Pipeline Construction
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tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	1.00	0.00
tblOffRoadEquipment	UsageHours	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	4.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	OperationalYear	2018	2021
tblTripsAndVMT	HaulingTripNumber	0.00	23.00
tblTripsAndVMT	PhaseName		Pipeline Construction

tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	20.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	14.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	1.00	16.00
tblTripsAndVMT	WorkerTripNumber	38.00	10.00
tblTripsAndVMT	WorkerTripNumber	28.00	8.00
tblTripsAndVMT	WorkerTripNumber	8.00	4.00
tblTripsAndVMT	WorkerTripNumber	1.00	20.00
tblTripsAndVMT	WorkerTripNumber	5.00	8.00
tblTripsAndVMT	WorkerTripNumber	38.00	10.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.4250	4.3455	2.8141	7.9400e-003	0.0174	0.1785	0.1959	4.8000e-003	0.1668	0.1716	0.0000	712.1138	712.1138	0.1962	0.0000	717.0187
2020	0.4140	4.0179	2.9678	8.2100e-003	0.0229	0.1668	0.1897	6.2500e-003	0.1557	0.1619	0.0000	719.9236	719.9236	0.2032	0.0000	725.0040
2021	0.0267	0.2442	0.1973	5.8000e-004	2.9300e-003	9.8300e-003	0.0128	7.9000e-004	9.0400e-003	9.8300e-003	0.0000	51.1262	51.1262	0.0151	0.0000	51.5041
Maximum	**0.4250**	**4.3455**	**2.9678**	**8.2100e-003**	**0.0229**	**0.1785**	**0.1959**	**6.2500e-003**	**0.1668**	**0.1716**	**0.0000**	**719.9236**	**719.9236**	**0.2032**	**0.0000**	**725.0040**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.1370	2.3486	4.2884	7.9400e-003	0.0174	0.0131	0.0305	4.8000e-003	0.0131	0.0179	0.0000	712.1130	712.1130	0.1962	0.0000	717.0179
2020	0.1410	2.4822	4.5280	8.2100e-003	0.0229	0.0150	0.0379	6.2500e-003	0.0149	0.0212	0.0000	719.9228	719.9228	0.2032	0.0000	725.0032
2021	0.0104	0.1694	0.3092	5.8000e-004	2.9300e-003	9.0000e-004	3.8300e-003	7.9000e-004	9.0000e-004	1.6800e-003	0.0000	51.1262	51.1262	0.0151	0.0000	51.5040
Maximum	**0.1410**	**2.4822**	**4.5280**	**8.2100e-003**	**0.0229**	**0.0150**	**0.0379**	**6.2500e-003**	**0.0149**	**0.0212**	**0.0000**	**719.9228**	**719.9228**	**0.2032**	**0.0000**	**725.0032**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**66.69**	**41.91**	**-52.62**	**0.00**	**0.00**	**91.84**	**81.87**	**0.00**	**91.28**	**88.14**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
3	**10-1-2019**	**12-31-2019**	1.5170	0.8340
4	**1-1-2020**	**3-31-2020**	1.3595	0.8194
5	**4-1-2020**	**6-30-2020**	1.5975	0.9660
6	**7-1-2020**	**9-30-2020**	2.1066	1.2803
		Highest	2.1066	1.2803

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	6.6400e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-005	3.0000e-005	0.0000	0.0000	3.0000e-005
Energy	2.1000e-004	1.9500e-003	1.6400e-003	1.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	5.7938	5.7938	2.1000e-004	7.0000e-005	5.8208
Mobile	2.5000e-003	0.0170	0.0298	1.1000e-004	8.6200e-003	1.1000e-004	8.7300e-003	2.3200e-003	1.0000e-004	2.4200e-003	0.0000	10.3082	10.3082	4.2000e-004	0.0000	10.3188
Waste						0.0000	0.0000		0.0000	0.0000	0.3776	0.0000	0.3776	0.0223	0.0000	0.9354
Water						0.0000	0.0000		0.0000	0.0000	0.1101	0.5460	0.6561	0.0113	2.7000e-004	1.0203
Total	**9.3500e-003**	**0.0190**	**0.0315**	**1.2000e-004**	**8.6200e-003**	**2.6000e-004**	**8.8800e-003**	**2.3200e-003**	**2.5000e-004**	**2.5700e-003**	**0.4876**	**16.6481**	**17.1357**	**0.0343**	**3.4000e-004**	**18.0954**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	6.6400e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-005	3.0000e-005	0.0000	0.0000	3.0000e-005
Energy	2.1000e-004	1.9500e-003	1.6400e-003	1.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	5.7938	5.7938	2.1000e-004	7.0000e-005	5.8208
Mobile	2.5000e-003	0.0170	0.0298	1.1000e-004	8.6200e-003	1.1000e-004	8.7300e-003	2.3200e-003	1.0000e-004	2.4200e-003	0.0000	10.3082	10.3082	4.2000e-004	0.0000	10.3188
Waste						0.0000	0.0000		0.0000	0.0000	0.3776	0.0000	0.3776	0.0223	0.0000	0.9354
Water						0.0000	0.0000		0.0000	0.0000	0.1101	0.5460	0.6561	0.0113	2.7000e-004	1.0203
Total	**9.3500e-003**	**0.0190**	**0.0315**	**1.2000e-004**	**8.6200e-003**	**2.6000e-004**	**8.8800e-003**	**2.3200e-003**	**2.5000e-004**	**2.5700e-003**	**0.4876**	**16.6481**	**17.1357**	**0.0343**	**3.4000e-004**	**18.0954**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Site A2 - Pumping Plant and Pipeline Construction - Alameda County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	4/1/2019	3/31/2019	5	0	
2	Demolition	Demolition	4/1/2019	3/31/2019	5	0	
3	Mobilization	Site Preparation	4/1/2019	6/30/2019	5	65	
4	Excavation/Site Work	Grading	7/1/2019	9/30/2019	5	66	
5	Building Construction (concrete work)	Building Construction	10/1/2019	5/31/2020	5	174	
6	Pipeline Construction	Trenching	5/1/2020	5/5/2020	5	3	
7	Building Construction	Building Construction	6/1/2020	9/30/2020	5	88	
8	Landscaping/Site Restoration	Paving	10/1/2020	12/31/2020	5	66	
9	Demobilization	Site Preparation	1/1/2021	3/31/2021	5	64	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 2,250; Non-Residential Outdoor: 750; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	0	0.00	78	0.48
Landscaping/Site Restoration	Cement and Mortar Mixers	0	0.00	9	0.56
Demolition	Concrete/Industrial Saws	0	0.00	81	0.73
Excavation/Site Work	Concrete/Industrial Saws	2	8.00	81	0.73
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Mobilization	Graders	0	0.00	187	0.41

Site A2 - Pumping Plant and Pipeline Construction - Alameda County, Annual

Landscaping/Site Restoration	Pavers	2	7.00	130	0.42
Landscaping/Site Restoration	Rollers	2	7.00	80	0.38
Demolition	Rubber Tired Dozers	0	0.00	247	0.40
Excavation/Site Work	Rubber Tired Dozers	0	0.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Excavation/Site Work	Tractors/Loaders/Backhoes	4	6.00	97	0.37
Landscaping/Site Restoration	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Mobilization	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction (concrete work)	Cranes	0	0.00	231	0.29
Building Construction (concrete work)	Forklifts	1	6.00	89	0.20
Demobilization	Graders	0	0.00	187	0.41
Building Construction (concrete work)	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Demobilization	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Bore/Drill Rigs	1	8.00	221	0.50
Building Construction	Excavators	1	8.00	158	0.38
Building Construction	Welders	1	8.00	46	0.45
Building Construction	Off-Highway Trucks	1	8.00	402	0.38
Excavation/Site Work	Cranes	1	8.00	231	0.29
Excavation/Site Work	Excavators	1	8.00	158	0.38
Excavation/Site Work	Off-Highway Trucks	6	8.00	402	0.38
Excavation/Site Work	Bore/Drill Rigs	1	8.00	221	0.50
Landscaping/Site Restoration	Plate Compactors	3	8.00	8	0.43
Landscaping/Site Restoration	Off-Highway Trucks	3	8.00	402	0.38
Mobilization	Off-Highway Trucks	2	8.00	402	0.38
Building Construction (concrete work)	Bore/Drill Rigs	2	8.00	221	0.50
Building Construction (concrete work)	Off-Highway Trucks	3	8.00	402	0.38

Building Construction (concrete work)	Pumps	2	8.00	84	0.74
Demobilization	Off-Highway Trucks	1	8.00	402	0.38
Pipeline Construction	Off-Highway Trucks	5	8.00	402	0.38
Pipeline Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Pipeline Construction	Forklifts	2	8.00	89	0.20
Pipeline Construction	Plate Compactors	2	8.00	8	0.43
Pipeline Construction	Pavers	2	8.00	130	0.42
Pipeline Construction	Rollers	2	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	16.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Excavation/Site Work	15	10.00	20.00	23.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Landscaping/Site Restoration	11	8.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Mobilization	3	4.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction (concrete work)	9	20.00	14.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demobilization	2	8.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Pipeline Construction	15	10.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Clean Paved Roads

3.2 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Architectural Coating - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Demolition - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Mobilization - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.0000e-005	0.0000	7.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0539	0.5456	0.3359	9.6000e-004		0.0222	0.0222		0.0204	0.0204	0.0000	86.5660	86.5660	0.0274	0.0000	87.2507
Total	**0.0539**	**0.5456**	**0.3359**	**9.6000e-004**	**7.0000e-005**	**0.0222**	**0.0222**	**1.0000e-005**	**0.0204**	**0.0204**	**0.0000**	**86.5660**	**86.5660**	**0.0274**	**0.0000**	**87.2507**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.9000e-004	0.0166	3.6800e-003	4.0000e-005	8.5000e-004	1.1000e-004	9.6000e-004	2.5000e-004	1.0000e-004	3.5000e-004	0.0000	3.4629	3.4629	2.1000e-004	0.0000	3.4682
Worker	4.9000e-004	3.8000e-004	3.7900e-003	1.0000e-005	1.0300e-003	1.0000e-005	1.0400e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.9429	0.9429	3.0000e-005	0.0000	0.9436
Total	**1.0800e-003**	**0.0170**	**7.4700e-003**	**5.0000e-005**	**1.8800e-003**	**1.2000e-004**	**2.0000e-003**	**5.2000e-004**	**1.1000e-004**	**6.3000e-004**	**0.0000**	**4.4058**	**4.4058**	**2.4000e-004**	**0.0000**	**4.4118**

3.4 Mobilization - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.0000e-005	0.0000	7.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0163	0.2711	0.5337	9.6000e-004		1.5700e-003	1.5700e-003		1.5700e-003	1.5700e-003	0.0000	86.5659	86.5659	0.0274	0.0000	87.2506
Total	**0.0163**	**0.2711**	**0.5337**	**9.6000e-004**	**7.0000e-005**	**1.5700e-003**	**1.6400e-003**	**1.0000e-005**	**1.5700e-003**	**1.5800e-003**	**0.0000**	**86.5659**	**86.5659**	**0.0274**	**0.0000**	**87.2506**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.9000e-004	0.0166	3.6800e-003	4.0000e-005	8.5000e-004	1.1000e-004	9.6000e-004	2.5000e-004	1.0000e-004	3.5000e-004	0.0000	3.4629	3.4629	2.1000e-004	0.0000	3.4682
Worker	4.9000e-004	3.8000e-004	3.7900e-003	1.0000e-005	1.0300e-003	1.0000e-005	1.0400e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.9429	0.9429	3.0000e-005	0.0000	0.9436
Total	**1.0800e-003**	**0.0170**	**7.4700e-003**	**5.0000e-005**	**1.8800e-003**	**1.2000e-004**	**2.0000e-003**	**5.2000e-004**	**1.1000e-004**	**6.3000e-004**	**0.0000**	**4.4058**	**4.4058**	**2.4000e-004**	**0.0000**	**4.4118**

3.5 Excavation/Site Work - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					8.0000e-005	0.0000	8.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2292	2.3072	1.5196	4.0200e-003		0.0987	0.0987		0.0920	0.0920	0.0000	359.4435	359.4435	0.1050	0.0000	362.0683
Total	**0.2292**	**2.3072**	**1.5196**	**4.0200e-003**	**8.0000e-005**	**0.0987**	**0.0988**	**1.0000e-005**	**0.0920**	**0.0921**	**0.0000**	**359.4435**	**359.4435**	**0.1050**	**0.0000**	**362.0683**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-004	3.5700e-003	6.1000e-004	1.0000e-005	1.9000e-004	1.0000e-005	2.1000e-004	5.0000e-005	1.0000e-005	7.0000e-005	0.0000	0.8899	0.8899	5.0000e-005	0.0000	0.8911
Vendor	2.9700e-003	0.0844	0.0187	1.8000e-004	4.3300e-003	5.4000e-004	4.8700e-003	1.2500e-003	5.2000e-004	1.7700e-003	0.0000	17.5808	17.5808	1.0800e-003	0.0000	17.6078
Worker	1.2500e-003	9.5000e-004	9.6200e-003	3.0000e-005	2.6100e-003	2.0000e-005	2.6300e-003	6.9000e-004	2.0000e-005	7.1000e-004	0.0000	2.3935	2.3935	7.0000e-005	0.0000	2.3952
Total	**4.3200e-003**	**0.0889**	**0.0289**	**2.2000e-004**	**7.1300e-003**	**5.7000e-004**	**7.7100e-003**	**1.9900e-003**	**5.5000e-004**	**2.5500e-003**	**0.0000**	**20.8641**	**20.8641**	**1.2000e-003**	**0.0000**	**20.8941**

3.5 Excavation/Site Work - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					8.0000e-005	0.0000	8.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0677	1.1819	2.2792	4.0200e-003		6.4500e-003	6.4500e-003		6.4500e-003	6.4500e-003	0.0000	359.4430	359.4430	0.1050	0.0000	362.0679
Total	**0.0677**	**1.1819**	**2.2792**	**4.0200e-003**	**8.0000e-005**	**6.4500e-003**	**6.5300e-003**	**1.0000e-005**	**6.4500e-003**	**6.4600e-003**	**0.0000**	**359.4430**	**359.4430**	**0.1050**	**0.0000**	**362.0679**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-004	3.5700e-003	6.1000e-004	1.0000e-005	1.9000e-004	1.0000e-005	2.1000e-004	5.0000e-005	1.0000e-005	7.0000e-005	0.0000	0.8899	0.8899	5.0000e-005	0.0000	0.8911
Vendor	2.9700e-003	0.0844	0.0187	1.8000e-004	4.3300e-003	5.4000e-004	4.8700e-003	1.2500e-003	5.2000e-004	1.7700e-003	0.0000	17.5808	17.5808	1.0800e-003	0.0000	17.6078
Worker	1.2500e-003	9.5000e-004	9.6200e-003	3.0000e-005	2.6100e-003	2.0000e-005	2.6300e-003	6.9000e-004	2.0000e-005	7.1000e-004	0.0000	2.3935	2.3935	7.0000e-005	0.0000	2.3952
Total	**4.3200e-003**	**0.0889**	**0.0289**	**2.2000e-004**	**7.1300e-003**	**5.7000e-004**	**7.7100e-003**	**1.9900e-003**	**5.5000e-004**	**2.5500e-003**	**0.0000**	**20.8641**	**20.8641**	**1.2000e-003**	**0.0000**	**20.8941**

3.6 Building Construction (concrete work) - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1319	1.3257	0.8899	2.5100e-003		0.0566	0.0566		0.0533	0.0533	0.0000	223.7410	223.7410	0.0615	0.0000	225.2780
Total	**0.1319**	**1.3257**	**0.8899**	**2.5100e-003**		**0.0566**	**0.0566**		**0.0533**	**0.0533**	**0.0000**	**223.7410**	**223.7410**	**0.0615**	**0.0000**	**225.2780**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0800e-003	0.0591	0.0131	1.3000e-004	3.0300e-003	3.8000e-004	3.4100e-003	8.8000e-004	3.6000e-004	1.2400e-003	0.0000	12.3065	12.3065	7.6000e-004	0.0000	12.3255
Worker	2.5000e-003	1.9100e-003	0.0193	5.0000e-005	5.2200e-003	4.0000e-005	5.2600e-003	1.3900e-003	3.0000e-005	1.4200e-003	0.0000	4.7869	4.7869	1.4000e-004	0.0000	4.7903
Total	**4.5800e-003**	**0.0610**	**0.0323**	**1.8000e-004**	**8.2500e-003**	**4.2000e-004**	**8.6700e-003**	**2.2700e-003**	**3.9000e-004**	**2.6600e-003**	**0.0000**	**17.0935**	**17.0935**	**9.0000e-004**	**0.0000**	**17.1158**

3.6 Building Construction (concrete work) - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0429	0.7287	1.4068	2.5100e-003		3.9900e-003	3.9900e-003		3.9900e-003	3.9900e-003	0.0000	223.7407	223.7407	0.0615	0.0000	225.2778
Total	**0.0429**	**0.7287**	**1.4068**	**2.5100e-003**		**3.9900e-003**	**3.9900e-003**		**3.9900e-003**	**3.9900e-003**	**0.0000**	**223.7407**	**223.7407**	**0.0615**	**0.0000**	**225.2778**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0800e-003	0.0591	0.0131	1.3000e-004	3.0300e-003	3.8000e-004	3.4100e-003	8.8000e-004	3.6000e-004	1.2400e-003	0.0000	12.3065	12.3065	7.6000e-004	0.0000	12.3255
Worker	2.5000e-003	1.9100e-003	0.0193	5.0000e-005	5.2200e-003	4.0000e-005	5.2600e-003	1.3900e-003	3.0000e-005	1.4200e-003	0.0000	4.7869	4.7869	1.4000e-004	0.0000	4.7903
Total	**4.5800e-003**	**0.0610**	**0.0323**	**1.8000e-004**	**8.2500e-003**	**4.2000e-004**	**8.6700e-003**	**2.2700e-003**	**3.9000e-004**	**2.6600e-003**	**0.0000**	**17.0935**	**17.0935**	**9.0000e-004**	**0.0000**	**17.1158**

3.6 Building Construction (concrete work) - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2009	1.9591	1.4234	4.1100e-003		0.0820	0.0820		0.0772	0.0772	0.0000	359.6510	359.6510	0.1002	0.0000	362.1567
Total	**0.2009**	**1.9591**	**1.4234**	**4.1100e-003**		**0.0820**	**0.0820**		**0.0772**	**0.0772**	**0.0000**	**359.6510**	**359.6510**	**0.1002**	**0.0000**	**362.1567**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.8400e-003	0.0889	0.0192	2.1000e-004	4.9600e-003	4.1000e-004	5.3800e-003	1.4400e-003	3.9000e-004	1.8300e-003	0.0000	19.9970	19.9970	1.1500e-003	0.0000	20.0257
Worker	3.7300e-003	2.7600e-003	0.0283	8.0000e-005	8.5400e-003	6.0000e-005	8.6000e-003	2.2700e-003	5.0000e-005	2.3300e-003	0.0000	7.5908	7.5908	2.0000e-004	0.0000	7.5957
Total	**6.5700e-003**	**0.0916**	**0.0474**	**2.9000e-004**	**0.0135**	**4.7000e-004**	**0.0140**	**3.7100e-003**	**4.4000e-004**	**4.1600e-003**	**0.0000**	**27.5878**	**27.5878**	**1.3500e-003**	**0.0000**	**27.6215**

3.6 Building Construction (concrete work) - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0702	1.1925	2.3021	4.1100e-003		6.5200e-003	6.5200e-003		6.5200e-003	6.5200e-003	0.0000	359.6506	359.6506	0.1002	0.0000	362.1563
Total	**0.0702**	**1.1925**	**2.3021**	**4.1100e-003**		**6.5200e-003**	**6.5200e-003**		**6.5200e-003**	**6.5200e-003**	**0.0000**	**359.6506**	**359.6506**	**0.1002**	**0.0000**	**362.1563**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.8400e-003	0.0889	0.0192	2.1000e-004	4.9600e-003	4.1000e-004	5.3800e-003	1.4400e-003	3.9000e-004	1.8300e-003	0.0000	19.9970	19.9970	1.1500e-003	0.0000	20.0257
Worker	3.7300e-003	2.7600e-003	0.0283	8.0000e-005	8.5400e-003	6.0000e-005	8.6000e-003	2.2700e-003	5.0000e-005	2.3300e-003	0.0000	7.5908	7.5908	2.0000e-004	0.0000	7.5957
Total	**6.5700e-003**	**0.0916**	**0.0474**	**2.9000e-004**	**0.0135**	**4.7000e-004**	**0.0140**	**3.7100e-003**	**4.4000e-004**	**4.1600e-003**	**0.0000**	**27.5878**	**27.5878**	**1.3500e-003**	**0.0000**	**27.6215**

3.7 Pipeline Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.5700e-003	0.0731	0.0540	1.4000e-004		3.2500e-003	3.2500e-003		3.0000e-003	3.0000e-003	0.0000	11.9454	11.9454	3.8400e-003	0.0000	12.0414
Total	**7.5700e-003**	**0.0731**	**0.0540**	**1.4000e-004**		**3.2500e-003**	**3.2500e-003**		**3.0000e-003**	**3.0000e-003**	**0.0000**	**11.9454**	**11.9454**	**3.8400e-003**	**0.0000**	**12.0414**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-005	7.1000e-004	1.5000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1587	0.1587	1.0000e-005	0.0000	0.1589
Worker	5.0000e-005	4.0000e-005	3.9000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1054	0.1054	0.0000	0.0000	0.1055
Total	**7.0000e-005**	**7.5000e-004**	**5.4000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.2641**	**0.2641**	**1.0000e-005**	**0.0000**	**0.2644**

3.7 Pipeline Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.2800e-003	0.0418	0.0797	1.4000e-004		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004	0.0000	11.9454	11.9454	3.8400e-003	0.0000	12.0414
Total	**2.2800e-003**	**0.0418**	**0.0797**	**1.4000e-004**		**2.2000e-004**	**2.2000e-004**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**11.9454**	**11.9454**	**3.8400e-003**	**0.0000**	**12.0414**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-005	7.1000e-004	1.5000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1587	0.1587	1.0000e-005	0.0000	0.1589
Worker	5.0000e-005	4.0000e-005	3.9000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1054	0.1054	0.0000	0.0000	0.1055
Total	**7.0000e-005**	**7.5000e-004**	**5.4000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.2641**	**0.2641**	**1.0000e-005**	**0.0000**	**0.2644**

3.8 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0914	0.8652	0.6685	1.6500e-003		0.0376	0.0376		0.0349	0.0349	0.0000	143.7242	143.7242	0.0450	0.0000	144.8499
Total	**0.0914**	**0.8652**	**0.6685**	**1.6500e-003**		**0.0376**	**0.0376**		**0.0349**	**0.0349**	**0.0000**	**143.7242**	**143.7242**	**0.0450**	**0.0000**	**144.8499**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.6000e-004	0.0207	4.4600e-003	5.0000e-005	1.1600e-003	1.0000e-004	1.2500e-003	3.3000e-004	9.0000e-005	4.3000e-004	0.0000	4.6554	4.6554	2.7000e-004	0.0000	4.6621
Worker	2.4300e-003	1.8000e-003	0.0184	5.0000e-005	5.5700e-003	4.0000e-005	5.6000e-003	1.4800e-003	4.0000e-005	1.5200e-003	0.0000	4.9481	4.9481	1.3000e-004	0.0000	4.9513
Total	**3.0900e-003**	**0.0225**	**0.0229**	**1.0000e-004**	**6.7300e-003**	**1.4000e-004**	**6.8500e-003**	**1.8100e-003**	**1.3000e-004**	**1.9500e-003**	**0.0000**	**9.6035**	**9.6035**	**4.0000e-004**	**0.0000**	**9.6134**

3.8 Building Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0275	0.5539	0.9819	1.6500e-003		4.5900e-003	4.5900e-003		4.5900e-003	4.5900e-003	0.0000	143.7240	143.7240	0.0450	0.0000	144.8497
Total	**0.0275**	**0.5539**	**0.9819**	**1.6500e-003**		**4.5900e-003**	**4.5900e-003**		**4.5900e-003**	**4.5900e-003**	**0.0000**	**143.7240**	**143.7240**	**0.0450**	**0.0000**	**144.8497**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.6000e-004	0.0207	4.4600e-003	5.0000e-005	1.1600e-003	1.0000e-004	1.2500e-003	3.3000e-004	9.0000e-005	4.3000e-004	0.0000	4.6554	4.6554	2.7000e-004	0.0000	4.6621
Worker	2.4300e-003	1.8000e-003	0.0184	5.0000e-005	5.5700e-003	4.0000e-005	5.6000e-003	1.4800e-003	4.0000e-005	1.5200e-003	0.0000	4.9481	4.9481	1.3000e-004	0.0000	4.9513
Total	**3.0900e-003**	**0.0225**	**0.0229**	**1.0000e-004**	**6.7300e-003**	**1.4000e-004**	**6.8500e-003**	**1.8100e-003**	**1.3000e-004**	**1.9500e-003**	**0.0000**	**9.6035**	**9.6035**	**4.0000e-004**	**0.0000**	**9.6134**

3.9 Landscaping/Site Restoration - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1032	0.9972	0.7425	1.8700e-003		0.0433	0.0433		0.0399	0.0399	0.0000	163.5463	163.5463	0.0522	0.0000	164.8517
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1032**	**0.9972**	**0.7425**	**1.8700e-003**		**0.0433**	**0.0433**		**0.0399**	**0.0399**	**0.0000**	**163.5463**	**163.5463**	**0.0522**	**0.0000**	**164.8517**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.5000e-004	7.7600e-003	1.6700e-003	2.0000e-005	4.3000e-004	4.0000e-005	4.7000e-004	1.3000e-004	3.0000e-005	1.6000e-004	0.0000	1.7458	1.7458	1.0000e-004	0.0000	1.7483
Worker	9.1000e-004	6.7000e-004	6.9100e-003	2.0000e-005	2.0900e-003	1.0000e-005	2.1000e-003	5.6000e-004	1.0000e-005	5.7000e-004	0.0000	1.8555	1.8555	5.0000e-005	0.0000	1.8567
Total	**1.1600e-003**	**8.4300e-003**	**8.5800e-003**	**4.0000e-005**	**2.5200e-003**	**5.0000e-005**	**2.5700e-003**	**6.9000e-004**	**4.0000e-005**	**7.3000e-004**	**0.0000**	**3.6013**	**3.6013**	**1.5000e-004**	**0.0000**	**3.6050**

3.9 Landscaping/Site Restoration - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0302	0.5707	1.0849	1.8700e-003		2.9800e-003	2.9800e-003		2.9800e-003	2.9800e-003	0.0000	163.5461	163.5461	0.0522	0.0000	164.8515
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0302**	**0.5707**	**1.0849**	**1.8700e-003**		**2.9800e-003**	**2.9800e-003**		**2.9800e-003**	**2.9800e-003**	**0.0000**	**163.5461**	**163.5461**	**0.0522**	**0.0000**	**164.8515**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.5000e-004	7.7600e-003	1.6700e-003	2.0000e-005	4.3000e-004	4.0000e-005	4.7000e-004	1.3000e-004	3.0000e-005	1.6000e-004	0.0000	1.7458	1.7458	1.0000e-004	0.0000	1.7483
Worker	9.1000e-004	6.7000e-004	6.9100e-003	2.0000e-005	2.0900e-003	1.0000e-005	2.1000e-003	5.6000e-004	1.0000e-005	5.7000e-004	0.0000	1.8555	1.8555	5.0000e-005	0.0000	1.8567
Total	**1.1600e-003**	**8.4300e-003**	**8.5800e-003**	**4.0000e-005**	**2.5200e-003**	**5.0000e-005**	**2.5700e-003**	**6.9000e-004**	**4.0000e-005**	**7.3000e-004**	**0.0000**	**3.6013**	**3.6013**	**1.5000e-004**	**0.0000**	**3.6050**

3.10 Demobilization - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.0000e-005	0.0000	7.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0255	0.2299	0.1882	5.2000e-004		9.7900e-003	9.7900e-003		9.0000e-003	9.0000e-003	0.0000	46.0361	46.0361	0.0149	0.0000	46.4083
Total	**0.0255**	**0.2299**	**0.1882**	**5.2000e-004**	**7.0000e-005**	**9.7900e-003**	**9.8600e-003**	**1.0000e-005**	**9.0000e-003**	**9.0100e-003**	**0.0000**	**46.0361**	**46.0361**	**0.0149**	**0.0000**	**46.4083**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0000e-004	0.0137	2.9000e-003	4.0000e-005	8.4000e-004	3.0000e-005	8.7000e-004	2.4000e-004	3.0000e-005	2.7000e-004	0.0000	3.3532	3.3532	1.8000e-004	0.0000	3.3578
Worker	8.2000e-004	5.8000e-004	6.1000e-003	2.0000e-005	2.0200e-003	1.0000e-005	2.0400e-003	5.4000e-004	1.0000e-005	5.5000e-004	0.0000	1.7369	1.7369	4.0000e-005	0.0000	1.7379
Total	**1.2200e-003**	**0.0143**	**9.0000e-003**	**6.0000e-005**	**2.8600e-003**	**4.0000e-005**	**2.9100e-003**	**7.8000e-004**	**4.0000e-005**	**8.2000e-004**	**0.0000**	**5.0901**	**5.0901**	**2.2000e-004**	**0.0000**	**5.0958**

3.10 Demobilization - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.0000e-005	0.0000	7.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.1600e-003	0.1551	0.3002	5.2000e-004		8.6000e-004	8.6000e-004		8.6000e-004	8.6000e-004	0.0000	46.0360	46.0360	0.0149	0.0000	46.4083
Total	**9.1600e-003**	**0.1551**	**0.3002**	**5.2000e-004**	**7.0000e-005**	**8.6000e-004**	**9.3000e-004**	**1.0000e-005**	**8.6000e-004**	**8.7000e-004**	**0.0000**	**46.0360**	**46.0360**	**0.0149**	**0.0000**	**46.4083**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0000e-004	0.0137	2.9000e-003	4.0000e-005	8.4000e-004	3.0000e-005	8.7000e-004	2.4000e-004	3.0000e-005	2.7000e-004	0.0000	3.3532	3.3532	1.8000e-004	0.0000	3.3578
Worker	8.2000e-004	5.8000e-004	6.1000e-003	2.0000e-005	2.0200e-003	1.0000e-005	2.0400e-003	5.4000e-004	1.0000e-005	5.5000e-004	0.0000	1.7369	1.7369	4.0000e-005	0.0000	1.7379
Total	**1.2200e-003**	**0.0143**	**9.0000e-003**	**6.0000e-005**	**2.8600e-003**	**4.0000e-005**	**2.9100e-003**	**7.8000e-004**	**4.0000e-005**	**8.2000e-004**	**0.0000**	**5.0901**	**5.0901**	**2.2000e-004**	**0.0000**	**5.0958**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.5000e-003	0.0170	0.0298	1.1000e-004	8.6200e-003	1.1000e-004	8.7300e-003	2.3200e-003	1.0000e-004	2.4200e-003	0.0000	10.3082	10.3082	4.2000e-004	0.0000	10.3188
Unmitigated	2.5000e-003	0.0170	0.0298	1.1000e-004	8.6200e-003	1.1000e-004	8.7300e-003	2.3200e-003	1.0000e-004	2.4200e-003	0.0000	10.3082	10.3082	4.2000e-004	0.0000	10.3188

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	10.46	1.98	1.02	23,054	23,054
Total	10.46	1.98	1.02	23,054	23,054

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.559358	0.040058	0.190549	0.109335	0.016678	0.005213	0.023344	0.044042	0.002152	0.002669	0.005545	0.000316	0.000739

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3.6742	3.6742	1.7000e-004	3.0000e-005	3.6886
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3.6742	3.6742	1.7000e-004	3.0000e-005	3.6886
NaturalGas Mitigated	2.1000e-004	1.9500e-003	1.6400e-003	1.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	2.1196	2.1196	4.0000e-005	4.0000e-005	2.1322
NaturalGas Unmitigated	2.1000e-004	1.9500e-003	1.6400e-003	1.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	2.1196	2.1196	4.0000e-005	4.0000e-005	2.1322

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	39720	2.1000e-004	1.9500e-003	1.6400e-003	1.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	2.1196	2.1196	4.0000e-005	4.0000e-005	2.1322
Total		**2.1000e-004**	**1.9500e-003**	**1.6400e-003**	**1.0000e-005**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**	**0.0000**	**2.1196**	**2.1196**	**4.0000e-005**	**4.0000e-005**	**2.1322**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	39720	2.1000e-004	1.9500e-003	1.6400e-003	1.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	2.1196	2.1196	4.0000e-005	4.0000e-005	2.1322
Total		**2.1000e-004**	**1.9500e-003**	**1.6400e-003**	**1.0000e-005**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**	**0.0000**	**2.1196**	**2.1196**	**4.0000e-005**	**4.0000e-005**	**2.1322**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	12630	3.6742	1.7000e-004	3.0000e-005	3.6886
Total		**3.6742**	**1.7000e-004**	**3.0000e-005**	**3.6886**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	12630	3.6742	1.7000e-004	3.0000e-005	3.6886
Total		**3.6742**	**1.7000e-004**	**3.0000e-005**	**3.6886**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	6.6400e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-005	3.0000e-005	0.0000	0.0000	3.0000e-005
Unmitigated	6.6400e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-005	3.0000e-005	0.0000	0.0000	3.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	7.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.8600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-005	3.0000e-005	0.0000	0.0000	3.0000e-005
Total	**6.6400e-003**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	7.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.8600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-005	3.0000e-005	0.0000	0.0000	3.0000e-005
Total	**6.6400e-003**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.6561	0.0113	2.7000e-004	1.0203
Unmitigated	0.6561	0.0113	2.7000e-004	1.0203

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0.346875 / 0	0.6561	0.0113	2.7000e-004	1.0203
Total		**0.6561**	**0.0113**	**2.7000e-004**	**1.0203**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0.346875 / 0	0.6561	0.0113	2.7000e-004	1.0203
Total		**0.6561**	**0.0113**	**2.7000e-004**	**1.0203**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.3776	0.0223	0.0000	0.9354
Unmitigated	0.3776	0.0223	0.0000	0.9354

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	1.86	0.3776	0.0223	0.0000	0.9354
Total		**0.3776**	**0.0223**	**0.0000**	**0.9354**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	1.86	0.3776	0.0223	0.0000	0.9354
Total		**0.3776**	**0.0223**	**0.0000**	**0.9354**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Site A4

CONSTRUCTION GHG EMISSIONS

CO2e (tons)	1755.5143	
Life of project (yrs)	40	
Ave. annual emissions	43.8878575	metric tons/year

OPERATIONAL GHG EMISSIONS

No. of pumps =	3			
Pump size =	350	hp =	261.0	kW
Hours used per day =	12	hours		
Electricity requirement of the Project			3429474.3	kW-hr/year

GHGs from Electricity Consumption			
GHG	**Emission Factor (lb/kWh)**	**Electricity Consumption (kW-hr/year)**	**CO_2e* (metric tons)**
CO_2	0.45700	3,429,474	710.91
CH_4	0.00003112	3,429,474	1.02
N_20	0.0000567	3,429,474	27.34
		Total =	739

NOTES:

1. The emission factor for CO_2 was obtained from PG&E, 2015. Emission factors for CH4 and N2O are USEPA's eGRID2012 Annual Emissions Output Rates
2. Proposed electricity consumption estimate for project based on data provided by SFPUC based on 7,200 AFY average annual recapture volume.
3. *Global Warming Potential for CH_4 = 21; GWP for N_2O = 310 (CCAR, 2009).

SOURCES:

1. California Climate Action Registry (CCAR), 2009. General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.1, January 2009. Tables C.3 and C.6.
2. Pacific Gas and Electric Company (PG&E), 2015. Greenhouse Gas Emission Factors - Guidance for PG&E Customers, November 2015
3. USEPA, eGRID2012 Annual Emission Output Rates. Available at http://www.epa.gov/sites/production/files/2015-10/documents/egrid2012_ghgoutputrates_0.pdf

TOTAL CO2e emissions (annualized construction + operation) = 783 metric tons per year

CONSTRUCTION EMISSIONS - CAP

Total number of construction workdays = 523

Tons per year				Pounds per day			
ROG	**NOx**	**Exhaust PM-10**	**Exhaust PM-2.5**	**ROG**	**NOx**	**PM-10**	**PM-2.5**
1.03	10.17	0.42	0.39	3.93	38.90	1.62	1.51

Site A4 - Pumping Plant and Pipeline Construction

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	1.50	1000sqft	0.10	1,500.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	4			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Site A4 - Pumping Plant and Pipeline Construction - Alameda County, Annual

Project Characteristics -

Land Use - Site A4 area

Construction Phase - Provided by EBMUD

Off-road Equipment - Equipment list provided by EBMUD

Off-road Equipment - Equipment list provided by EBMUD

Off-road Equipment - Equipment list provided by EBMUD

Off-road Equipment - Equipment list provided by EBMUD

Off-road Equipment - Equipment list provided by EBMUD

Off-road Equipment - Equipment list provided by EBMUD

Off-road Equipment - Equipment list provided by EBMUD

Off-road Equipment - Equipment list provided by EBMUD

Off-road Equipment - Equipment list provided by EBMUD

Grading - Provided by EBMUD

Trips and VMT - Provided by EBMUD

Construction Off-road Equipment Mitigation - Tier 4 equipment used for BACT

Table Name	Column Name	Default Value	New Value
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tblConstructionPhase	PhaseStartDate	4/1/2019	6/1/2020

Site A4 - Pumping Plant and Pipeline Construction - Alameda County, Annual

tblConstructionPhase	PhaseStartDate	4/1/2019	7/1/2019
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tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs

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2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.4254	4.3598	2.8165	7.9800e-003	0.0182	0.1786	0.1968	5.0200e-003	0.1668	0.1718	0.0000	715.6733	715.6733	0.1964	0.0000	720.5829
2020	0.5745	5.5677	4.1124	0.0111	0.0262	0.2352	0.2615	7.1500e-003	0.2187	0.2258	0.0000	976.3232	976.3232	0.2842	0.0000	983.4273
2021	0.0267	0.2442	0.1973	5.8000e-004	2.9200e-003	9.8300e-003	0.0128	7.9000e-004	9.0400e-003	9.8300e-003	0.0000	51.1262	51.1262	0.0151	0.0000	51.5041
Maximum	**0.5745**	**5.5677**	**4.1124**	**0.0111**	**0.0262**	**0.2352**	**0.2615**	**7.1500e-003**	**0.2187**	**0.2258**	**0.0000**	**976.3232**	**976.3232**	**0.2842**	**0.0000**	**983.4273**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.1374	2.3629	4.2908	7.9800e-003	0.0182	0.0132	0.0314	5.0200e-003	0.0131	0.0181	0.0000	715.6725	715.6725	0.1964	0.0000	720.5821
2020	0.1905	3.3756	6.2129	0.0111	0.0262	0.0197	0.0459	7.1500e-003	0.0197	0.0268	0.0000	976.3221	976.3221	0.2842	0.0000	983.4262
2021	0.0104	0.1694	0.3092	5.8000e-004	2.9200e-003	9.0000e-004	3.8200e-003	7.9000e-004	9.0000e-004	1.6800e-003	0.0000	51.1262	51.1262	0.0151	0.0000	51.5040
Maximum	**0.1905**	**3.3756**	**6.2129**	**0.0111**	**0.0262**	**0.0197**	**0.0459**	**7.1500e-003**	**0.0197**	**0.0268**	**0.0000**	**976.3221**	**976.3221**	**0.2842**	**0.0000**	**983.4262**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**67.06**	**41.92**	**-51.74**	**0.00**	**0.00**	**92.03**	**82.78**	**0.00**	**91.47**	**88.56**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
3	**10-1-2019**	**12-31-2019**	1.5170	0.8340
4	**1-1-2020**	**3-31-2020**	1.3595	0.8194
5	**4-1-2020**	**6-30-2020**	1.5975	0.9660
6	**7-1-2020**	**9-30-2020**	2.1066	1.2803
		Highest	2.1066	1.2803

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	6.6400e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-005	3.0000e-005	0.0000	0.0000	3.0000e-005
Energy	2.1000e-004	1.9500e-003	1.6400e-003	1.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	5.7938	5.7938	2.1000e-004	7.0000e-005	5.8208
Mobile	2.5000e-003	0.0170	0.0298	1.1000e-004	8.6200e-003	1.1000e-004	8.7300e-003	2.3200e-003	1.0000e-004	2.4200e-003	0.0000	10.3082	10.3082	4.2000e-004	0.0000	10.3188
Waste						0.0000	0.0000		0.0000	0.0000	0.3776	0.0000	0.3776	0.0223	0.0000	0.9354
Water						0.0000	0.0000		0.0000	0.0000	0.1101	0.5460	0.6561	0.0113	2.7000e-004	1.0203
Total	**9.3500e-003**	**0.0190**	**0.0315**	**1.2000e-004**	**8.6200e-003**	**2.6000e-004**	**8.8800e-003**	**2.3200e-003**	**2.5000e-004**	**2.5700e-003**	**0.4876**	**16.6481**	**17.1357**	**0.0343**	**3.4000e-004**	**18.0954**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	6.6400e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-005	3.0000e-005	0.0000	0.0000	3.0000e-005
Energy	2.1000e-004	1.9500e-003	1.6400e-003	1.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	5.7938	5.7938	2.1000e-004	7.0000e-005	5.8208
Mobile	2.5000e-003	0.0170	0.0298	1.1000e-004	8.6200e-003	1.1000e-004	8.7300e-003	2.3200e-003	1.0000e-004	2.4200e-003	0.0000	10.3082	10.3082	4.2000e-004	0.0000	10.3188
Waste						0.0000	0.0000		0.0000	0.0000	0.3776	0.0000	0.3776	0.0223	0.0000	0.9354
Water						0.0000	0.0000		0.0000	0.0000	0.1101	0.5460	0.6561	0.0113	2.7000e-004	1.0203
Total	**9.3500e-003**	**0.0190**	**0.0315**	**1.2000e-004**	**8.6200e-003**	**2.6000e-004**	**8.8800e-003**	**2.3200e-003**	**2.5000e-004**	**2.5700e-003**	**0.4876**	**16.6481**	**17.1357**	**0.0343**	**3.4000e-004**	**18.0954**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Site A4 - Pumping Plant and Pipeline Construction - Alameda County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	4/1/2019	3/31/2019	5	0	
2	Building Construction	Building Construction	6/1/2020	9/30/2020	5	88	
3	Demolition	Demolition	4/1/2019	3/31/2019	5	0	
4	Excavation/Site Work	Grading	7/1/2019	9/30/2019	5	66	
5	Landscaping/Site Restoration	Paving	10/1/2020	12/31/2020	5	66	
6	Mobilization	Site Preparation	4/1/2019	6/30/2019	5	65	
7	Building Construction (concrete work)	Building Construction	10/1/2019	5/31/2020	5	174	
8	Demobilization	Site Preparation	1/1/2021	3/31/2021	5	64	
9	Pipeline Construction	Trenching	5/1/2020	7/31/2020	5	66	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 2,250; Non-Residential Outdoor: 750; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	0	0.00	78	0.48
Landscaping/Site Restoration	Cement and Mortar Mixers	0	0.00	9	0.56
Demolition	Concrete/Industrial Saws	0	0.00	81	0.73
Excavation/Site Work	Concrete/Industrial Saws	2	8.00	81	0.73
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Mobilization	Graders	0	0.00	187	0.41

Landscaping/Site Restoration	Pavers	2	7.00	130	0.42
Landscaping/Site Restoration	Rollers	2	7.00	80	0.38
Demolition	Rubber Tired Dozers	0	0.00	247	0.40
Excavation/Site Work	Rubber Tired Dozers	0	0.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Excavation/Site Work	Tractors/Loaders/Backhoes	4	6.00	97	0.37
Landscaping/Site Restoration	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Mobilization	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction (concrete work)	Cranes	0	0.00	231	0.29
Building Construction (concrete work)	Forklifts	1	6.00	89	0.20
Demobilization	Graders	0	0.00	187	0.41
Building Construction (concrete work)	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Demobilization	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Bore/Drill Rigs	1	8.00	221	0.50
Building Construction	Excavators	1	8.00	158	0.38
Building Construction	Welders	1	8.00	46	0.45
Building Construction	Off-Highway Trucks	1	8.00	402	0.38
Excavation/Site Work	Cranes	1	8.00	231	0.29
Excavation/Site Work	Excavators	1	8.00	158	0.38
Excavation/Site Work	Off-Highway Trucks	6	8.00	402	0.38
Excavation/Site Work	Bore/Drill Rigs	1	8.00	221	0.50
Landscaping/Site Restoration	Plate Compactors	3	8.00	8	0.43
Landscaping/Site Restoration	Off-Highway Trucks	3	8.00	402	0.38
Mobilization	Off-Highway Trucks	2	8.00	402	0.38
Building Construction (concrete work)	Bore/Drill Rigs	2	8.00	221	0.50
Building Construction (concrete work)	Off-Highway Trucks	3	8.00	402	0.38

Building Construction (concrete work)	Pumps	2	8.00	84	0.74
Demobilization	Off-Highway Trucks	1	8.00	402	0.38
Pipeline Construction	Off-Highway Trucks	5	8.00	402	0.38
Pipeline Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Pipeline Construction	Forklifts	2	8.00	89	0.20
Pipeline Construction	Plate Compactors	2	8.00	8	0.43
Pipeline Construction	Pavers	2	8.00	130	0.42
Pipeline Construction	Rollers	2	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	16.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Excavation/Site Work	15	10.00	20.00	115.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Landscaping/Site Restoration	11	8.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Mobilization	3	4.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction (concrete work)	9	20.00	14.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demobilization	2	8.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Pipeline Construction	15	10.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Clean Paved Roads

3.2 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Architectural Coating - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0914	0.8652	0.6685	1.6500e-003		0.0376	0.0376		0.0349	0.0349	0.0000	143.7242	143.7242	0.0450	0.0000	144.8499
Total	**0.0914**	**0.8652**	**0.6685**	**1.6500e-003**		**0.0376**	**0.0376**		**0.0349**	**0.0349**	**0.0000**	**143.7242**	**143.7242**	**0.0450**	**0.0000**	**144.8499**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.6000e-004	0.0207	4.4600e-003	5.0000e-005	1.1600e-003	1.0000e-004	1.2500e-003	3.3000e-004	9.0000e-005	4.3000e-004	0.0000	4.6554	4.6554	2.7000e-004	0.0000	4.6621
Worker	2.4300e-003	1.8000e-003	0.0184	5.0000e-005	5.5700e-003	4.0000e-005	5.6000e-003	1.4800e-003	4.0000e-005	1.5200e-003	0.0000	4.9481	4.9481	1.3000e-004	0.0000	4.9513
Total	**3.0900e-003**	**0.0225**	**0.0229**	**1.0000e-004**	**6.7300e-003**	**1.4000e-004**	**6.8500e-003**	**1.8100e-003**	**1.3000e-004**	**1.9500e-003**	**0.0000**	**9.6035**	**9.6035**	**4.0000e-004**	**0.0000**	**9.6134**

3.3 Building Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0275	0.5539	0.9819	1.6500e-003		4.5900e-003	4.5900e-003		4.5900e-003	4.5900e-003	0.0000	143.7240	143.7240	0.0450	0.0000	144.8497
Total	**0.0275**	**0.5539**	**0.9819**	**1.6500e-003**		**4.5900e-003**	**4.5900e-003**		**4.5900e-003**	**4.5900e-003**	**0.0000**	**143.7240**	**143.7240**	**0.0450**	**0.0000**	**144.8497**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.6000e-004	0.0207	4.4600e-003	5.0000e-005	1.1600e-003	1.0000e-004	1.2500e-003	3.3000e-004	9.0000e-005	4.3000e-004	0.0000	4.6554	4.6554	2.7000e-004	0.0000	4.6621
Worker	2.4300e-003	1.8000e-003	0.0184	5.0000e-005	5.5700e-003	4.0000e-005	5.6000e-003	1.4800e-003	4.0000e-005	1.5200e-003	0.0000	4.9481	4.9481	1.3000e-004	0.0000	4.9513
Total	**3.0900e-003**	**0.0225**	**0.0229**	**1.0000e-004**	**6.7300e-003**	**1.4000e-004**	**6.8500e-003**	**1.8100e-003**	**1.3000e-004**	**1.9500e-003**	**0.0000**	**9.6035**	**9.6035**	**4.0000e-004**	**0.0000**	**9.6134**

3.4 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Demolition - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Excavation/Site Work - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.1000e-004	0.0000	1.1000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2292	2.3072	1.5196	4.0200e-003		0.0987	0.0987		0.0920	0.0920	0.0000	359.4435	359.4435	0.1050	0.0000	362.0683
Total	**0.2292**	**2.3072**	**1.5196**	**4.0200e-003**	**1.1000e-004**	**0.0987**	**0.0988**	**1.0000e-005**	**0.0920**	**0.0921**	**0.0000**	**359.4435**	**359.4435**	**0.1050**	**0.0000**	**362.0683**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.2000e-004	0.0179	3.0500e-003	5.0000e-005	9.7000e-004	6.0000e-005	1.0400e-003	2.7000e-004	6.0000e-005	3.3000e-004	0.0000	4.4495	4.4495	2.3000e-004	0.0000	4.4552
Vendor	2.9700e-003	0.0844	0.0187	1.8000e-004	4.3300e-003	5.4000e-004	4.8700e-003	1.2500e-003	5.2000e-004	1.7700e-003	0.0000	17.5808	17.5808	1.0800e-003	0.0000	17.6078
Worker	1.2500e-003	9.5000e-004	9.6200e-003	3.0000e-005	2.6100e-003	2.0000e-005	2.6300e-003	6.9000e-004	2.0000e-005	7.1000e-004	0.0000	2.3935	2.3935	7.0000e-005	0.0000	2.3952
Total	**4.7400e-003**	**0.1032**	**0.0313**	**2.6000e-004**	**7.9100e-003**	**6.2000e-004**	**8.5400e-003**	**2.2100e-003**	**6.0000e-004**	**2.8100e-003**	**0.0000**	**24.4237**	**24.4237**	**1.3800e-003**	**0.0000**	**24.4582**

3.5 Excavation/Site Work - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.1000e-004	0.0000	1.1000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0677	1.1819	2.2792	4.0200e-003		6.4500e-003	6.4500e-003		6.4500e-003	6.4500e-003	0.0000	359.4430	359.4430	0.1050	0.0000	362.0679
Total	**0.0677**	**1.1819**	**2.2792**	**4.0200e-003**	**1.1000e-004**	**6.4500e-003**	**6.5600e-003**	**1.0000e-005**	**6.4500e-003**	**6.4600e-003**	**0.0000**	**359.4430**	**359.4430**	**0.1050**	**0.0000**	**362.0679**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.2000e-004	0.0179	3.0500e-003	5.0000e-005	9.7000e-004	6.0000e-005	1.0400e-003	2.7000e-004	6.0000e-005	3.3000e-004	0.0000	4.4495	4.4495	2.3000e-004	0.0000	4.4552
Vendor	2.9700e-003	0.0844	0.0187	1.8000e-004	4.3300e-003	5.4000e-004	4.8700e-003	1.2500e-003	5.2000e-004	1.7700e-003	0.0000	17.5808	17.5808	1.0800e-003	0.0000	17.6078
Worker	1.2500e-003	9.5000e-004	9.6200e-003	3.0000e-005	2.6100e-003	2.0000e-005	2.6300e-003	6.9000e-004	2.0000e-005	7.1000e-004	0.0000	2.3935	2.3935	7.0000e-005	0.0000	2.3952
Total	**4.7400e-003**	**0.1032**	**0.0313**	**2.6000e-004**	**7.9100e-003**	**6.2000e-004**	**8.5400e-003**	**2.2100e-003**	**6.0000e-004**	**2.8100e-003**	**0.0000**	**24.4237**	**24.4237**	**1.3800e-003**	**0.0000**	**24.4582**

3.6 Landscaping/Site Restoration - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1032	0.9972	0.7425	1.8700e-003		0.0433	0.0433		0.0399	0.0399	0.0000	163.5463	163.5463	0.0522	0.0000	164.8517
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1032**	**0.9972**	**0.7425**	**1.8700e-003**		**0.0433**	**0.0433**		**0.0399**	**0.0399**	**0.0000**	**163.5463**	**163.5463**	**0.0522**	**0.0000**	**164.8517**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.5000e-004	7.7600e-003	1.6700e-003	2.0000e-005	4.3000e-004	4.0000e-005	4.7000e-004	1.3000e-004	3.0000e-005	1.6000e-004	0.0000	1.7458	1.7458	1.0000e-004	0.0000	1.7483
Worker	9.1000e-004	6.7000e-004	6.9100e-003	2.0000e-005	2.0900e-003	1.0000e-005	2.1000e-003	5.6000e-004	1.0000e-005	5.7000e-004	0.0000	1.8555	1.8555	5.0000e-005	0.0000	1.8567
Total	**1.1600e-003**	**8.4300e-003**	**8.5800e-003**	**4.0000e-005**	**2.5200e-003**	**5.0000e-005**	**2.5700e-003**	**6.9000e-004**	**4.0000e-005**	**7.3000e-004**	**0.0000**	**3.6013**	**3.6013**	**1.5000e-004**	**0.0000**	**3.6050**

3.6 Landscaping/Site Restoration - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0302	0.5707	1.0849	1.8700e-003		2.9800e-003	2.9800e-003		2.9800e-003	2.9800e-003	0.0000	163.5461	163.5461	0.0522	0.0000	164.8515
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0302**	**0.5707**	**1.0849**	**1.8700e-003**		**2.9800e-003**	**2.9800e-003**		**2.9800e-003**	**2.9800e-003**	**0.0000**	**163.5461**	**163.5461**	**0.0522**	**0.0000**	**164.8515**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.5000e-004	7.7600e-003	1.6700e-003	2.0000e-005	4.3000e-004	4.0000e-005	4.7000e-004	1.3000e-004	3.0000e-005	1.6000e-004	0.0000	1.7458	1.7458	1.0000e-004	0.0000	1.7483
Worker	9.1000e-004	6.7000e-004	6.9100e-003	2.0000e-005	2.0900e-003	1.0000e-005	2.1000e-003	5.6000e-004	1.0000e-005	5.7000e-004	0.0000	1.8555	1.8555	5.0000e-005	0.0000	1.8567
Total	**1.1600e-003**	**8.4300e-003**	**8.5800e-003**	**4.0000e-005**	**2.5200e-003**	**5.0000e-005**	**2.5700e-003**	**6.9000e-004**	**4.0000e-005**	**7.3000e-004**	**0.0000**	**3.6013**	**3.6013**	**1.5000e-004**	**0.0000**	**3.6050**

3.7 Mobilization - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0539	0.5456	0.3359	9.6000e-004		0.0222	0.0222		0.0204	0.0204	0.0000	86.5660	86.5660	0.0274	0.0000	87.2507
Total	**0.0539**	**0.5456**	**0.3359**	**9.6000e-004**	**5.0000e-005**	**0.0222**	**0.0222**	**1.0000e-005**	**0.0204**	**0.0204**	**0.0000**	**86.5660**	**86.5660**	**0.0274**	**0.0000**	**87.2507**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.9000e-004	0.0166	3.6800e-003	4.0000e-005	8.5000e-004	1.1000e-004	9.6000e-004	2.5000e-004	1.0000e-004	3.5000e-004	0.0000	3.4629	3.4629	2.1000e-004	0.0000	3.4682
Worker	4.9000e-004	3.8000e-004	3.7900e-003	1.0000e-005	1.0300e-003	1.0000e-005	1.0400e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.9429	0.9429	3.0000e-005	0.0000	0.9436
Total	**1.0800e-003**	**0.0170**	**7.4700e-003**	**5.0000e-005**	**1.8800e-003**	**1.2000e-004**	**2.0000e-003**	**5.2000e-004**	**1.1000e-004**	**6.3000e-004**	**0.0000**	**4.4058**	**4.4058**	**2.4000e-004**	**0.0000**	**4.4118**

3.7 Mobilization - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0163	0.2711	0.5337	9.6000e-004		1.5700e-003	1.5700e-003		1.5700e-003	1.5700e-003	0.0000	86.5659	86.5659	0.0274	0.0000	87.2506
Total	**0.0163**	**0.2711**	**0.5337**	**9.6000e-004**	**5.0000e-005**	**1.5700e-003**	**1.6200e-003**	**1.0000e-005**	**1.5700e-003**	**1.5800e-003**	**0.0000**	**86.5659**	**86.5659**	**0.0274**	**0.0000**	**87.2506**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.9000e-004	0.0166	3.6800e-003	4.0000e-005	8.5000e-004	1.1000e-004	9.6000e-004	2.5000e-004	1.0000e-004	3.5000e-004	0.0000	3.4629	3.4629	2.1000e-004	0.0000	3.4682
Worker	4.9000e-004	3.8000e-004	3.7900e-003	1.0000e-005	1.0300e-003	1.0000e-005	1.0400e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.9429	0.9429	3.0000e-005	0.0000	0.9436
Total	**1.0800e-003**	**0.0170**	**7.4700e-003**	**5.0000e-005**	**1.8800e-003**	**1.2000e-004**	**2.0000e-003**	**5.2000e-004**	**1.1000e-004**	**6.3000e-004**	**0.0000**	**4.4058**	**4.4058**	**2.4000e-004**	**0.0000**	**4.4118**

3.8 Building Construction (concrete work) - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1319	1.3257	0.8899	2.5100e-003		0.0566	0.0566		0.0533	0.0533	0.0000	223.7410	223.7410	0.0615	0.0000	225.2780
Total	**0.1319**	**1.3257**	**0.8899**	**2.5100e-003**		**0.0566**	**0.0566**		**0.0533**	**0.0533**	**0.0000**	**223.7410**	**223.7410**	**0.0615**	**0.0000**	**225.2780**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0800e-003	0.0591	0.0131	1.3000e-004	3.0300e-003	3.8000e-004	3.4100e-003	8.8000e-004	3.6000e-004	1.2400e-003	0.0000	12.3065	12.3065	7.6000e-004	0.0000	12.3255
Worker	2.5000e-003	1.9100e-003	0.0193	5.0000e-005	5.2200e-003	4.0000e-005	5.2600e-003	1.3900e-003	3.0000e-005	1.4200e-003	0.0000	4.7869	4.7869	1.4000e-004	0.0000	4.7903
Total	**4.5800e-003**	**0.0610**	**0.0323**	**1.8000e-004**	**8.2500e-003**	**4.2000e-004**	**8.6700e-003**	**2.2700e-003**	**3.9000e-004**	**2.6600e-003**	**0.0000**	**17.0935**	**17.0935**	**9.0000e-004**	**0.0000**	**17.1158**

3.8 Building Construction (concrete work) - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0429	0.7287	1.4068	2.5100e-003		3.9900e-003	3.9900e-003		3.9900e-003	3.9900e-003	0.0000	223.7407	223.7407	0.0615	0.0000	225.2778
Total	**0.0429**	**0.7287**	**1.4068**	**2.5100e-003**		**3.9900e-003**	**3.9900e-003**		**3.9900e-003**	**3.9900e-003**	**0.0000**	**223.7407**	**223.7407**	**0.0615**	**0.0000**	**225.2778**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0800e-003	0.0591	0.0131	1.3000e-004	3.0300e-003	3.8000e-004	3.4100e-003	8.8000e-004	3.6000e-004	1.2400e-003	0.0000	12.3065	12.3065	7.6000e-004	0.0000	12.3255
Worker	2.5000e-003	1.9100e-003	0.0193	5.0000e-005	5.2200e-003	4.0000e-005	5.2600e-003	1.3900e-003	3.0000e-005	1.4200e-003	0.0000	4.7869	4.7869	1.4000e-004	0.0000	4.7903
Total	**4.5800e-003**	**0.0610**	**0.0323**	**1.8000e-004**	**8.2500e-003**	**4.2000e-004**	**8.6700e-003**	**2.2700e-003**	**3.9000e-004**	**2.6600e-003**	**0.0000**	**17.0935**	**17.0935**	**9.0000e-004**	**0.0000**	**17.1158**

3.8 Building Construction (concrete work) - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2009	1.9591	1.4234	4.1100e-003		0.0820	0.0820		0.0772	0.0772	0.0000	359.6510	359.6510	0.1002	0.0000	362.1567
Total	**0.2009**	**1.9591**	**1.4234**	**4.1100e-003**		**0.0820**	**0.0820**		**0.0772**	**0.0772**	**0.0000**	**359.6510**	**359.6510**	**0.1002**	**0.0000**	**362.1567**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.8400e-003	0.0889	0.0192	2.1000e-004	4.9600e-003	4.1000e-004	5.3800e-003	1.4400e-003	3.9000e-004	1.8300e-003	0.0000	19.9970	19.9970	1.1500e-003	0.0000	20.0257
Worker	3.7300e-003	2.7600e-003	0.0283	8.0000e-005	8.5400e-003	6.0000e-005	8.6000e-003	2.2700e-003	5.0000e-005	2.3300e-003	0.0000	7.5908	7.5908	2.0000e-004	0.0000	7.5957
Total	**6.5700e-003**	**0.0916**	**0.0474**	**2.9000e-004**	**0.0135**	**4.7000e-004**	**0.0140**	**3.7100e-003**	**4.4000e-004**	**4.1600e-003**	**0.0000**	**27.5878**	**27.5878**	**1.3500e-003**	**0.0000**	**27.6215**

3.8 Building Construction (concrete work) - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0702	1.1925	2.3021	4.1100e-003		6.5200e-003	6.5200e-003		6.5200e-003	6.5200e-003	0.0000	359.6506	359.6506	0.1002	0.0000	362.1563
Total	**0.0702**	**1.1925**	**2.3021**	**4.1100e-003**		**6.5200e-003**	**6.5200e-003**		**6.5200e-003**	**6.5200e-003**	**0.0000**	**359.6506**	**359.6506**	**0.1002**	**0.0000**	**362.1563**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.8400e-003	0.0889	0.0192	2.1000e-004	4.9600e-003	4.1000e-004	5.3800e-003	1.4400e-003	3.9000e-004	1.8300e-003	0.0000	19.9970	19.9970	1.1500e-003	0.0000	20.0257
Worker	3.7300e-003	2.7600e-003	0.0283	8.0000e-005	8.5400e-003	6.0000e-005	8.6000e-003	2.2700e-003	5.0000e-005	2.3300e-003	0.0000	7.5908	7.5908	2.0000e-004	0.0000	7.5957
Total	**6.5700e-003**	**0.0916**	**0.0474**	**2.9000e-004**	**0.0135**	**4.7000e-004**	**0.0140**	**3.7100e-003**	**4.4000e-004**	**4.1600e-003**	**0.0000**	**27.5878**	**27.5878**	**1.3500e-003**	**0.0000**	**27.6215**

3.9 Demobilization - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0255	0.2299	0.1882	5.2000e-004		9.7900e-003	9.7900e-003		9.0000e-003	9.0000e-003	0.0000	46.0361	46.0361	0.0149	0.0000	46.4083
Total	**0.0255**	**0.2299**	**0.1882**	**5.2000e-004**	**5.0000e-005**	**9.7900e-003**	**9.8400e-003**	**1.0000e-005**	**9.0000e-003**	**9.0100e-003**	**0.0000**	**46.0361**	**46.0361**	**0.0149**	**0.0000**	**46.4083**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0000e-004	0.0137	2.9000e-003	4.0000e-005	8.4000e-004	3.0000e-005	8.7000e-004	2.4000e-004	3.0000e-005	2.7000e-004	0.0000	3.3532	3.3532	1.8000e-004	0.0000	3.3578
Worker	8.2000e-004	5.8000e-004	6.1000e-003	2.0000e-005	2.0200e-003	1.0000e-005	2.0400e-003	5.4000e-004	1.0000e-005	5.5000e-004	0.0000	1.7369	1.7369	4.0000e-005	0.0000	1.7379
Total	**1.2200e-003**	**0.0143**	**9.0000e-003**	**6.0000e-005**	**2.8600e-003**	**4.0000e-005**	**2.9100e-003**	**7.8000e-004**	**4.0000e-005**	**8.2000e-004**	**0.0000**	**5.0901**	**5.0901**	**2.2000e-004**	**0.0000**	**5.0958**

3.9 Demobilization - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.1600e-003	0.1551	0.3002	5.2000e-004		8.6000e-004	8.6000e-004		8.6000e-004	8.6000e-004	0.0000	46.0360	46.0360	0.0149	0.0000	46.4083
Total	**9.1600e-003**	**0.1551**	**0.3002**	**5.2000e-004**	**5.0000e-005**	**8.6000e-004**	**9.1000e-004**	**1.0000e-005**	**8.6000e-004**	**8.7000e-004**	**0.0000**	**46.0360**	**46.0360**	**0.0149**	**0.0000**	**46.4083**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0000e-004	0.0137	2.9000e-003	4.0000e-005	8.4000e-004	3.0000e-005	8.7000e-004	2.4000e-004	3.0000e-005	2.7000e-004	0.0000	3.3532	3.3532	1.8000e-004	0.0000	3.3578
Worker	8.2000e-004	5.8000e-004	6.1000e-003	2.0000e-005	2.0200e-003	1.0000e-005	2.0400e-003	5.4000e-004	1.0000e-005	5.5000e-004	0.0000	1.7369	1.7369	4.0000e-005	0.0000	1.7379
Total	**1.2200e-003**	**0.0143**	**9.0000e-003**	**6.0000e-005**	**2.8600e-003**	**4.0000e-005**	**2.9100e-003**	**7.8000e-004**	**4.0000e-005**	**8.2000e-004**	**0.0000**	**5.0901**	**5.0901**	**2.2000e-004**	**0.0000**	**5.0958**

3.10 Pipeline Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1665	1.6073	1.1872	3.0000e-003		0.0716	0.0716		0.0659	0.0659	0.0000	262.7982	262.7982	0.0845	0.0000	264.9117
Total	**0.1665**	**1.6073**	**1.1872**	**3.0000e-003**		**0.0716**	**0.0716**		**0.0659**	**0.0659**	**0.0000**	**262.7982**	**262.7982**	**0.0845**	**0.0000**	**264.9117**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.0000e-004	0.0155	3.3400e-003	4.0000e-005	8.7000e-004	7.0000e-005	9.4000e-004	2.5000e-004	7.0000e-005	3.2000e-004	0.0000	3.4915	3.4915	2.0000e-004	0.0000	3.4966
Worker	1.1400e-003	8.4000e-004	8.6300e-003	3.0000e-005	2.6100e-003	2.0000e-005	2.6300e-003	6.9000e-004	2.0000e-005	7.1000e-004	0.0000	2.3194	2.3194	6.0000e-005	0.0000	2.3209
Total	**1.6400e-003**	**0.0164**	**0.0120**	**7.0000e-005**	**3.4800e-003**	**9.0000e-005**	**3.5700e-003**	**9.4000e-004**	**9.0000e-005**	**1.0300e-003**	**0.0000**	**5.8110**	**5.8110**	**2.6000e-004**	**0.0000**	**5.8175**

3.10 Pipeline Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0501	0.9196	1.7532	3.0000e-003		4.8500e-003	4.8500e-003		4.8500e-003	4.8500e-003	0.0000	262.7978	262.7978	0.0845	0.0000	264.9114
Total	**0.0501**	**0.9196**	**1.7532**	**3.0000e-003**		**4.8500e-003**	**4.8500e-003**		**4.8500e-003**	**4.8500e-003**	**0.0000**	**262.7978**	**262.7978**	**0.0845**	**0.0000**	**264.9114**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.0000e-004	0.0155	3.3400e-003	4.0000e-005	8.7000e-004	7.0000e-005	9.4000e-004	2.5000e-004	7.0000e-005	3.2000e-004	0.0000	3.4915	3.4915	2.0000e-004	0.0000	3.4966
Worker	1.1400e-003	8.4000e-004	8.6300e-003	3.0000e-005	2.6100e-003	2.0000e-005	2.6300e-003	6.9000e-004	2.0000e-005	7.1000e-004	0.0000	2.3194	2.3194	6.0000e-005	0.0000	2.3209
Total	**1.6400e-003**	**0.0164**	**0.0120**	**7.0000e-005**	**3.4800e-003**	**9.0000e-005**	**3.5700e-003**	**9.4000e-004**	**9.0000e-005**	**1.0300e-003**	**0.0000**	**5.8110**	**5.8110**	**2.6000e-004**	**0.0000**	**5.8175**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.5000e-003	0.0170	0.0298	1.1000e-004	8.6200e-003	1.1000e-004	8.7300e-003	2.3200e-003	1.0000e-004	2.4200e-003	0.0000	10.3082	10.3082	4.2000e-004	0.0000	10.3188
Unmitigated	2.5000e-003	0.0170	0.0298	1.1000e-004	8.6200e-003	1.1000e-004	8.7300e-003	2.3200e-003	1.0000e-004	2.4200e-003	0.0000	10.3082	10.3082	4.2000e-004	0.0000	10.3188

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	10.46	1.98	1.02	23,054	23,054
Total	10.46	1.98	1.02	23,054	23,054

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.559358	0.040058	0.190549	0.109335	0.016678	0.005213	0.023344	0.044042	0.002152	0.002669	0.005545	0.000316	0.000739

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3.6742	3.6742	1.7000e-004	3.0000e-005	3.6886
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3.6742	3.6742	1.7000e-004	3.0000e-005	3.6886
NaturalGas Mitigated	2.1000e-004	1.9500e-003	1.6400e-003	1.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	2.1196	2.1196	4.0000e-005	4.0000e-005	2.1322
NaturalGas Unmitigated	2.1000e-004	1.9500e-003	1.6400e-003	1.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	2.1196	2.1196	4.0000e-005	4.0000e-005	2.1322

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	39720	2.1000e-004	1.9500e-003	1.6400e-003	1.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	2.1196	2.1196	4.0000e-005	4.0000e-005	2.1322
Total		**2.1000e-004**	**1.9500e-003**	**1.6400e-003**	**1.0000e-005**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**	**0.0000**	**2.1196**	**2.1196**	**4.0000e-005**	**4.0000e-005**	**2.1322**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	39720	2.1000e-004	1.9500e-003	1.6400e-003	1.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	2.1196	2.1196	4.0000e-005	4.0000e-005	2.1322
Total		**2.1000e-004**	**1.9500e-003**	**1.6400e-003**	**1.0000e-005**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**	**0.0000**	**2.1196**	**2.1196**	**4.0000e-005**	**4.0000e-005**	**2.1322**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	12630	3.6742	1.7000e-004	3.0000e-005	3.6886
Total		**3.6742**	**1.7000e-004**	**3.0000e-005**	**3.6886**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	12630	3.6742	1.7000e-004	3.0000e-005	3.6886
Total		**3.6742**	**1.7000e-004**	**3.0000e-005**	**3.6886**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	6.6400e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-005	3.0000e-005	0.0000	0.0000	3.0000e-005
Unmitigated	6.6400e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-005	3.0000e-005	0.0000	0.0000	3.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	7.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.8600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-005	3.0000e-005	0.0000	0.0000	3.0000e-005
Total	**6.6400e-003**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	7.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.8600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-005	3.0000e-005	0.0000	0.0000	3.0000e-005
Total	**6.6400e-003**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.6561	0.0113	2.7000e-004	1.0203
Unmitigated	0.6561	0.0113	2.7000e-004	1.0203

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0.346875 / 0	0.6561	0.0113	2.7000e-004	1.0203
Total		**0.6561**	**0.0113**	**2.7000e-004**	**1.0203**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0.346875 / 0	0.6561	0.0113	2.7000e-004	1.0203
Total		**0.6561**	**0.0113**	**2.7000e-004**	**1.0203**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.3776	0.0223	0.0000	0.9354
Unmitigated	0.3776	0.0223	0.0000	0.9354

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	1.86	0.3776	0.0223	0.0000	0.9354
Total		**0.3776**	**0.0223**	**0.0000**	**0.9354**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	1.86	0.3776	0.0223	0.0000	0.9354
Total		**0.3776**	**0.0223**	**0.0000**	**0.9354**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX C

Potential to Occur Table and Special Status Species List

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APPENDIX C
LISTED AND SPECIAL-STATUS SPECIES CONSIDERED FOR DERWA SRVRWP PUMP STATION R3000 PROJECT

Name	Listing Status	General Habitat Requirements	Occurrence	Potential for Species Occurrence Within the Survey Area
Invertebrates				
Conservancy fairy shrimp (*Branchinecta conservatio*)	FE/--	Vernal pools.	Endemic to the grasslands of the northern two-thirds of the Central Valley	**Absent**. Habitat is not present in Study Area.
Longhorn fairy shrimp (*Branchinecta longiantenna*)	FE/--	Vernal pools or other areas capable of ponding water seasonally	Endemic to the eastern margin of the Central Coast mountains in seasonally astatic grassland vernal pools	**Absent**. Habitat is not present in Study Area.
Vernal pool fairy shrimp (*Branchinecta lynchi*)	FT/--	Grassland vernal pools.	East San Francisco Bay including Livermore area.	**Absent**. Habitat is not present in Study Area.
San Bruno elfin butterfly (*Incisalia mossil bayensis*)	FE/--	Valley & foothill grassland	Coastal, mountainous areas with grassy ground cover, mainly in the vicinity of San Bruno Mountain, San Mateo County.	**Absent**. Habitat is not present in Study Area.
Amphibians				
California tiger salamander (*Ambystoma californiense*)	FT/ CT	Vernal or temporary pools in annual grasslands, or open stages of woodlands. Typically adults use mammal burrows.	The species occurs from Petaluma in Sonoma County, east through the Central Valley to Yolo and Sacramento Counties south to Tulare County, and from the San Francisco Bay south to Santa Barbara County. Most Central Valley populations have been extirpated, and any remaining populations likely occur in the surrounding foothills.	**Low Potential**. Unsuitable habitat in Study Areas.
California red-legged frog (*Rana draytonii*)	FT/ CT	Freshwater pools, ponds, reservoirs, and slow-moving streams with overhanging vegetation. Also found in woods adjacent to streams. Requires permanent or ephemeral water sources and needs pools of >0.5 m depth for breeding.	Historical range is Sacramento Valley east into the Sierra Nevada foothills.	**Moderate Potential.** Site A2 is less than 100 feet from the west branch of Alamo Creek, which could provide suitable migrating habitat for CRLF. Non-native grasslands in the vicinity of Crow Canyon Road and Lilac Ridge Road Study Areas unlikely to support migrating CRLF due to human disturbance and lack of aquatic habitat. The nearest occurrence of this species was documented approximately 2.5 east of the Study Area in a large detention pond.
Foothill yellow-legged frog (*Rana boylii*)	--/CSC	Breeds and overwinters in and near cobbled streams with permanent water	Nearest occurrences are associated with rocky, perennial streams, greater than 5 miles from Study Area and are historical.	**Absent**. Habitat is not present in Study Area.
Fish				
Steelhead-California Coast ESU (*Oncorhynchus mykiss)*	FT/--	Aquatic streams and drainages.	Drainages of San Francisco and San Pablo Bays, central Calif. Coastal drainages.	**Absent.** Habitats not present within the Study Area, which are also isolated from this species known range.

LISTED AND SPECIAL-STATUS SPECIES CONSIDERED FOR DERWA SRVRWP PUMP STATION R3000 PROJECT (CONTINUED)

Name	Listing Status	General Habitat Requirements	Occurrence	Potential for Species Occurrence Within the Survey Area
Reptiles				
Western pond turtle *(Emys marmorata)*	--/CSC	Ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation <6,000' in elevation. Require basking sites and upland habitat for egg laying (sandy banks and open, grassy fields)	Western California including coast ranges and the Central Valley.	**Low potential.** Suitable habitat not present within Study Area.
Alameda whipsnake (*Masticophis lateralis euryxanthus*)	FT/CT	Coastal ranges, in chaparral and riparian habitat and adjacent grasslands	Limited to coastal scrub and oak communities of East Bay in Contra Costa, Alameda, and parts of San Joaquin and Santa Clara Counties.	**Low potential**. Alameda whipsnake has a low potential to occur due to lack of primary habitat in in the study areas and surrounding open space, in addition to the occurrence of routine mowing in Lilac Ridge Rd Study Area. Primary habitat is chaparral or coastal scrub vegetation, interspersed with other native vegetation types and rock lands.
Birds				
Cooper's hawk (*Accipiter cooperii*)	CDFW §3503.5	Forests, woodlands, and fields. Will also inhabit trees in suburban areas in parks and neighborhoods.	Widespread across California and the United States.	**Moderate potential.** A common raptor; open habitat areas exist nearby the proposed project sites that could support this raptor. Large trees adjacent to projects sites may provide nesting habitat.
Sharp-shinned hawk (*Accipiter striatus*)	CDFW §3503.5	Forests and forest edges. Require dense forests for breeding.	Widespread across California and the United States.	**Low potential.** Suitable habitat not present within Study Area.
Tricolored blackbird (*Agelaius tricolor*)	--/CCE	Nests in freshwater marshes with dense stands of cattails or bulrushes, occasionally in willows, thistles, mustard, blackberry brambles, and dense shrubs and grains. Requires open water, protected areas for nests, foraging habitat with insects.	Sacramento-San Joaquin River Delta, Monterey and Marin counties, and coastal lagoons from Sonoma to San Diego Counties during winter. Large breeding colonies occur in Central Valley.	**Low potential.** Breeding habitat does not exist in Study Area or nearby.
Burrowing owl (*Athene cunicularia)*	BCC/CSC (burrowing sites)	Nests and forages in low-growing grasslands with burrowing mammals	Interior areas of San Francisco Bay, with larger numbers in Alameda, Contra Costa, and Santa Clara counties.	**Moderate potential**. Although routine mowing activities and exposure to human disturbance is routine in Lilac Ridge Road Study Area, mammal burrows present in the existing Reservoir R200 site (Staging Area 2), which could provide suitable habitat for burrowing owl (BUOW). Potential foraging and nesting habitat could be found near proposed Site A4 and Staging Area 2.
Prairie falcon (*Falco mexicanus*)	BCC/WL (nesting)	Inhabits hills, canyons, and mountainous areas with grasslands; nests on cliffs or abandoned raptor nests.	Valley and foothill grassland. Nest site is typically on a ledge of a cliff, in a recessed site, protected by an overhang of rock.	**Low potential.** Nesting not expected in Study Areas. Routine mowing indicates the non-native grasslands in Lilac Ridge Rd Study Area are considered low-quality habitat for prairie. Local occurrence information for the prairie falcon is suppressed by agencies due to species sensitivity (CDFW, 2018).

LISTED AND SPECIAL-STATUS SPECIES CONSIDERED FOR DERWA SRVRWP PUMP STATION R3000 PROJECT (CONTINUED)

Name	Listing Status	General Habitat Requirements	Occurrence	Potential for Species Occurrence Within the Survey Area
Birds (Continued)				
Red-tailed hawk (*Buteo jamaicensis*)	CDFW §3503.5	Occupies numerous types of open habitat including desert, scrublands, grasslands, roadsides, fields and pastures. Commonly found at field edges and perched on fences, poles, and trees. Nests in tall trees.	Widespread across California and the United States.	**Moderate potential.** Common raptor. Open habitat areas exist nearby the project site that could support this raptor. Large trees adjacent to projects sites may provide nesting habitat.
Swainson's hawk (*Buteo swainsoni*)	--/CT	Summer resident; breeds in lower Sacramento and San Joaquin valleys, the Klamath Basin, and Butte Valley.	Nests in oaks or cottonwoods in or near riparian habitats; forages in grasslands, irrigated pastures, and grain fields	**Moderate potential.** Trees near West Alamo Creek could provide nesting habitat for Swainson's hawk.
White-tailed kite (*Elanus leucurus)*	FP	Nests in shrubs and trees adjacent to grasslands, forages over grasslands and agricultural lands	Widespread across California and the United States.	**Low Potential.** Trees near West Alamo Creek provide nesting opportunity. All other sites lack suitable nesting habitat and are too disturbed for this sensitive species.
American kestrel (*Falco sparverius*)	CDFW §3503.5	Open areas such as meadows, grasslands, and open woodlands. Also utilize human modified habitat such as parks, agricultural fields, and suburban areas. Nest in pre-existing cavities.	Widespread across California and the United States.	**Low potential**. Suitable nesting cavities do not occur within Study Area but adjacent open areas can support foraging.
Mammals				
Pallid bat (*Antrozous pallidus*)	CSC	Grasslands, shrublands, woodlands, and forests. Common in arid regions with rocky outcroppings, particularly near water. Roosts in rock crevices, buildings, and under bridges.	British Colombia to west Texas, Baja, and Central Mexico	**Low potential.** Study Area with potential roosting habitat is located adjacent to highly utilized roadway which would deter this species from roosting.
Townsend's big-eared bat (*Corynorhinus townsendii*)	--/CSC	Throughout California in a wide variety of habitats. Roosts in the open, hanging from walls & ceilings.	Throughout California in a wide variety of habitats.	**Low potential.** Study Area with potential roosting habitat is located adjacent to highly utilized roadway which would deter this species from roosting.
San Joaquin kit fox (*Vulpes macrotis mutica*)	FE/CT	Undeveloped grasslands and agricultural land.	Patchily distributed in the Diablo Range and south to Bakersfield	**Low potential**. Unsuitable habitat in Study Areas. Nearest occurrence of species is considered historical and occurred roughly two miles north of Crow Canyon Rd. Study Area on Blackhawk Road. Development has significantly degraded movement and dispersal corridors for young kit foxes. Successful movement of kit foxes between remaining core habitat areas is becoming increasingly unlikely.[1]

[1] Center for Biological Diversity, 2018. San Joaquin Kit Fox Natural History. Available online: https://www.biologicaldiversity.org/species/mammals/San_Joaquin_kit_fox/natural_history.html. Accessed on April 26, 2018.

LISTED AND SPECIAL-STATUS SPECIES CONSIDERED FOR DERWA SRVRWP PUMP STATION R3000 PROJECT (CONTINUED)

Name	Listing Status	General Habitat Requirements	Occurrence	Potential for Species Occurrence Within the Survey Area
Mammals (continued)				
Hoary bat (*Lasiurus cinereus*)	WBWG Medium	Forested habitats and trees along clearing edges. Roosts in trees with dense foliage. Forages in trees and along streams and lake shores.	Widespread across California	**Low potential.** Study Area with potential roosting habitat is located adjacent to highly utilized roadway which would deter this species from roosting.
Yuma myotis *(Myotis yumanensis*)	WBWG Low	Groups roost in caves, trees, cliff crevices, mines, and under bridges. Forages over water and thus lives near ponds and rivers.	Widespread across California	**Low potential**. No suitable habitat present in Study Area.
Plants				
Palmate-bractedbird's-beak *(Chloropyron palmatum)*	FE/SE/1B.1	Chenopod scrub, valley and foothill grasslands	Endemic to California. Occurrences in Central Valley north of Sacramento and west of Yuba City. Local populations limited to alkali scalds at the Springtown Alkali Preserve.	**Absent**. Alkaline habitat not present on project site or in immediate vicinity.
Alkali milk-vetch *(Astragalus tener* var. *tener)*	--/--/1B.2	Alkali playa, valley and foothill grassland (adobo clay), vernal pool, wetland.	Endemic to California. Occurrences in greater San Francisco Bay Area including Livermore area, Napa River, and from Suisun Bay north to greater Davis area.	**Absent**. Alkaline habitat not present on project site or in immediate vicinity.
Brittlescale *(Atriplex depressa)*	--/--/1B.2	Alkali playa, chenopod scrub, meadow and seep, valley and foothill grassland, vernal pool, wetland.	Endemic to California. Occurrences in greater San Francisco Bay Area including Livermore area. Occurs in Contra Costa, Solano, Colusa, Fresno, Glenn, Kern, Merced, Stanislaus, Tulare, and Yolo Counties.	**Absent.** Alkaline habitat not present on project site or in immediate vicinity.
Lesser saltscale *(Atriplex minuscula)*	--/--/1B.1	Chenopod scrub, alkali playa, valley and foothill grassland.	Endemic to California. Occurrences in Livermore area. Also occurs in Alameda, Butte, Fresno, Kern, Madera, Merced, and Tulare Counties.	**Absent**. Alkaline habitat not present on project site or in immediate vicinity.
Diablo helianthella *(Helianthella castanea)*	FSC/--/1B.2	Forest, woodland, chaparral, coastal scrub, riparian woodland, and grassland; usually in chaparral/oak woodland ecotone.	San Francisco Bay Area mostly around Mount Diablo.	**Absent.** Study Area does not contain preferred habitat and mostly consists of highly disturbed dominated with non-native vegetation. Perennial plant, not observed on project site.
Prostrate navarretia *(Navarretia prostrata)*	/--/1B.1	In mesic, alkali areas of coastal scrub and grassland, particularly vernal pools	Scattered distribution from San Francisco Bay Area, through Transverse Ranges and Peninsular Ranges, to south California border.	**Absent.** Alkaline habitat not present on project sites or in immediate vicinity.
Congdon's tarplant *(Centromadia parryi* ssp. *congdonii)*	--/--/1B.1	Valley and foothill grassland.	Endemic to California. Occurrences in San Francisco Bay Area from the South Bay northeast to the East Bay including Dublin/Pleasanton/Livermore area and northeast to Brentwood area.	**Low potential**. Site supports species associated with grassland habitat; however, this plant was not observed on site.

LISTED AND SPECIAL-STATUS SPECIES CONSIDERED FOR DERWA SRVRWP PUMP STATION R3000 PROJECT (CONTINUED)

Name	Listing Status	General Habitat Requirements	Occurrence	Potential for Species Occurrence Within the Survey Area
Plants (cont.)				
Saline clover *(Trifolium hydrophilum)*	--/--/1B.2	Marshes and swamps, mesic and alkaline valley and foothill grasslands (mesic, alkaline), vernal pools.	Greater San Francisco Bay Area including the North Bay, the East Bay, the South Bay around San Jose, east to Sacramento and Stockton, and areas around Salinas, and Monterey.	**Absent**. Saline habitat not present on project sites or in immediate vicinity.
Caper-fruited tropidocarpum (*Tropidocarpum capparideum*)	--/--/1B.1	Valley and foothill grassland alkaline hills.	Endemic to California. Occurs in Central Valley around Fresno, in Central Coast near San Luis Obispo and north of Lake San Antonio.	**Absent.** Occurrences in region are historical.

Status Codes:
- USFWS (U.S. Fish and Wildlife Service)
  - FE = Listed as Endangered by the Federal Government
  - FT = Listed as Threatened (likely to become Endangered within the foreseeable future) by the Federal Government.
- CDFW (California Department of Fish and Wildlife)
  - CE = Listed as Endangered by the State of California
  - CCE = Candidate Endangered by the State of California
  - CT = Listed as Threatened by the State of California
  - CSC = California Species of Special Concern
  - FP = Fully Protected
  - §3503.5 = CDFW Fish and Game Code Section §3503.5; this code protects nesting raptors and birds of prey

California Native Plant Society (CNPS):
- List 1A: Plants presumed extinct.
- List 1B: Plants rare, threatened, or endangered in California and elsewhere.
- List 2: Plants rare, threatened, or endangered in California, but more numerous elsewhere.
- List 3: Plants about which more information is needed – a review list.
- List 4: Plants of limited distribution – a watch list.
  - 0.1 = Seriously endangered in California.
  - 0.2 = Fairly endangered in California.
  - 0.3 = Not very endangered in California.

Potential to Occur Categories:
- Unlikely = The project areas and/or immediate vicinities do not support suitable habitat for a particular species. Project areas are outside of the species known range.
- Low Potential = The project areas and/or immediate vicinities only provide limited habitat. In addition, the species' known range may be outside of the project areas.
- Moderate Potential = The project areas and/or immediate vicinities provide suitable habitat.
- High Potential = The project areas and/or immediate vicinity provide ideal habitat conditions.

SOURCES: CDFW, 2018; CNPS, 2018; USFWS, 2018.

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Query Criteria: Quad IS (Antioch South (3712187) OR Clayton (3712188) OR Diablo (3712178) OR Dublin (3712168) OR Hayward (3712261) OR Livermore (3712167) OR Tassajara (3712177) OR Walnut Creek (3712281) OR Las Trampas Ridge (3712271))

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Accipiter striatus sharp-shinned hawk	G5 S4	None None	CDFW_WL-Watch List IUCN_LC-Least Concern	1,180 1,180	22 S:1	1	0	0	0	0	0	1	0	1	0	0
Agelaius tricolor tricolored blackbird	G2G3 S1S2	None Candidate Endangered	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_EN-Endangered NABCI_RWL-Red Watch List USFWS_BCC-Birds of Conservation Concern	314 759	951 S:8	0	1	2	0	0	5	7	1	8	0	0
Ambystoma californiense California tiger salamander	G2G3 S2S3	Threatened Threatened	CDFW_WL-Watch List IUCN_VU-Vulnerable	50 1,950	1178 S:130	11	54	14	2	14	35	45	85	116	5	9
Amsinckia grandiflora large-flowered fiddleneck	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_UCBBG-UC Berkeley Botanical Garden	1,150 1,800	8 S:4	0	0	0	0	3	1	3	1	1	0	3
Amsinckia lunaris bent-flowered fiddleneck	G2G3 S2S3	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	892 1,600	86 S:5	0	1	0	0	0	4	0	5	5	0	0
Andrena blennospermatis Blennosperma vernal pool andrenid bee	G2 S2	None None		900 900	15 S:1	0	0	0	0	0	1	1	0	1	0	0
Anniella pulchra northern California legless lizard	G3 S3	None None	CDFW_SSC-Species of Special Concern USFS_S-Sensitive	360 450	333 S:2	1	0	0	0	1	0	1	1	1	1	0
Anomobryum julaceum slender silver moss	G5? S2	None None	Rare Plant Rank - 4.2		13 S:1	0	0	0	0	0	1	0	1	1	0	0
Antrozous pallidus pallid bat	G5 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive WBWG_H-High Priority	30 780	411 S:11	0	0	0	0	0	11	10	1	11	0	0

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Aquila chrysaetos golden eagle	G5 S3	None None	BLM_S-Sensitive CDF_S-Sensitive CDFW_FP-Fully Protected CDFW_WL-Watch List IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	155 1,360	319 S:6	5	1	0	0	0	0	3	3	6	0	0
Arctostaphylos auriculata Mt. Diablo manzanita	G2 S2	None None	Rare Plant Rank - 1B.3	600 1,850	17 S:17	2	5	5	0	0	5	12	5	17	0	0
Arctostaphylos manzanita ssp. laevigata Contra Costa manzanita	G5T2 S2	None None	Rare Plant Rank - 1B.2	500 2,000	10 S:10	0	1	1	0	0	8	7	3	10	0	0
Ardea herodias great blue heron	G5 S4	None None	CDF_S-Sensitive IUCN_LC-Least Concern	300 300	147 S:1	0	1	0	0	0	0	1	0	1	0	0
Astragalus tener var. tener alkali milk-vetch	G2T2 S2	None None	Rare Plant Rank - 1B.2	40 70	65 S:2	0	0	0	0	2	0	2	0	0	0	2
Athene cunicularia burrowing owl	G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	25 888	1967 S:37	7	11	8	4	1	6	6	31	36	1	0
Atriplex depressa brittlescale	G2 S2	None None	Rare Plant Rank - 1B.2	160 500	61 S:3	0	1	1	0	0	1	1	2	3	0	0
Atriplex minuscula lesser saltscale	G2 S2	None None	Rare Plant Rank - 1B.1	507 507	37 S:1	0	0	0	0	0	1	0	1	1	0	0
Balsamorhiza macrolepis big-scale balsamroot	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive USFS_S-Sensitive	500 500	50 S:2	1	0	0	0	0	1	1	1	2	0	0
Blepharizonia plumosa big tarplant	G2 S2	None None	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	300 1,650	53 S:20	3	8	2	0	1	6	6	14	19	1	0
Bombus caliginosus obscure bumble bee	G4? S1S2	None None	IUCN_VU-Vulnerable	300 3,150	181 S:2	0	0	0	0	0	2	2	0	2	0	0

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Bombus crotchii Crotch bumble bee	G3G4 S1S2	None None		50 2,000	234 S:4	0	0	0	0	0	4	4	0	4	0	0
Bombus occidentalis western bumble bee	G2G3 S1	None None	USFS_S-Sensitive XERCES_IM-Imperiled	25 2,000	282 S:10	0	0	0	0	0	10	10	0	10	0	0
Branchinecta lynchi vernal pool fairy shrimp	G3 S3	Threatened None	IUCN_VU-Vulnerable	220 500	765 S:6	0	1	3	0	0	2	2	4	6	0	0
Buteo regalis ferruginous hawk	G4 S3S4	None None	CDFW_WL-Watch List IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	400 640	107 S:3	1	0	1	0	0	1	0	3	3	0	0
Buteo swainsoni Swainson's hawk	G5 S3	None Threatened	BLM_S-Sensitive IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	50 2,000	2460 S:6	1	2	2	0	0	1	1	5	6	0	0
Callophrys mossii bayensis San Bruno elfin butterfly	G4T1 S1	Endangered None	XERCES_CI-Critically Imperiled	2,000 2,000	10 S:1	0	0	0	0	0	1	1	0	1	0	0
Calochortus pulchellus Mt. Diablo fairy-lantern	G2 S2	None None	Rare Plant Rank - 1B.2	450 3,000	52 S:47	2	15	5	2	0	23	13	34	47	0	0
Campanula exigua chaparral harebell	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_RSABG-Rancho Santa Ana Botanic Garden	1,500 3,200	32 S:5	1	1	0	0	0	3	4	1	5	0	0
Centromadia parryi ssp. congdonii Congdon's tarplant	G3T2 S2	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive SB_RSABG-Rancho Santa Ana Botanic Garden	40 800	93 S:27	5	8	4	1	6	3	5	22	21	2	4
Chloropyron palmatum palmate-bracted salty bird's-beak	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	510 510	26 S:1	0	1	0	0	0	0	0	1	1	0	0
Circus cyaneus northern harrier	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	900 900	53 S:1	1	0	0	0	0	0	1	0	1	0	0

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Cordylanthus nidularius Mt. Diablo bird's-beak	G1 S1	None Rare	Rare Plant Rank - 1B.1 BLM_S-Sensitive	1,600 2,400	2 S:2	0	1	0	0	0	1	0	2	2	0	0
Corynorhinus townsendii Townsend's big-eared bat	G3G4 S2	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive WBWG_H-High Priority	200 3,790	626 S:5	0	1	1	0	0	3	3	2	5	0	0
Cryptantha hooveri Hoover's cryptantha	GH SH	None None	Rare Plant Rank - 1A		4 S:1	0	0	0	0	1	0	1	0	0	1	0
Danaus plexippus pop. 1 monarch - California overwintering population	G4T2T3 S2S3	None None	USFS_S-Sensitive	25 25	380 S:1	0	0	0	0	0	1	0	1	1	0	0
Delphinium californicum ssp. interius Hospital Canyon larkspur	G3T3 S3	None None	Rare Plant Rank - 1B.2	630 3,300	28 S:6	1	2	0	0	0	3	1	5	6	0	0
Dipodomys heermanni berkeleyensis Berkeley kangaroo rat	G3G4T1 S1	None None		3,200 3,200	7 S:1	0	0	0	0	0	1	1	0	1	0	0
Efferia antiochi Antioch efferian robberfly	G1G2 S1S2	None None		350 350	4 S:1	0	0	0	0	0	1	1	0	1	0	0
Elanus leucurus white-tailed kite	G5 S3S4	None None	BLM_S-Sensitive CDFW_FP-Fully Protected IUCN_LC-Least Concern	408 600	174 S:2	1	1	0	0	0	0	1	1	2	0	0
Emys marmorata western pond turtle	G3G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable USFS_S-Sensitive	3 1,980	1340 S:30	4	11	2	4	0	9	8	22	30	0	0
Eremophila alpestris actia California horned lark	G5T4Q S4	None None	CDFW_WL-Watch List IUCN_LC-Least Concern	600 680	93 S:2	0	2	0	0	0	0	2	0	2	0	0
Eriastrum ertterae Lime Ridge eriastrum	G1 S1	None None	Rare Plant Rank - 1B.1	700 900	2 S:2	0	0	0	0	0	2	0	2	2	0	0
Eriogonum truncatum Mt. Diablo buckwheat	G1 S1	None None	Rare Plant Rank - 1B.1	350 1,150	7 S:6	1	0	0	0	1	4	4	2	5	1	0

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Eryngium jepsonii Jepson's coyote-thistle	G2 S2	None None	Rare Plant Rank - 1B.2	330 1,000	19 S:4	0	0	0	0	0	4	0	4	4	0	0
Eumops perotis californicus western mastiff bat	G5T4 S3S4	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern WBWG_H-High Priority	120 120	294 S:1	0	0	0	0	0	1	1	0	1	0	0
Extriplex joaquinana San Joaquin spearscale	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_RSABG-Rancho Santa Ana Botanic Garden	160 730	124 S:21	2	3	3	5	6	2	6	15	15	2	4
Falco mexicanus prairie falcon	G5 S4	None None	CDFW_WL-Watch List IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	1,535 1,860	459 S:5	5	0	0	0	0	0	0	5	5	0	0
Falco peregrinus anatum American peregrine falcon	G4T4 S3S4	Delisted Delisted	CDF_S-Sensitive CDFW_FP-Fully Protected USFWS_BCC-Birds of Conservation Concern	1,581 1,581	56 S:1	0	0	0	0	0	1	0	1	1	0	0
Fritillaria liliacea fragrant fritillary	G2 S2	None None	Rare Plant Rank - 1B.2 USFS_S-Sensitive	400 850	82 S:7	0	1	1	2	0	3	2	5	7	0	0
Grimmia torenii Toren's grimmia	G2 S2	None None	Rare Plant Rank - 1B.3	3,025 3,805	13 S:2	0	0	0	0	0	2	0	2	2	0	0
Helianthella castanea Diablo helianthella	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	400 3,500	107 S:72	10	25	15	1	0	21	19	53	72	0	0
Helminthoglypta nickliniana bridgesi Bridges' coast range shoulderband	G3T1 S1S2	None None	IUCN_DD-Data Deficient	1,950 1,950	6 S:1	0	0	0	0	0	1	1	0	1	0	0
Hesperolinon breweri Brewer's western flax	G2? S2?	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	650 2,900	25 S:18	2	5	0	0	0	11	8	10	18	0	0
Hoita strobilina Loma Prieta hoita	G2 S2	None None	Rare Plant Rank - 1B.1		34 S:1	0	0	0	0	0	1	1	0	1	0	0
Holocarpha macradenia Santa Cruz tarplant	G1 S1	Threatened Endangered	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden		37 S:1	0	0	0	0	1	0	1	0	0	1	0

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Isocoma arguta Carquinez goldenbush	G1 S1	None None	Rare Plant Rank - 1B.1		14 S:1	0	0	0	0	0	1	1	0	1	0	0
Juglans hindsii Northern California black walnut	G1 S1	None None	Rare Plant Rank - 1B.1 SB_USDA-US Dept of Agriculture	550 550	5 S:1	0	0	0	0	0	1	0	1	1	0	0
Lasiurus blossevillii western red bat	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern WBWG_H-High Priority	15 15	126 S:1	0	0	0	0	0	1	0	1	1	0	0
Lasiurus cinereus hoary bat	G5 S4	None None	IUCN_LC-Least Concern WBWG_M-Medium Priority	60 60	236 S:4	0	0	0	0	0	4	3	1	4	0	0
Lasthenia conjugens Contra Costa goldfields	G1 S1	Endangered None	Rare Plant Rank - 1B.1 SB_UCBBG-UC Berkeley Botanical Garden	50 200	33 S:3	0	0	0	0	3	0	3	0	0	0	3
Lepidurus packardi vernal pool tadpole shrimp	G4 S3S4	Endangered None	IUCN_EN-Endangered	330 330	324 S:1	0	0	1	0	0	0	0	1	1	0	0
Linderiella occidentalis California linderiella	G2G3 S2S3	None None	IUCN_NT-Near Threatened	160 920	434 S:11	0	6	0	0	0	5	3	8	11	0	0
Lytta molesta molestan blister beetle	G2 S2	None None		400 400	17 S:1	0	0	0	0	0	1	1	0	1	0	0
Madia radiata showy golden madia	G2 S2	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive SB_RSABG-Rancho Santa Ana Botanic Garden	250 250	100 S:2	0	0	0	0	0	2	2	0	2	0	0
Malacothamnus hallii Hall's bush-mallow	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	600 1,500	36 S:7	1	0	0	1	1	4	4	3	6	1	0
Masticophis lateralis euryxanthus Alameda whipsnake	G4T2 S2	Threatened Threatened		175 3,785	163 S:96	24	28	5	1	4	34	34	62	92	4	0
Microcina lumi Lum's micro-blind harvestman	G1 S1	None None		400 600	2 S:2	0	0	0	0	0	2	2	0	2	0	0

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Monolopia gracilens woodland woollythreads	G3 S3	None None	Rare Plant Rank - 1B.2	1,500 3,000	57 S:6	0	0	0	0	0	6	3	3	6	0	0
Myotis yumanensis Yuma myotis	G5 S4	None None	BLM_S-Sensitive IUCN_LC-Least Concern WBWG_LM-Low-Medium Priority	380 380	263 S:1	0	0	0	0	0	1	0	1	1	0	0
Navarretia gowenii Lime Ridge navarretia	G1 S1	None None	Rare Plant Rank - 1B.1	600 1,000	3 S:2	0	0	0	0	0	2	0	2	2	0	0
Navarretia nigelliformis ssp. radians shining navarretia	G4T2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	260 1,700	72 S:3	0	0	1	0	0	2	0	3	3	0	0
Navarretia prostrata prostrate vernal pool navarretia	G2 S2	None None	Rare Plant Rank - 1B.1	340 340	60 S:1	0	0	0	0	0	1	0	1	1	0	0
Neotoma fuscipes annectens San Francisco dusky-footed woodrat	G5T2T3 S2S3	None None	CDFW_SSC-Species of Special Concern	700 1,600	21 S:4	2	1	0	0	0	1	0	4	4	0	0
Oenothera deltoides ssp. howellii Antioch Dunes evening-primrose	G5T1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden		10 S:1	0	0	0	0	0	1	1	0	1	0	0
Perognathus inornatus San Joaquin Pocket Mouse	G2G3 S2S3	None None	BLM_S-Sensitive IUCN_LC-Least Concern	500 750	122 S:3	1	2	0	0	0	0	3	0	3	0	0
Phacelia phacelioides Mt. Diablo phacelia	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	2,000 3,400	16 S:6	0	1	0	1	0	4	5	1	6	0	0
Phrynosoma blainvillii coast horned lizard	G3G4 S3S4	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	1,224 1,462	771 S:2	1	1	0	0	0	0	0	2	2	0	0
Plagiobothrys glaber hairless popcornflower	GH SH	None None	Rare Plant Rank - 1A	20 350	9 S:3	0	0	0	0	3	0	2	1	0	3	0
Polemonium carneum Oregon polemonium	G3G4 S2	None None	Rare Plant Rank - 2B.2		16 S:1	0	0	0	0	0	1	1	0	1	0	0
Puccinellia simplex California alkali grass	G3 S2	None None	Rare Plant Rank - 1B.2	500 500	71 S:2	0	0	0	0	1	1	2	0	1	1	0

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Rana boylii foothill yellow-legged frog	G3 S3	None Candidate Threatened	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened USFS_S-Sensitive	490 1,130	1693 S:2	0	0	0	0	0	2	2	0	2	0	0
Rana draytonii California red-legged frog	G2G3 S2S3	Threatened None	CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable	130 2,175	1473 S:143	16	65	18	6	3	35	36	107	140	3	0
Sanicula saxatilis rock sanicle	G2 S2	None Rare	Rare Plant Rank - 1B.2 BLM_S-Sensitive	2,200 3,400	7 S:3	0	2	1	0	0	0	1	2	3	0	0
Senecio aphanactis chaparral ragwort	G3 S2	None None	Rare Plant Rank - 2B.2	1,000 1,000	82 S:1	0	0	0	0	0	1	1	0	1	0	0
Serpentine Bunchgrass Serpentine Bunchgrass	G2 S2.2	None None		1,300 2,000	22 S:2	0	1	0	0	0	1	2	0	2	0	0
Setophaga petechia yellow warbler	G5 S3S4	None None	CDFW_SSC-Species of Special Concern USFWS_BCC-Birds of Conservation Concern	280 280	70 S:1	0	1	0	0	0	0	0	1	1	0	0
Spergularia macrotheca var. longistyla long-styled sand-spurrey	G5T2 S2	None None	Rare Plant Rank - 1B.2	500 500	22 S:3	0	0	0	0	1	2	1	2	2	1	0
Streptanthus albidus ssp. peramoenus most beautiful jewelflower	G2T2 S2	None None	Rare Plant Rank - 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden USFS_S-Sensitive	745 2,400	103 S:6	1	2	0	0	0	3	2	4	6	0	0
Streptanthus hispidus Mt. Diablo jewelflower	G2 S2	None None	Rare Plant Rank - 1B.3	820 3,200	8 S:8	0	4	3	1	0	0	5	3	8	0	0
Stuckenia filiformis ssp. alpina slender-leaved pondweed	G5T5 S3	None None	Rare Plant Rank - 2B.2	600 600	21 S:1	0	0	0	0	0	1	1	0	1	0	0
Sycamore Alluvial Woodland Sycamore Alluvial Woodland	G1 S1.1	None None		500 500	17 S:1	0	0	1	0	0	0	1	0	1	0	0
Taxidea taxus American badger	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	179 800	544 S:10	2	3	2	0	0	3	5	5	10	0	0

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Trifolium hydrophilum saline clover	G2 S2	None None	Rare Plant Rank - 1B.2	350 350	49 S:1	0	0	0	0	1	0	0	1	0	1	0
Triquetrella californica coastal triquetrella	G2 S2	None None	Rare Plant Rank - 1B.2 USFS_S-Sensitive	3,849 3,849	13 S:1	0	0	0	0	0	1	1	0	1	0	0
Tropidocarpum capparideum caper-fruited tropidocarpum	G1 S1	None None	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden USFS_S-Sensitive	400 540	18 S:2	0	0	0	0	0	2	2	0	2	0	0
Valley Needlegrass Grassland Valley Needlegrass Grassland	G3 S3.1	None None		500 500	45 S:2	0	0	1	0	0	1	2	0	2	0	0
Valley Sink Scrub Valley Sink Scrub	G1 S1.1	None None		510 510	29 S:1	0	0	0	0	0	1	1	0	1	0	0
Viburnum ellipticum oval-leaved viburnum	G4G5 S3?	None None	Rare Plant Rank - 2B.3	600 1,500	38 S:5	1	0	0	0	0	4	3	2	5	0	0
Vulpes macrotis mutica San Joaquin kit fox	G4T2 S2	Endangered Threatened		220 800	1017 S:12	2	4	0	0	0	6	12	0	12	0	0

California Native Plant Society, Rare Plant Program. 2018. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.45). Website http://www.rareplants.cnps.org [accessed 18 April 2018].

Scientific Name	Common Name	Lifeform	CRPR	CESA	FESA	Blooming Period	Habitat	Micro Habitat	Elevation Low (m)	Elevation Low (ft)	Elevation High (m)	Elevation High (ft)	CA Endemic
Amsinckia grandiflora	large-flowered fiddleneck	annual herb	1B.1	CE	FE	(Mar)Apr-May	Cismontane woodland, Valley and foothill grassland		270	885	550	1805	T
Amsinckia lunaris	bent-flowered fiddleneck	annual herb	1B.2	None	None	Mar-Jun	Coastal bluff scrub, Cismontane woodland, Valley and foothill grassland		3	5	500	1640	T
Androsace elongata ssp. acuta	California androsace	annual herb	4.2	None	None	Mar-Jun	Chaparral, Cismontane woodland, Coastal scrub, Meadows and seeps, Pinyon and juniper woodland, Valley and foothill grassland		150	490	1305	4280	F
Anomobryum julaceum	slender silver moss	moss	4.2	None	None		Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest	damp rock and soil on outcrops, usually on roadcuts	100	325	1000	3280	F
Arabis blepharophylla	coast rockcress	perennial herb	4.3	None	None	Feb-May	Broadleafed upland forest, Coastal bluff scrub, Coastal prairie, Coastal scrub	rocky	3	5	1100	3610	T
Arctostaphylos auriculata	Mt. Diablo manzanita	perennial evergreen shrub	1B.3	None	None	Jan-Mar	Chaparral (sandstone), Cismontane woodland		135	440	650	2135	T
Arctostaphylos manzanita ssp. laevigata	Contra Costa manzanita	perennial evergreen shrub	1B.2	None	None	Jan-Mar(Apr)	Chaparral (rocky)		430	1410	1100	3610	T
Astragalus tener var. tener	alkali milk-vetch	annual herb	1B.2	None	None	Mar-Jun	Playas, Valley and foothill grassland (adobe clay), Vernal pools	alkaline	1	0	60	195	T
Atriplex cordulata var. cordulata	heartscale	annual herb	1B.2	None	None	Apr-Oct	Chenopod scrub, Meadows and seeps, Valley and foothill grassland (sandy)	saline or alkaline	0	0	560	1835	T
Atriplex coronata var. coronata	crownscale	annual herb	4.2	None	None	Mar-Oct	Chenopod scrub, Valley and foothill grassland, Vernal pools	alkaline, often clay	1	0	590	1935	T
Atriplex depressa	brittlescale	annual herb	1B.2	None	None	Apr-Oct	Chenopod scrub, Meadows and seeps, Playas, Valley and foothill grassland, Vernal pools	alkaline, clay	1	0	320	1050	T
Atriplex minuscula	lesser saltscale	annual herb	1B.1	None	None	May-Oct	Chenopod scrub, Playas, Valley and foothill grassland	alkaline, sandy	15	45	200	655	T
Balsamorhiza macrolepis	big-scale balsamroot	perennial herb	1B.2	None	None	Mar-Jun	Chaparral, Cismontane woodland, Valley and foothill grassland	sometimes serpentinite	45	145	1555	5100	T
Blepharizonia plumosa	big tarplant	annual herb	1B.1	None	None	Jul-Oct	Valley and foothill grassland	Usually clay.	30	95	505	1655	T
Calandrinia breweri	Brewer's calandrinia	annual herb	4.2	None	None	(Jan)Mar-Jun	Chaparral, Coastal scrub	sandy or loamy, disturbed sites and burns	10	30	1220	4005	F

Calochortus pulchellus	Mt. Diablo fairy-lantern	perennial bulbiferous herb	1B.2	None	None	Apr-Jun	Chaparral, Cismontane woodland, Riparian woodland, Valley and foothill grassland		30	95	840	2755	T
Calochortus umbellatus	Oakland star-tulip	perennial bulbiferous herb	4.2	None	None	Mar-May	Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Valley and foothill grassland	often serpentinite	100	325	700	2295	T
Campanula exigua	chaparral harebell	annual herb	1B.2	None	None	May-Jun	Chaparral (rocky, usually serpentinite)		275	900	1250	4100	T
Castilleja ambigua var. ambigua	johnny-nip	annual herb (hemiparasitic)	4.2	None	None	Mar-Aug	Coastal bluff scrub, Coastal prairie, Coastal scrub, Marshes and swamps, Valley and foothill grassland, Vernal pools margins		0	0	435	1425	F
Centromadia parryi ssp. congdonii	Congdon's tarplant	annual herb	1B.1	None	None	May-Oct(Nov)	Valley and foothill grassland (alkaline)		0	0	230	755	T
Chloropyron palmatum	palmate-bracted bird's-beak	annual herb (hemiparasitic)	1B.1	CE	FE	May-Oct	Chenopod scrub, Valley and foothill grassland	alkaline	5	15	155	510	T
Clarkia concinna ssp. automixa	Santa Clara red ribbons	annual herb	4.3	None	None	(Apr)May-Jun(Jul)	Chaparral, Cismontane woodland		90	295	1500	4920	T
Collomia diversifolia	serpentine collomia	annual herb	4.3	None	None	May-Jun	Chaparral, Cismontane woodland	serpentinite, rocky or gravelly	200	655	600	1970	T
Convolvulus simulans	small-flowered morning-glory	annual herb	4.2	None	None	Mar-Jul	Chaparral (openings), Coastal scrub, Valley and foothill grassland	clay, serpentinite seeps	30	95	740	2430	F
Cordylanthus nidularius	Mt. Diablo bird's-beak	annual herb (hemiparasitic)	1B.1	CR	None	Jun-Aug	Chaparral (serpentinite)		600	1965	800	2625	T
Cryptantha hooveri	Hoover's cryptantha	annual herb	1A	None	None	Apr-May	Inland dunes, Valley and foothill grassland (sandy)		9	25	150	490	T
Delphinium californicum ssp. interius	Hospital Canyon larkspur	perennial herb	1B.2	None	None	Apr-Jun	Chaparral (openings), Cismontane woodland (mesic), Coastal scrub		195	635	1095	3595	T
Dirca occidentalis	western leatherwood	perennial deciduous shrub	1B.2	None	None	Jan-Mar(Apr)	Broadleafed upland forest, Closed-cone coniferous forest, Chaparral, Cismontane woodland, North Coast coniferous forest, Riparian forest, Riparian woodland	mesic	25	80	425	1395	T
Eriastrum ertterae	Lime Ridge eriastrum	annual herb	1B.1	None	None	Jun-Jul	Chaparral (openings or edges)	Alkaline or semi-alkaline, sandy.	200	655	290	950	T
Eriogonum truncatum	Mt. Diablo buckwheat	annual herb	1B.1	None	None	Apr-Sep(Nov-Dec)	Chaparral, Coastal scrub, Valley and foothill grassland	sandy	3	5	350	1150	T

Eriophyllum jepsonii	Jepson's woolly sunflower	perennial herb	4.3	None	None	Apr-Jun	Chaparral, Cismontane woodland, Coastal scrub	sometimes serpentinite	200	655	1025	3365	T
Eryngium jepsonii	Jepson's coyote thistle	perennial herb	1B.2	None	None	Apr-Aug	Valley and foothill grassland, Vernal pools	clay	3	5	300	985	T
Eschscholzia rhombipetala	diamond-petaled California poppy	annual herb	1B.1	None	None	Mar-Apr	Valley and foothill grassland (alkaline, clay)		0	0	975	3200	T
Extriplex joaquinana	San Joaquin spearscale	annual herb	1B.2	None	None	Apr-Oct	Chenopod scrub, Meadows and seeps, Playas, Valley and foothill grassland	alkaline	1	0	835	2740	T
Fritillaria agrestis	stinkbells	perennial bulbiferous herb	4.2	None	None	Mar-Jun	Chaparral, Cismontane woodland, Pinyon and juniper woodland, Valley and foothill grassland	Clay, sometimes serpentinite	10	30	1555	5100	T
Fritillaria liliacea	fragrant fritillary	perennial bulbiferous herb	1B.2	None	None	Feb-Apr	Cismontane woodland, Coastal prairie, Coastal scrub, Valley and foothill grassland	Often serpentinite	3	5	410	1345	T
Galium andrewsii ssp. gatense	phlox-leaf serpentine bedstraw	perennial herb	4.2	None	None	Apr-Jul	Chaparral, Cismontane woodland, Lower montane coniferous forest	serpentinite, rocky	150	490	1450	4755	T
Grimmia torenii	Toren's grimmia	moss	1B.3	None	None		Chaparral, Cismontane woodland, Lower montane coniferous forest	Openings, rocky, boulder and rock walls, carbonate, volcanic	325	1065	1160	3805	T
Helianthella castanea	Diablo helianthella	perennial herb	1B.2	None	None	Mar-Jun	Broadleafed upland forest, Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland, Valley and foothill grassland	Usually rocky, axonal soils. Often in partial shade	60	195	1300	4265	T
Hesperolinon breweri	Brewer's western flax	annual herb	1B.2	None	None	May-Jul	Chaparral, Cismontane woodland, Valley and foothill grassland	usually serpentinite	30	95	945	3100	T
Holocarpha macradenia	Santa Cruz tarplant	annual herb	1B.1	CE	FT	Jun-Oct	Coastal prairie, Coastal scrub, Valley and foothill grassland	often clay, sandy	10	30	220	720	T
Iris longipetala	coast iris	perennial rhizomatous herb	4.2	None	None	Mar-May	Coastal prairie, Lower montane coniferous forest, Meadows and seeps	mesic	0	0	600	1970	T
Juglans californica	Southern California black walnut	perennial deciduous tree	4.2	None	None	Mar-Aug	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland	alluvial	50	160	900	2955	T
Juglans hindsii	Northern California black walnut	perennial deciduous tree	1B.1	None	None	Apr-May	Riparian forest, Riparian woodland		0	0	440	1445	T
Lasthenia conjugens	Contra Costa goldfields	annual herb	1B.1	None	FE	Mar-Jun	Cismontane woodland, Playas (alkaline), Valley and foothill grassland, Vernal pools	mesic	0	0	470	1540	T

Lathyrus jepsonii var. jepsonii	Delta tule pea	perennial herb	1B.2	None	None	May-Jul(Aug-Sep)	Marshes and swamps (freshwater and brackish)		0	0	5	15	T
Leptosiphon acicularis	bristly leptosiphon	annual herb	4.2	None	None	Apr-Jul	Chaparral, Cismontane woodland, Coastal prairie, Valley and foothill grassland		55	180	1500	4920	T
Madia radiata	showy golden madia	annual herb	1B.1	None	None	Mar-May	Cismontane woodland, Valley and foothill grassland		25	80	1215	3985	T
Malacothamnus hallii	Hall's bush-mallow	perennial evergreen shrub	1B.2	None	None	(Apr)May-Sep(Oct)	Chaparral, Coastal scrub		10	30	760	2495	T
Micropus amphibolus	Mt. Diablo cottonweed	annual herb	3.2	None	None	Mar-May	Broadleafed upland forest, Chaparral, Cismontane woodland, Valley and foothill grassland	rocky	45	145	825	2705	T
Monardella antonina ssp. antonina	San Antonio Hills monardella	perennial rhizomatous herb	3	None	None	Jun-Aug	Chaparral, Cismontane woodland		320	1045	1000	3280	T
Monolopia gracilens	woodland woolythreads	annual herb	1B.2	None	None	(Feb)Mar-Jul	Broadleafed upland forest (openings), Chaparral (openings), Cismontane woodland, North Coast coniferous forest (openings), Valley and foothill grassland	Serpentine	100	325	1200	3935	T
Navarretia gowenii	Lime Ridge navarretia	annual herb	1B.1	None	None	May-Jun	Chaparral		180	590	305	1000	T
Navarretia heterandra	Tehama navarretia	annual herb	4.3	None	None	Apr-Jun	Valley and foothill grassland (mesic), Vernal pools		30	95	1010	3315	F
Navarretia nigelliformis ssp. nigelliformis	adobe navarretia	annual herb	4.2	None	None	Apr-Jun	Valley and foothill grassland vernally mesic, Vernal pools sometimes	clay, sometimes serpentinite	100	325	1000	3280	T
Navarretia nigelliformis ssp. radians	shining navarretia	annual herb	1B.2	None	None	(Mar)Apr-Jul	Cismontane woodland, Valley and foothill grassland, Vernal pools	Sometimes clay	65	210	1000	3280	T
Navarretia prostrata	prostrate vernal pool navarretia	annual herb	1B.1	None	None	Apr-Jul	Coastal scrub, Meadows and seeps, Valley and foothill grassland (alkaline), Vernal pools	Mesic	3	5	1210	3970	T
Oenothera deltoides ssp. howellii	Antioch Dunes evening-primrose	perennial herb	1B.1	CE	FE	Mar-Sep	Inland dunes		0	0	30	100	T
Phacelia phacelioides	Mt. Diablo phacelia	annual herb	1B.2	None	None	Apr-May	Chaparral, Cismontane woodland	rocky	500	1640	1370	4495	T
Piperia michaelii	Michael's rein orchid	perennial herb	4.2	None	None	Apr-Aug	Coastal bluff scrub, Closed-cone coniferous forest, Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest		3	5	915	3000	T

Plagiobothrys glaber	hairless popcornflower	annual herb	1A	None	None	Mar-May	Meadows and seeps (alkaline), Marshes and swamps (coastal salt)		15	45	180	590	T
Polemonium carneum	Oregon polemonium	perennial herb	2B.2	None	None	Apr-Sep	Coastal prairie, Coastal scrub, Lower montane coniferous forest		0	0	1830	6005	F
Puccinellia simplex	California alkali grass	annual herb	1B.2	None	None	Mar-May	Chenopod scrub, Meadows and seeps, Valley and foothill grassland, Vernal pools	Alkaline, vernally mesic; sinks, flats, and lake margins	2	5	930	3050	F
Ranunculus lobbii	Lobb's aquatic buttercup	annual herb (aquatic)	4.2	None	None	Feb-May	Cismontane woodland, North Coast coniferous forest, Valley and foothill grassland, Vernal pools	mesic	15	45	470	1540	F
Sanicula saxatilis	rock sanicle	perennial herb	1B.2	CR	None	Apr-May	Broadleafed upland forest, Chaparral, Valley and foothill grassland	rocky, scree, talus	620	2030	1175	3855	T
Senecio aphanactis	chaparral ragwort	annual herb	2B.2	None	None	Jan-Apr(May)	Chaparral, Cismontane woodland, Coastal scrub	sometimes alkaline	15	45	800	2625	F
Streptanthus albidus ssp. peramoenus	most beautiful jewelflower	annual herb	1B.2	None	None	(Mar)Apr-Sep(Oct)	Chaparral, Cismontane woodland, Valley and foothill grassland	serpentinite	95	310	1000	3280	T
Streptanthus hispidus	Mt. Diablo jewelflower	annual herb	1B.3	None	None	Mar-Jun	Chaparral, Valley and foothill grassland	rocky	365	1195	1200	3935	T
Stuckenia filiformis ssp. alpina	slender-leaved pondweed	perennial rhizomatous herb (aquatic)	2B.2	None	None	May-Jul	Marshes and swamps (assorted shallow freshwater)		300	980	2150	7055	F
Trifolium hydrophilum	saline clover	annual herb	1B.2	None	None	Apr-Jun	Marshes and swamps, Valley and foothill grassland (mesic, alkaline), Vernal pools		0	0	300	985	T
Triquetrella californica	coastal triquetrella	moss	1B.2	None	None		Coastal bluff scrub, Coastal scrub	soil	10	30	100	330	F
Tropidocarpum capparideum	caper-fruited tropidocarpum	annual herb	1B.1	None	None	Mar-Apr	Valley and foothill grassland (alkaline hills)		1	0	455	1495	T
Viburnum ellipticum	oval-leaved viburnum	perennial deciduous shrub	2B.3	None	None	May-Jun	Chaparral, Cismontane woodland, Lower montane coniferous forest		215	705	1400	4595	F

United States Department of the Interior

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

In Reply Refer To: April 18, 2018
Consultation Code: 08ESMF00-2017-SLI-2416
Event Code: 08ESMF00-2018-E-05505
Project Name: EBMUD R3000 Pump Station Staging Area 2 (Crow Canyon Road Study Area)

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

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

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

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

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

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

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

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

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

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

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

Project Summary

Consultation Code: 08ESMF00-2017-SLI-2416

Event Code: 08ESMF00-2018-E-05505

Project Name: EBMUD R3000 Pump Station Staging Area 2 (Crow Canyon Road Study Area)

Project Type: WATER SUPPLY / DELIVERY

Project Description: The Project would be owned and operated by EBMUD and would enhance the provision of recycled water to areas served only by EBMUD within the DERWA system through construction of a new pump station.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/37.78733948250803N121.93260853202709W

Counties: Contra Costa, CA

Endangered Species Act Species

There is a total of 8 threatened, endangered, or candidate species on this species list.

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

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

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

---

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

Mammals

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

Birds

NAME	STATUS
California Least Tern *Sterna antillarum browni* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8104	Endangered

Reptiles

NAME	STATUS
Alameda Whipsnake (=striped Racer) *Masticophis lateralis euryxanthus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5524	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog *Rana draytonii* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander *Ambystoma californiense* Population: U.S.A. (Central CA DPS) There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2076	Threatened

Fishes

NAME	STATUS
Delta Smelt *Hypomesus transpacificus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened

Insects

NAME	STATUS
San Bruno Elfin Butterfly *Callophrys mossii bayensis* There is **proposed** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/3394	Endangered

Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp *Branchinecta lynchi* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened

Critical habitats

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

United States Department of the Interior

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In Reply Refer To: April 26, 2018
Consultation Code: 08ESMF00-2018-SLI-1964
Event Code: 08ESMF00-2018-E-05730
Project Name: EBMUD R3000 Dougherty Road Study Area

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

To Whom It May Concern:

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

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

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

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

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

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

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Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

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

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

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

Project Summary

Consultation Code: 08ESMF00-2018-SLI-1964

Event Code: 08ESMF00-2018-E-05730

Project Name: EBMUD R3000 Dougherty Road Study Area

Project Type: WATER SUPPLY / DELIVERY

Project Description: The Project would be owned and operated by EBMUD and would enhance the provision of recycled water to areas served only by EBMUD within the DERWA system through construction of a new pump station.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/37.7837475228788N121.92423808806936W

Counties: Contra Costa, CA

Endangered Species Act Species

There is a total of 8 threatened, endangered, or candidate species on this species list.

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

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---

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

Mammals

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

Birds

NAME	STATUS
California Least Tern *Sterna antillarum browni* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8104	Endangered

Reptiles

NAME	STATUS
Alameda Whipsnake (=striped Racer) *Masticophis lateralis euryxanthus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5524	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog *Rana draytonii* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander *Ambystoma californiense* Population: U.S.A. (Central CA DPS) There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2076	Threatened

Fishes

NAME	STATUS
Delta Smelt *Hypomesus transpacificus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened

Insects

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NAME	STATUS
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Critical habitats

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

United States Department of the Interior

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In Reply Refer To: April 26, 2018
Consultation Code: 08ESMF00-2018-SLI-1963
Event Code: 08ESMF00-2018-E-05728
Project Name: EBMUD R3000 Lilac Ridge Road Study Area

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

To Whom It May Concern:

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

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

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

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

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

Project Summary

Consultation Code: 08ESMF00-2018-SLI-1963

Event Code: 08ESMF00-2018-E-05728

Project Name: EBMUD R3000 Lilac Ridge Road Study Area

Project Type: WATER SUPPLY / DELIVERY

Project Description: The Project would be owned and operated by EBMUD and would enhance the provision of recycled water to areas served only by EBMUD within the DERWA system through construction of a new pump station.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/37.781594800975114N121.9280192894553W

Counties: Contra Costa, CA

Endangered Species Act Species

There is a total of 8 threatened, endangered, or candidate species on this species list.

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

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---

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Mammals

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

Birds

NAME	STATUS
California Least Tern *Sterna antillarum browni* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8104	Endangered

Reptiles

NAME	STATUS
Alameda Whipsnake (=striped Racer) *Masticophis lateralis euryxanthus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5524	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog *Rana draytonii* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander *Ambystoma californiense* Population: U.S.A. (Central CA DPS) There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2076	Threatened

Fishes

NAME	STATUS
Delta Smelt *Hypomesus transpacificus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened

Insects

NAME	STATUS
San Bruno Elfin Butterfly *Callophrys mossii bayensis* There is **proposed** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/3394	Endangered

Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp *Branchinecta lynchi* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened

Critical habitats

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

APPENDIX D

Mitigation Monitoring and Reporting Plan

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APPENDIX D
MITIGATION MONITORING AND REPORTING PLAN

Impacts Being Mitigated	Mitigation Measure	Responsible for Implementation	Responsible for Monitoring and/or Enforcement	Timing of Implementing	Applicable Sites	
					Site A2	Site A4
Aesthetics						
Impact Aesthetics d) Potential to create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area.	**Mitigation Measure AES-1: Shield Night Lighting.** Stationary lighting used during nighttime construction (if required) shall be shielded and directed downward or oriented such that the light source is not directed toward residential areas or into streets.	EBMUD and EBMUD's Construction Contractor	EBMUD	During Construction	X	X
Biological Resources						
Impact Biology a) Potential to 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.	**Mitigation Measure BIO-1: Conduct Pre-Construction Surveys for California Red-legged Frog.** Within 24 hours before any construction activities that involve ground disturbance or vegetation removal a USFWS approved biologist will conduct pre-construction surveys for California red-legged frog at Site A2. The survey area will include all habitats suitable for these species within a 300-foot buffer of the work limits. Whenever a lapse in project-related construction activity of 2 weeks or greater has occurred these areas will be re-inspected. If California red-legged frog(s) (including eggs, larvae, or adult forms) is/are found during pre-construction surveys, the biologist will contact USFWS and/or CDFW to determine whether their relocation is appropriate and if additional measures are necessary. Construction activities will not proceed until consultation and/or relocation activities are complete. A monitoring report of all activities associated with surveys and mitigation for this species will be submitted to the USFWS and CDFW by EBMUD no later than three months after construction is completed. The monitoring report will describe methods and results of any field survey efforts and mitigation measures implemented before, during or after project construction.	EBMUD and EBMUD's Construction Contractor	EBMUD	Prior to Construction	X	
	Mitigation Measure BIO-2: Wildlife Exclusion Fencing. A multi-purpose protective barrier (such as silt fencing) or CDFW-approved species exclusion fencing shall be constructed at Site A2 to deter common and special status wildlife in West Alamo Creek riparian corridor from entering into the Project construction work limits. Fence installation shall be overseen by a qualified biologist. The fence shall be a minimum height of 3 feet above ground surface and with an additional 4-6 inches of fence material buried such that species cannot crawl under the fence. The fencing will be installed along the south boundary of Site A2, starting from Dougherty Road and extending 265 linear feet west to the West Alamo Creek Trail. The barrier shall be installed adjacent to the existing chain-link fence, where feasible. At the southeastern boundary of Site A2, the exclusion fence shall extend 90 linear feet to the south along the existing chain-link fence.	EBMUD and EBMUD's Construction Contractor	EBMUD	Prior to Construction	X	

Impacts Being Mitigated	Mitigation Measure	Responsible for Implementation	Responsible for Monitoring and/or Enforcement	Timing of Implementing	Applicable Sites	
					Site A2	Site A4
Biological Resources (cont.)						
Impact Biology a) Potential to 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. (cont.)	• The fencing will contain one-way egress for sensitive species to the extent possible; • Signage shall be installed on the fencing to identify sensitive habitat areas and restrict construction activities; • No equipment mobilization, grading, clearing, or storage of equipment or machinery, or similar activity shall occur at the project site until a qualified biologist has inspected and approved the wildlife exclusion fencing; and • The District shall ensure that the temporary fencing is continuously maintained until all construction is complete.					
Cultural Resources						
Impact Cultural c) Potential to directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	**Mitigation Measure CUL-1: Paleontological Resources Monitoring and Mitigation Program.** a) A professional paleontologist shall provide sensitivity training to supervisory staff to alert construction workers to the possibility of exposing significant paleontological resources within the Project area. The training shall be conducted as defined by the Society of Vertebrate Paleontology's Conformable Impact Mitigation Guidelines Committee (1995), to recognize fossil materials in the event that any are uncovered during construction. This training shall be specific to paleontological resources and supplement the cultural resources training required by EBMUD specification 01 35 44, Environmental Requirements, Section 3.9, Protection of Cultural and Paleontological Resources. b) An "Alert Sheet" shall be posted in staging areas, such as in construction trailers, to alert personnel to the procedures and protocols to follow for the discovery of unique paleontological resources. c) During construction, earth-moving activities shall be monitored by a qualified paleontological consultant having expertise in California paleontology. In the event that a paleontological resource is uncovered during Project construction, all ground disturbing work within 100 feet shall be halted. A qualified paleontologist shall inspect the discovery and determine whether further investigation is required. d) If the discovery can be avoided and no further impacts will occur, no further effort shall be required. If the resource cannot be avoided and may be subject to further impact, a qualified paleontologist shall evaluate the resource and determine whether it is "unique" under CEQA, Appendix G, part V.	EBMUD and EBMUD's Construction Contractor	EBMUD	Prior to and During Construction	X	X

Impacts Being Mitigated	Mitigation Measure	Responsible for Implementation	Responsible for Monitoring and/or Enforcement	Timing of Implementing	Applicable Sites	
					Site A2	Site A4
Cultural Resources (cont.)						
Impact Cultural c) Potential to directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. (cont.)	e) If the resource is determined not to be unique, work may commence in the area. If the resource is determined to be a unique paleontological resource, work shall remain halted, and the paleontologist shall, if necessary, develop appropriate treatment measures in conformance with Society of Vertebrate Paleontology (SVP) standards, and in consultation with EBMUD. f) Treatment would ensure that the fossils are recovered, prepared, identified, catalogued, and analyzed according to current professional standards under the direction of a qualified paleontologist. All recovered fossils shall be offered to be curated at an accredited and permanent scientific institutions according to SVP standard guidelines for curation. Work may commence upon completion of treatment.					
Mandatory Findings of Significance						
Impact Mandatory Findings a) Potential for the project to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, 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.	**Mitigation Measure AES-1: Shield Night Lighting.** (see Impact Aesthetics d, above) **Mitigation Measure BIO-1: Conduct Pre-Construction Surveys for California Red-legged Frog.** (see Impact Biology a, above) **Mitigation Measure BIO-2: Wildlife Exclusion Fencing.** (see Impact Biology a, above) **Mitigation Measure CUL-1: Paleontological Resources Monitoring and Mitigation Program.** (see Impact Cultural c, above)	See above	EBMUD	See above	X	X
Impact Mandatory Findings c) Potential to have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.	**Mitigation Measure AES-1: Shield Night Lighting.** (see Impact Aesthetics d, above) **Mitigation Measure BIO-1: Conduct Pre-Construction Surveys for California Red-legged Frog.** (see Impact Biology a, above) **Mitigation Measure BIO-2: Wildlife Exclusion Fencing.** (see Impact Biology a, above) **Mitigation Measure CUL-1: Paleontological Resources Monitoring and Mitigation Program.** (see Impact Cultural c, above)	See above	EBMUD	See above	X	X

Appendix E

SAN RAMON VALLEY RECYCLED WATER PROGRAM PUMP STATION R3000 PROJECT

Response to Comments on Initial Study and Mitigated Negative Declaration

Prepared for

East Bay Municipal Utility District

June 2019

ESA

Appendix E

SAN RAMON VALLEY RECYCLED WATER PROGRAM PUMP STATION R3000 PROJECT

Response to Comments on Initial Study and Mitigated Negative Declaration

Prepared for

East Bay Municipal Utility District

June 2019

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CHAPTER 1
Introduction

This Response to Comments document has been prepared as Appendix E to the Initial Study/Mitigated Negative Declaration (IS/MND) for the East Bay Municipal Utility District's (EBMUD; Lead Agency) San Ramon Valley Recycled Water Program Pump Station R3000 Project (Project). The MND evaluated the potential impacts of the proposed Project and recommended mitigation measures to reduce significant and potentially significant impacts. This appendix responds to comments on and makes revisions to the MND as necessary. The California Environmental Quality Act (CEQA) and its implementing regulations (the "CEQA Guidelines") require the lead agency to, prior to approval of a project, consider the proposed MND together with any comments received during the public review process. Together with the MND, this Appendix E Response to Comments document constitutes the Final MND for the Project.

1.1 Initial Study Public Review Process

On October 8, 2018, EBMUD, as the Lead Agency under the California Environmental Quality Act (CEQA), released the IS/MND for the Project for public review and filed a Notice of Intent (NOI) with the Governor's Office of Planning and Research to begin a 30-day public review period (Section 15073 of the CEQA Guidelines). Concurrent with issuance of the NOI, the IS/MND was made available to responsible and trustee agencies, other affected agencies, and interested parties. During the public review period the IS/MND was available for review at the following locations:

- East Bay Municipal Utility District, 375 11th Street, Oakland, CA 94607
- EBMUD website: http://www.ebmud.com/r3000
- City of San Ramon Library, 100 Montgomery Street, San Ramon, CA 94583

Public meetings were held on October 17, 2018 and November 13, 2018, at the Castenada Service Yard in the City of San Ramon to receive comments on the IS/MND. The public review period ended on December 7, 2018.

This Response to Comments document has been prepared based on the comments received during the public comment period.

1.2 CEQA Requirements

EBMUD has prepared this document pursuant to Section 15074 of the CEQA Guidelines, which specifies that "Prior to approving a project, the decision-making body of the lead agency shall consider the proposed negative declaration or mitigated negative declaration together with any comments received during the public review process."

1.3 Organization of this Document

This response to comment contains four chapters and one appendix:

- Chapter 1 is the introduction to the Response to Comments document.
- Chapter 2 presents the responses to comments on the IS/MND. Where multiple comments relate to similar issues, responses are provided with Master Responses. Multiple individuals provided the same comment letter (i.e., a "form letter"), so joint responses have been prepared to address these letters. Following these joint responses are the individual letter responses.
- Chapter 3 includes text changes to the IS/MND.
- Chapter 4 contains copies of the complete comments received during the public review period.
- Appendix A includes additional detail regarding the alternative site selection process.

Submittals include letters, emails and comment cards from the public meetings on the IS/MND. Each submittal received is listed in **Table 1-1** and identified by number, comment author, and date. Table 1-1 also indicates joint submittals (i.e., form letters submitted by multiple individuals). Each submittal has been assigned a letter code based on the initials and last name of the commenter or agency/organization acronym. Individual comments within each submittal have been assigned an alphanumeric identification code based on the submittal code and comment number; for example, the first comment in the letter from the California Department of Transportation (Caltrans) is Caltrans-1.

TABLE 1-1
LIST OF COMMENTERS

Submittal Code	Comment Author	Date	Joint Comment Letter? (Yes/No), Form Letter #
Caltrans	Patricia Maurice	December 3, 2018	No
Babul, S	Shaheen Babul	November 13, 2018	Yes, Form Letter 1
Babul, Z.1	Zaheer Babul	October 18, 2018	No
Babul, Z.2	Zaheer Babul	November 7, 2018	Yes, Form Letter 1
Balaka, J	Jyothi Balaka	November 15, 2018	Yes, Form Letter 3
Bauer, L	Leo Bauer	October 23, 2018	No
Bommadevara, S	Seshagiri Bommadexara	October 11, 2018	Yes, Form Letter 2
Chakrabarti, R	Rita Chakrabarti	October 22, 2018	No
Cheriyathmadam, A	Anand Cheriyathmadam	November 13, 2018	Yes, Form Letter 1
Emany, M	Maruth Emany	October 12, 2018	No
Flicek, D	Deborah Flicek	October 17, 2018	No
Fu, X	Xiaodong Fu	November 18, 2018	No
Goundar, N	Nal Raj Goundar	October 11, 2018	Yes, Form Letter 2
Janbakhsh, M	Mahmoud Janbakhsh	November 15, 2018	Yes, Form Letter 3
Karmalawy, Y.1	Yara Karmalawy	October 17, 2018	No
Karmalawy, Y.2	Yara Karmalawy	October 17, 2018	No
Karmalawy, Y.3	Yara Karmalawy	October 18, 2018	No
Karmalawy, Y.4	Yara Karmalawy	October 19, 2018	No
Karmalawy, Y.5	Yara Karmalawy	November 13, 2018	No
Kelshikar, S.1	Shital Kelshikar	October 17, 2018	No
Kelshikar, S.2	Shital Kelshikar	October 24, 2018	No
Lahiji, C.1	Christopher Lahiji	October 17, 2018	No
Lahiji, C.2	Christopher Lahiji	November 15, 2018	No
Lee, C	Cindy Lee	November 17, 2018	No
Lee, D	Deborah Lee	October 11, 2018	No
Lee, S	Spencer Lee	October 11, 2018	Yes, Form Letter 2
Leww, Y	Yung Leww	October 30, 2018	No
Louie, M.1	Marie Louie	October 11, 2018	Yes, Form Letter 2
Louie, M.2	Marie Louie	October 17, 2018	No
Louie, M.3	Marie Louie	October 21, 2018	Yes, Form Letter 4
Lucey, R	Richard Lucey	October 17, 2018	No
L.Marpu	Lalasa Marpu	November 15, 2018	Yes, Form Letter 3
Nalam, N.1	Naveen Nalam	October 16, 2018	No
Nalam, N.2	Naveen Nalam	October 17, 2018	No
Nalam, N.3	Naveen Nalam	December 7, 2018	No
O'Hanlon, J	John O'Hanlon	October 27, 2018	No
Panconi, M	Michael Panconi	October 15, 2018	No

TABLE 1-1 (CONTINUED)
LIST OF COMMENTERS

Submittal Code	Comment Author	Date	Joint Comment Letter? (Yes/No), Form Letter #
Peng, D	Dinghua Peng	October 17, 2018	No
Pham, N	Nhan Pham	October 9, 2018	No
Potti, S	Shashi Potti	November 13, 2018	Yes, Form Letter 1
Puppala, K	Kiran Puppala	November 30, 2018	Yes, Form Letter 3
Setty, M	Madhavi Setty	November 13, 2018	Yes, Form Letter 1
Shen, J.1	James Shen	October 17, 2018	No
Shen, J.2	James Shen	October 29, 2018	No
Shen, J.3	James Shen	November 13, 2018	Yes, Form Letter 1
Shen, J.4	James Shen	December 7, 2018	No
Sinha, A.1	Ajit K Sinha	November 11, 2018	No
Sinha, A.2	Ajit K Sinha	December 6, 2018	No
Supekar, B	Binnu Supekar	December 7, 2018	No
Tang, F.1	Francis Tang	October 15, 2018	No
Tang, F.2	Francis Tang	October 16, 2018	No
Tang, F.3	Francis Tang	October 17, 2018	No
Veerapareddy, P	Prasanth Veerapareddy	November 13, 2018	Yes, Form Letter 1
Wen, Y	Yu Wen	October 21, 2018	Yes, Form Letter 4
Wu, J	Jian Wu	November 15, 2018	Yes, Form Letter 3
Zhao, A	Angela Zhao and Joe Osborn	October 12, 2018	Yes, Form Letter 2

CHAPTER 2
Response to Comments

2.1 Master Responses

2.1.1 Master Response 1 – Construction Impacts at Site A4

Commenters expressed concern about construction impacts at Site A4, specifically related to construction noise, debris, traffic and safety, and emissions and dust. This Master Response addresses these comments and summarizes relevant information from the Draft Initial Study/Mitigated Negative Declaration (IS/MND) about the impacts of constructing the Project at Site A4.

Construction Noise

Commenters expressed general concern about noise from construction activities for the proposed pump station at Site A4 and associated pipeline.

Noise and its associated impacts are discussed in the IS/MND, Section 2.2.12, Noise. As discussed in Section 2.2.12 (page 2-94), at the nearest residences to the south of Lilac Ridge Road, the maximum noise levels from construction equipment (without implementation of EBMUD standard practices and procedures, discussed below) at Site A4 would be 66 A-weighted decibels (dBA)[1], which would be below the 70 dBA speech interference threshold. At the nearest residences on Laurelspur Loop, the maximum construction noise levels (without implementation of EBMUD standard practices and procedures, discussed below) for the proposed pump station would attenuate to 77 dBA, which would exceed the speech interference threshold of 70 dBA. In addition, pipeline construction for Site A4 would occur less than 100 feet from sensitive receptors in some locations and would lead to short-term increased noise levels and potential exceedance of the speech interference threshold at the residences on Lantana Way, Sky Jasmine Way, Laurelspur Loop, and the receptors at Coyote Creek Elementary School.

However, as detailed in the Project Description, a number of East Bay Municipal Utility District (EBMUD) standard practices and procedures applicable to all EBMUD projects have been incorporated into the Project, including:

[1] Refer to IS/MND Section 2.2.12, Noise, for definitions of the terms used in this response.

- Standard Construction Specification 01 14 00, Work Restrictions, Section 1.4, Work Hours, and Section 1.8, Construction Noise; and
- Standard Construction Specification 01 35 44, Environmental Requirements, Section 3.6, Noise Control.

These EBMUD Standard Construction Specifications are discussed in Section 2.2.12 (pages 2-95 to 2-97) and include measures to restrict the hours for operation of construction equipment and minimization measures for noise control of construction equipment, which include requiring the use of noise control devices on construction equipment, locating noise sources farthest from receptors, and limiting construction to the less noise-sensitive daytime hours. As standard practices and procedures applicable to all EBMUD projects, these requirements would be incorporated into the Project, reducing noise levels to less than the 70 dBA speech interference threshold and ensuring that Project impacts from short-term construction noise would be less than significant.

Construction Debris

Commenters were concerned about the potential for debris and heightened rodent activity from construction activities for the proposed pump station at Site A4 and the associated pipelines.

Construction debris and its associated impacts are discussed in the IS/MND, Section 2.2.18, Utilities and Service Systems. As discussed in Section 2.2.18 (page 2-120), construction at Site A4 would require approximately 1,040 cubic yards of soil to be hauled away during pump station construction and approximately 4,160 cubic yards during pipeline construction. Solid waste generation would be limited to construction activities. As detailed in the Project Description, a number of EBMUD standard practices and procedures applicable to all EBMUD projects have been incorporated into the Project including:

- Standard Construction Specification 01 35 44, Environmental Requirements, Section 1.3.C, Construction and Demolition Waste Disposal Plan.

This EBMUD Standard Construction Specification is discussed in Section 2.2.18 (pages 2-120 to 2-121) and requires preparation of and compliance with a Construction and Demolition Waste Disposal Plan during Project construction, which would include provisions for identifying disposal methods for soil and the approved disposal site. The plan will also identify how the Contractor would remove, handle, transport, and dispose of all materials in a safe, appropriate, and lawful manner. The removed debris would include construction materials, soil, and trash. As standard practices and procedures applicable to all projects, this same requirement would be incorporated, ensuring that Project impacts from short-term construction debris would be less than significant.

Construction Traffic and Safety

Commenters were concerned about the disruption of drop-off and pick-up activities at Coyote Creek Elementary School during Project construction, as well as the safety of

pedestrians. Commenters also expressed concern about potential traffic delays during construction of the proposed pump station at Site A4 and its associated pipeline.

Construction traffic and safety and work hours and the associated impacts are discussed in the IS/MND, Section 1.0, Project Description and Section 2.2.16, Transportation and Traffic. As described in Section 1.5 (page 1-14) and Section 2.2.16 (page 2-113), there would be no construction activity for the pipeline associated with Site A4 on North Gale Ridge Road during the normal school year for Coyote Creek Elementary School. Additionally, as shown on Figure 2 (page 1-4 of the IS/MND), construction staging would not occur on Lilac Ridge Road or North Gale Ridge Road.

To better characterize the potential for traffic impacts associated with Site A4—particularly around Coyote Creek Elementary School-- the table below indicates the number of construction vehicle trips that would be expected during critical times of day. As the table shows, the construction activities at Site A4 would only add a small number of additional vehicles to nearby roadways during peak periods and school pick-up and drop-off. A capacity of 1,600 vehicles per hour per lane (i.e., 3,200 two-way vehicles per hour for a two-lane roadway) on local-serving roadways is assumed based on guidance provided in the Highway Capacity Manual (HCM) (Transportation Research Board, 2010). The potential period of overlap between pump station and pipeline construction represents the theoretical “worst case scenario” for construction traffic impacts. Even under that scenario, project construction vehicles would only add a maximum of 18 vehicle trips per hour, a 1% percent increase in total vehicles per hour per lane on a local-serving roadway. These local roads would accommodate the Project-generated truck and worker vehicle trips, which would be dispersed throughout the day. There is no evidence that these modest increases would create delays or safety hazards during Coyote Creek Elementary School drop-off and pick-up activities.

Construction Phase	Approximate Duration in Months	AM Peak/School Drop-Off Trips Per Hour (7-9:30 AM)	PM School Pick-Up Trips Per Hour (2-3:15 PM)	PM Peak Trips (5-7 PM)
Excavation	0.5	2-3 trucks	2-3 trucks	5 worker vehicles dispersed over the 5-7pm peak period.
Pump Station Construction	24	5 worker vehicles prior to 7:30 AM; 4-5 trucks after 9 AM	9-10 trucks	5 worker vehicles dispersed over the 5-7pm peak period.
Pipeline Construction	4	13 worker vehicles prior to 7:30 AM; 3-4 trucks after 9 AM during construction on Lilac Ridge Road. No trucks during construction on North Gale Ridge Road.	6-7 trucks during construction on Lilac Ridge Road. No trucks during construction on North Gale Ridge Road.	13 worker vehicles dispersed over the 5-7pm peak period.
Potential Pump Station/Pipeline Construction Overlap	4	18 worker vehicles prior to 7:30 AM; 7-9 trucks after 9 AM during pipeline construction on Lilac Ridge Road. No trucks during construction on North Gale Ridge Road.	15-17 trucks during pipeline construction on Lilac Ridge Road. No trucks during construction on North Gale Ridge Road.	18 worker vehicles dispersed over the 5-7pm peak period.

Assumptions:

- All truck trips occur between 9 am - 4 pm.
- 7:30 am to 7 pm construction hours.
- Assume workers arrive prior to 7:30 and leave during peak PM hour.
- Excavation requires 17 trucks per day.
- Pump station construction requires 64 trucks per day.
- Pipeline construction requires 36 trucks per day.

Table 10 under Section 2.2.16 on page 2-109 of the IS/MND has been revised to correct errors as follows:

REVISED TABLE 10
MAXIMUM TRUCK AND WORKER TRIPS DURING CONSTRUCTION

Construction Phase	Site A2			Site A4		
	Approximate Duration (months)	Maximum trucks (per day; one way trips)	Maximum Worker vehicles (per day; one way trips)	Approximate Duration (months)	Maximum trucks (per day; one way trips)	Maximum Worker vehicles (per day; one way trips)
Pump Station Construction	24	64	10	24	64	10
Excavation	0.5	~~46~~ 4	--	0.5	~~232~~ 17	--
Pipeline Construction[a]	--	--	--	4	4 36	26

NOTE:

[a] Pipeline construction for Site A2 would occur in concurrence with the pump station construction, so the haul trucks and trips per day are included as part of the total estimate provided for the Site A2 pump station construction.

Pursuant to EBMUD Standard Construction Specification 01 14 00, the work hours for haul trucks would be limited to between 9:00 a.m. and 4:00 p.m. to prohibit haul truck traffic during commute hours. Therefore, haul trucks would not be on the roadways during the peak traffic hours during the morning and evening. In addition, the description of Site A4 pipeline construction on p. 1-16 of the IS/MND has been modified to clarify that signage and flaggers would be used along Lilac Ridge and North Gale Ridge Roads, including near Coyote Creek Elementary School, to ensure vehicle and pedestrian safety as follows (single underlined text represents language that has been added to the IS/MND):

> As shown in Figure 4, the supply pipeline would be installed in the Reservoir R200 access road, and the discharge pipeline would be installed in the Reservoir R200 access road, Lilac Ridge Road, and North Gale Ridge Road, turning north on Dougherty Road and connecting to the existing recycled water pipeline in Dougherty Road. The trench typically would be up to three feet wide and seven feet deep, to account for existing buried pipelines. A minimum construction corridor width of 10 feet would be needed to accommodate pipeline storage and to allow trucks and equipment access along the trench. In some areas where the pipeline would need to be installed at greater depth to avoid other utilities, a wider trench and construction easement of up to 15 feet would be required. Other construction activities, such as the installation of pipeline connections, could also require larger excavations. One lane of Lilac Ridge Road and North Gale Ridge Road is anticipated to be closed during pipeline construction and connection. One-way traffic control around the construction site would be implemented in order to reduce traffic road congestion. It is expected that one or two lanes would be closed during non-commute hours on either the southbound or northbound side of Dougherty Road during pipeline construction (from Site A4 to the recycled water transmission main in Dougherty Road), with traffic being funneled into the remaining available lane(s). Traffic control measures (e.g., signage, flaggers) would be implemented in order to route traffic around the construction areas along Lilac Ridge and North Gale Ridge Roads, including near Coyote Creek Elementary School, to ensure vehicle and pedestrian safety.

Further, as stated in Section 2.2.16 (pages 2-111 to 2-112), EBMUD Standard Construction Specification 01 55 26, Traffic Regulation, requires a Traffic Control Plan that includes circulation and detour plans to maintain local street circulation, a description of access for emergency response vehicles, procedures to schedule Project construction to reduce overlapping truck hauling, designated contractor staging areas, and locations for construction worker parking. Because EBMUD's Standard Construction Specification 01 55 26, has been incorporated into the Project and includes provisions for traffic circulation and detour plans (for automobiles, bicycles, and pedestrians), Project impacts from short-term construction traffic delays and traffic safety would be less than significant.

For all of the reasons stated above, there is no evidence that the Project construction at Site A4 would cause significant traffic impacts.

Construction Emissions and Dust

Commenters were concerned about exposing sensitive receptors to construction-related dust and emissions.

Construction emissions, dust, and related impacts are discussed in the IS/MND, Section 2.2.3, Air Quality. As stated in Section 2.2.3 (pages 2-17 to 2-21), Project construction would result in short-term diesel exhaust emissions, including diesel particulate matter. Table 6 on page 2-18 of the IS/MND includes estimates of particulate emissions from construction exhaust. Exposure to these emissions would cease following the completion of construction; further, at less than 2 pounds per day, emissions would be well below the significance thresholds for PM_{10} and $PM_{2.5}$ of 82 and 54 pound per day, respectively, as established by the Bay Area Air Quality Management District (BAAQMD).

As detailed in the Project Description, a number of EBMUD standard practices and procedures applicable to all EBMUD projects have been incorporated into the Project including:

- Standard Construction Specification 01 35 44, Environmental Requirements, specifically, Section 1.3.I, Tune-up Logs, Section 3.3.B, Dust Control, and Section 3.4, Emissions Control.

This EBMUD Standard Construction Specification, discussed in Section 2.2.3 (pages 2-18 to 2-25), is consistent with recommended measures from the BAAQMD to reduce dust and construction equipment exhaust emissions and includes measures such as implementation of a Dust Control and Monitoring Plan (to reduce impacts from fugitive dust), standard air emission controls like minimizing the use of diesel generators, and tune-up logs that provide records of construction equipment used at the Project sites.

Implementation of Section 1.3.E, Dust Control and Monitoring Plan, and Section 3.3.B, Dust Control, of EBMUD's Standard Construction Specification 01 35 44 ensures that dust generated by short-term construction activities would be monitored and controlled to reduce construction dust emissions. Section 3.4.A of Standard Construction Specification 01 35 44 includes requirements that would reduce emissions from construction equipment and exposure to receptors. These are described in the IS/MND, pages 2-19 to 2-22. As standard practices and procedures applicable to all projects, this same requirement would also be incorporated, ensuring that Project impacts from short-term construction emissions and dust would be less than significant.

2.1.2 Master Response 2 – Operational Noise

Commenters were concerned about potential noise from pump operations at Site A4, particularly at night. This Master Response summarizes information from the IS/MND about noise from pump station operations at both Site A4 and Site A2 and provides additional information in response to specific requests from commenters.

The pumps will be constructed in an enclosed building with sound attenuating materials to reduce noise. Proper ventilation with air vents is required for the pump station building. The vents will include acoustical louvers with noise absorbing material to reduce noise levels while allowing air circulation in the pump station building. Louvers, doors, and windows would be located facing away from nearest residences to reduce noise impacts. The electrical transformer will also be enclosed for sound attenuation.

Noise and its associated impacts are discussed in the IS/MND, Section 2.2.12, Noise. As stated in Section 2.2.12 (page 2-98), the simultaneous operation of the three pumps and transformer at Site A4 during the daytime would produce a noise level of 39.4 dBA at the closest residences.[2] Operational noise would not be audible over the existing ambient noise level of 50.4 dBA, Leq.[3]

Noise from the pump station at Site A4 would increase the existing nighttime noise level at the nearest receptors (42 dBA) by 1.9 dB, which is below the San Ramon General Plan 2035 (General Plan) standards (which state that in noise environments less than 60 dBA day-night noise level [DNL], an increase of up to 5 dB would not be significant).

An increase of 3 dBA is barely perceptible, while an increase of 5 dBA is readily perceptible.[4] As the increase in nighttime noise from the operation of the pump station would be less than 3 dBA, it would be below the General Plan threshold and also not audible to receptors at nearby homes.

At Site A2, the simultaneous operation of the three pumps and transformer would produce a noise level of 36.5 dBA at the closest residences; this level would not be audible over the existing ambient noise level of 49.6 dBA. Noise from the pump station at Site A2 would increase the existing nighttime noise level at the nearest receptors (42 dBA) by 1.1 dB, which is below the General Plan standards, which state that in noise environments less than 60 dBA DNL, a project noise increase of up to 5 dB would not be significant. Please refer to Section 2.2.12 (pages 2-97 to 2-98), for more information about noise.

2.1.3 Master Response 3 – Cost of Project Construction and Construction Duration

Commenters were concerned about the cost and duration of Project construction at Site A4 and the associated pipeline, specifically the trenching and repaving for the pipeline and excavation of the hillside. This Master Response summarizes information from the IS/MND about the construction duration of the Project, for Site A4.

[2] The referenced distances were measured as ground distances in Google Earth. The measurements were taken from the southeast corner of Site A4 to the nearest residence in the Capella at Gale Ranch development (i.e., approximately 170 feet), and from the middle of the south boundary of the site to the nearest residence in the Bridges at Gale Ranch development (i.e., approximately 350 feet).

[3] Refer to IS/MND Section 2.2.12, Noise, for definitions of the terms used in this response.

[4] California Department of Transportation, Technical Noise Supplement – A Technical Supplement to the Traffic Noise Analysis Protocol, September 2013.

Regarding the cost of the Project, the purpose of documents prepared pursuant to the California Environmental Quality Act (CEQA) is to identify a project's effects on the physical environment; consequently, Project cost is not addressed in the IS/MND. The total Project cost, including planning, design, and construction, is estimated to be approximately $7 million.

Project construction is described in the IS/MND, Section 1.0, Project Description. As noted in Section 1.5 (page 1-10), construction of the pump station at Site A4 would require mobilization, excavation/site work, pump station construction, backfill, landscaping/site restoration, and demobilization. Pipeline construction would include mobilization, pipeline installation, landscaping/site restoration, and demobilization. Construction of the pump station would take about 24 months and would occur sometime between 2020 and 2024. Construction of the pipeline would take about 4 months within the same time frame.

As described in Section 1.5 (page 1-13), the total volume of soil to be hauled during excavation at Site A4 is approximately 1,040 cubic yards, but this would not level the hillside (which some commenters assert would occur, increasing the cost of the Project). A 16-foot tall retaining wall would be constructed to maintain the hillside away from the pump station facilities.

Please refer to Section 1.0, Project Description, for more information on Project construction.

2.1.4 Master Response 4 – Visual Impacts

Commenters were concerned about the visibility of Site A4 from nearby homes, and the aesthetic impacts of the pump station at Site A4 and Site A2 on the surrounding community. This Master Response summarizes information from the IS/MND about the visual impacts of the Project for both Site A4 and Site A2.

Aesthetics and visual impacts are discussed in the IS/MND, Section 2.2.1, Aesthetics (page 2-4). Pursuant to the CEQA Guidelines Section 15063, the analyses in the IS/MND are based on the Appendix G: Environmental Checklist Form from the 2018 CEQA Guidelines. The criteria in the checklist for evaluating aesthetic impacts include the consideration of effects on a scenic vista, potential damage to scenic resources (such as trees, rock outcroppings, and historic buildings along a state scenic highway), degradation of the existing visual character or quality of a site and its surroundings, and creation of a new source of light or glare. The General Plan implementing Policy 8.3-I-13 focuses on public views of the surrounding natural hillsides, and not private views. Consistent with CEQA and the General Plan, the analysis in the IS/MND emphasizes potential visual impacts from publicly accessible location (i.e., streets and trails) in the Project vicinity.

As discussed in Section 2.2.1 (page 2-6), while the pump station at Site A4 would be visible from parts of Lilac Ridge Road and Lantana Way, and slightly visible from the corner of Sky Jasmine Way and Laurelspur Loop, because of its location, elevation, and

scale, the pump station would not obstruct views of adjacent ridgelines, which are considered a scenic resource. The pump station would not be visible from Cattleya Drive due to existing vegetation and intervening topography as shown in the photo below. Although the site can be seen from portions of the West Alamo Creek Trail, based on a site survey on July 28, 2016, it is mostly obscured by intervening topography and vegetation such as grasses and shrubs, and would not significantly diminish views from the trail because the pump station building would not obstruct views of adjacent ridgelines, which are considered a scenic resource. There are no scenic highways or other scenic resources nearby or adjacent to Site A4.

Under criterion c of the Appendix G: Environmental Checklist Form from the 2018 CEQA Guidelines, evaluation of the potential effect of a project considers if a project would substantially degrade the existing visual character or quality of the site and its surroundings.

As discussed in Section 2.2.1, under criterion c (page 2-9), the pump station at either location would change the existing visual character of the site. The existing site for A4 is on a hillside currently covered by grasses and shrubs. Neighboring uses include the access road and manmade features (fencing, stairs, etc.) associated with Reservoir R200 near Site A4. Site A2 is currently occupied by trees and shrubs. The vegetation at either site would be replaced by a building, electrical equipment, and a paved parking area. The transition from natural to manmade elements on the site would be softened with landscaping along portions of the perimeter of the pump station (refer to Figure 3 [page1-5] and Figure 4 [page 1-6] of the IS/MND). Based on the landscaping screening, the design would be consistent with the architectural styles of the surrounding neighborhood, and similar to surrounding manmade features, and therefore would not cause significant visual impacts.

In addition, as stated in Section 1.4 (page 1-7), the proposed pump station building would be designed to match the architectural styles of surrounding subdivisions, including a beige-colored building with a slanted, clay-tiled roof. The proposed pump station would also be similar to the height and massing of surrounding structures, including residences and other manmade features.

A public outreach meeting focused on the new recommendation of Site A2 was held in the City of San Ramon on July 7, 2016, to solicit input early in the planning phase. The Project architectural design was based on similar designs of public spaces in the area to be consistent with the neighborhood aesthetic. Several public structures in the area, including the Bridges Golf Course Club House, entrance posts to Alta Vista subdivision, and the nearby Valley View Recycled Water Pump Station owned and operated by Dublin San Ramon Services District, include stucco buildings of similar mass, beige coloring, and slanted tile roofs. Project elements and architectural and landscape designs and were presented to the City's Architectural Review Board on August 9, 2018. Postcards were sent to residents in the vicinity of the A2 and A4 sites prior to the release of the draft MND on October 5, 2018. Public outreach meetings occurred during the MND review period on October 17 and November 13, 2018. Based on comments received from the Architectural Review Board and from the public regarding project

aesthetics during the public outreach period, the project design was revised to remove security fencing (at Site A2),to provide a darker tiled roof, and incorporate additional evergreen shrubbery to better blend with the surrounding landscape. The revised architectural renderings for Site A2 were presented to the EBMUD Planning Committee on May 14, 2019, and are presented below.

Emails informing the public about the Planning Committee presentation were sent to those that attended previous public meetings on April 4, May 3, and May 10, 2019 and individuals that submitted comments on the MND. A notice of the Planning Committee meeting was also posted on the Project website. A copy of the staff report to the Planning Committee was included in the May 10, 2019, email and was also available on EBMUD's website prior to the Planning Committee meeting. No members of the public commented on the pump station during the planning committee meeting.

View of A4 from Cattleya Drive

Rendering of Proposed Pump Station at Site A2, looking southwest from Dougherty Road

Rendering of Proposed Pump Station at Site A2, looking northwest from Dougherty Road

Because landscaping would be incorporated into the Project, and the size and design of the pump station building would match the architectural styles of surrounding subdivisions and be consistent with the surrounding manmade features, the Project would not substantially degrade the existing visual character or quality of the site and its surroundings, including when viewed from West Alamo Creek Trail.

2.1.5 Master Response 5 – Fire Risk

Commenters were concerned about the fire risk in the community due to construction and operation of the pump station at Site A4. This Master Response summarizes information from the IS/MND about the fire hazards of the Project and presents additional information to fully respond to comments regarding fire risk.

The pump station would use electricity supplied by Pacific Gas and Electric (PG&E) through a 480 volt 300 kVA transformer. The pump station would connect to nearby existing underground power lines. The distribution panel, switchgear, and motor control center would be located outside of the pump station building, but within the boundary of the site. Hazards, hazardous materials, and their associated impacts are discussed in the IS/MND, Section 2.2.8, Hazards and Hazardous Materials. Section 2.2.8 (pages 2-73 to 2-75) addresses fire hazards at both Site A2 and Site A4. As detailed in the Project Description, a number of EBMUD standard practices and procedures applicable to all EBMUD projects have been incorporated into the Project including:

- Standard Construction Specification 01 35 24, Project Safety Requirements, Section 1.6, Fire Prevention and Protection.

This specification would be implemented to reduce fire hazards in the Project area during construction. These standard specifications and standard practices are designed to address typical characteristics of EBMUD construction projects and are not project-specific or tailored to the unique characteristics of the Project. These standard specifications and standard practices, which are applicable to all EBMUD projects and reflect generally applicable EBMUD standard operating procedures. Refer to Section 2.2.8 (page 2-75) for further discussion regarding wildland fires. There is no evidence that installation of the pump station presents a substantial fire risk.

Section 2.2.8 (page 2-75) of the IS/MND has been revised as follows to address operational fire hazards (<u>single underlined text</u> represents language that has been added to the IS/MND, and ~~strikethrough text~~ represents language that has been removed from the IS/MND):

> ~~Once constructed, the new facilities at either site could provide a source of fuel for wildfires during operation of Pump Station R3000 if surrounding vegetation is not appropriately managed. However, as part of EBMUD's Standard Construction Specifications Section 01 35 24, Project Safety Requirements Section 1.6, Fire Prevention and Protection, the site would include a defensible space, as well as would be supplied and maintained with firefighting equipment. This defensible space would be maintained throughout the year and for the entirety of operations.~~

~~Because the sites are located in moderate fire severity hazards and Section 1.6, Fire Prevention and Protection, of EBMUD's Standard Construction Specification 01 35 24, Project Safety Requirements, has been incorporated into the Project, the Project operational impacts related to hazards resulting from wildland fires is less than significant.~~

Once constructed, the new facilities would be built to meet all relevant California building standards, including building code, electrical code, and fire code requirements, and there would be no overhead electrical lines used for the Project, thereby minimizing the potential for ignition to occur at the facility. In addition, EBMUD provides routine maintenance of its sites which includes routine vegetation management to ensure a defensible space is maintained consistent with the requirements of local fire agencies. Fire protection services for the Project site are provided by the San Ramon Valley Fire Protection District, and there are two fire stations within approximately 3.5 miles from the Project site. In addition, there are hydrants located approximately 150 feet north of the Project site on the west side of Dougherty Road. Because the Project would be built to modern code requirements, would be maintained by EBMUD to maintain defensible space around the facility, and fire protection services and fire hydrants are located near and adjacent to the Project site, the Project operational impacts related to hazards resulting from wildland fires is less than significant. (**Less than Significant)**

2.1.6 Master Response 6 – Previous Sites Evaluated

Commenters asked if other sites were evaluated and considered for the location of the proposed pump station. This Master Response summarizes information about previous sites evaluated by EBMUD.

Appendix A of this document describes the site selection process for Pump Station R3000 and the alternative sites that were identified and evaluated during that process. As described in Appendix A, EBMUD conducted a preliminary site evaluation in 2016, in consultation with the City of San Ramon, that considered seven sites, as well as a second review of seven additional potential sites in 2018 in response to comments received during the public review period for this IS/MND. A summary of this process has been incorporated into the IS/MND; the second paragraph under Section 1.1, Introduction and Background, on page 1-1 of the IS/MND has been revised as follows (single underlined text represents language that has been added to the IS/MND):

The SRVRWP [San Ramon Valley Recycled Water Program] Pump Station R3000 Project (Pump Station R3000 or Project) evaluated in this Initial Study/Mitigated Negative Declaration (IS/MND) is part of Phase 3 of the SRVRWP. The Project was initially proposed as part of the SRVRWP Facilities Plan (Facility Plan) prepared by DERWA in July 1996. The Facility Plan proposed a Project location to the north of the intersection of Dougherty Road and Crow Canyon Road. The Facility Plan also proposed an alternative Project location at the entrance to Diablo Vista Park on Crow Canyon Road. Both sites are owned by the City of San Ramon (City or San Ramon). These locations were

analyzed pursuant to CEQA as part of the 1996 SRVRWP EIR. In 2016, City staff reviewed the sites presented in the 1996 Facility Plan and SRVRWP EIR and, due to their proximity to existing residences and park sites and potential for impacts on these uses, recommended that a further review of alternative site locations be prepared and presented to the City of San Ramon City Council Policy Committee (Committee). As requested by the City, EBMUD staff completed an analysis of additional potential sites.

Due to system hydraulics and pressure requirements, the new pump station must be connected to the existing Dougherty Road recycled water pipeline somewhere north of the intersection with Lilac Ridge Road and North Gale Ridge Road. Much of the open space along Dougherty Road is protected in Geologic Hazard Abatement District (GHAD), conservation easement, scenic vista, ridgeline, or is immediately adjacent to Alamo Creek. Construction within these areas would pose greater visual and other environmental impacts, as compared to the other alternative sites.

In 2016, a site selection analysis was completed in coordination with City staff that evaluated seven potential pump station locations (designated as Sites A1 through A7) based on numerous selection criteria. The Project and site selection analysis were presented to the Committee on May 25, 2016. The Committee recommended that staff further evaluate community impacts associated with Site A1 (located at the northern side of the intersection of Dougherty Road and Crow Canyon Road), the project location proposed in the 1996 Facility Plan and analyzed in the 1996 SRVRWP EIR. Staff reached out to residents immediately adjacent to Site A1 and the adjacent Home Owners Association management to obtain feedback regarding the proposed pump station site. Following community engagement, Site A1 was removed from further consideration by EBMUD and the City, due to its use as a park by adjacent residents, and its location within 35 feet of adjacent residences. Site A3 and Sites A5 through A7 were also removed from consideration because they did not meet the majority of the site requirements of the selection criteria.

Site A2 best met the site selection criteria as compared to other sites. EBMUD and City staff agreed that Site A2 was the preferred site. The City approved a resolution in July 2016 to authorize the City Manager to negotiate an agreement with EBMUD for the sale of an easement/and or property for the Site A2. A street vacation clearing the public right-of-way located on Site A2 would be completed through the City. Site A4 was included in the CEQA analysis because although it met fewer selection criteria than other sites, Site A4 is located on property owned by DERWA and would not require property acquisition from the City.

In response to comments received during the public review period of the MND, staff conducted a review of seven additional potential sites (Sites B1 through B7). Sites B1 through B7 are similar in nature to the previously analyzed sites (Sites A1 through A7) and would cause more significant impacts than the preferred Site A2. Based upon the selection criteria, there are no clear advantages to Sites B1

through B7 as compared to Site A2, and many of the sites do not minimize visual, noise, and traffic impacts to the surrounding community, and/or are located within a GHAD, conservation easement, designated open space, or major ridgelines where impacts would likely be greater. In addition, Site B1 through B7 would require thousands of feet of additional pipeline compared to Site A2. For these reasons, none of the B sites are preferred over Site A2.

The Project would be owned and operated by EBMUD and would allow the provision of recycled water to areas served only by EBMUD within the DERWA system through construction of a new pump station which was included in the SRVRWP Program EIR, and EBMUD was identified a Responsible Agency for the SRVRWP. This IS/MND was prepared because the Project location was changed following further site reviews. Pursuant to CEQA Guidelines Section 15052(a)(2) and Section 15162(c), EBMUD is the Lead Agency for this IS/MND; no further approval action by the DERWA Board of Directors is necessary for Pump Station R3000 because the Project would be owned and operated by EBMUD individually.

2.1.7 Master Response 7 – Preference for Site A2

Commenters asked for more information about why EBMUD prefers Site A2. This Master Response summarizes information regarding the preference of Site A2.

EBMUD prefers Site A2 over Site A4 because Site A2 best meets the selection criteria described in Appendix A of this document. Compared to Site A2, Site A4 does not benefit from natural screening between the site and nearby residences, requires approximately 4,700 feet more new recycled water pipeline to be constructed in residential streets and Dougherty Road, and requires temporary closure of recreational trails. Site A4 meets fewer key criteria and would result in more visual, noise, and traffic impacts on the surrounding community with increased Project costs. Therefore, Site A2 is preferred over Site A4 and EBMUD staff will recommend that EBMUD's Board of Directors choose site A2 for the project. Site A4 was included as an alternative Project location because it is owned by DERWA and would not require property acquisition.

2.1.8 Master Response 8 – Operational Odors

Commenters asked for more information about potential odors from the pump station during operation. This Master Response summarizes information from the IS/MND about the pump station operation and odors.

Odor impacts are discussed in the IS/MND, Section 2.2.3, Air Quality. As stated in Section 2.2.3 (pages 2-23 to 2-25), types of land use development that pose potential odor problems include wastewater treatment plants, refineries, landfills, composting facilities, and transfer stations. This Project involves a recycled water pump station, which is not in the typical category of land uses described above, and would not generate odors during operations.

The recycled water that would be handled by the pump station is highly treated and generates no odors. Recycled water is currently used for irrigation throughout the Dougherty Valley with no odor complaints. All recycled water conveyed to and from the pump station would be fully enclosed within pipelines, and would not be exposed to the air or generate odors. The pumps used to transfer recycled water would be powered by electricity and would not generate any odors.

2.1.9 Master Response 9 – Property Values

Commenters were concerned about the effect of the Project on their property values. The purpose of documents prepared pursuant to CEQA is to identify a project's effects on the physical environment; consequently, property values are not addressed in the IS/MND nor further addressed in this response. In addition, there is no evidence of a connection between construction of a facility such as the proposed pump station and property values.

2.2 Joint Comment Letters

2.2.1 Form Letter 1

These responses address comments presented in a form letter in the following submittals:

Babul, S.	Babul, Z.2	Cheriyathmadam, A.	Fu, X.
Potti, S.	Setty, M.	Shen, J.3	Veerapareddy, P.

1. This statement that the comments in the letter are about the proposed pump station at Site A4 is acknowledged.
2. This comment states that Site A4 is located next to a quiet residential area with no natural sound barriers and therefore, the pump noise would be more audible to nearby homes, especially at night. Please refer to Master Response 2 for a discussion of the operational noise impacts for the proposed pump station at Site A4. This master response explains that there would be no significant noise impacts resulting from pump station operation, either during the day or at night.
3. This comment states that the construction process for Site A4 would be expensive and long in duration. Please refer to Master Response 3 for a discussion of the construction cost and duration.
4. This comment states that the visibility of Site A4 would affect the surrounding homes. Please refer to Master Response 4 regarding the visual impacts of the pump station at Site A4. As explained therein, there is no evidence that placing the pump station at site A4 would cause significant visual impacts.
5. This comment states that due to the proximity of Site A4 to Coyote Creek Elementary School, construction would be disruptive especially during the drop off and pick up times at the school. Please refer to Master Response 1 regarding the construction traffic and potential disruption of Coyote Creek Elementary School drop-off and

pick-up activities. As explained in Master Response 1, construction would not cause significant transportation impacts related to Coyote Creek Elementary School.

6. This comment states that Site A4 could become a fire risk to the community due to the presence of heavy electrical equipment. Please refer to Master Response 5 regarding this issue, which confirms that the Project would not cause significant impacts related to wildfire risk.

2.2.2 Form Letter 2

These responses address comments presented in a form letter in the following submittals:

Bommadevara, S. Goundar, N. Lee, S. Louie, M.1
Osborn, J./ Zhao, A.

1. This statement that the comments in the letter are about the proposed pump station at Site A4 is acknowledged.

2. This comment states that the increased noise and debris during construction would result in increased rodent activity. Please refer to Master Response 1 for more information about construction-related impacts, including construction noise and debris. The master response confirms that there would be no significant impacts related to construction noise or debris.

3. This comment states that there would be traffic delays during construction. Please refer to Master Response 1 regarding traffic associated with the construction of the pump station at Site A4 and associated pipeline. The master response confirms that there would be no significant transportation impacts resulting from construction of the pump station at site A4, including the associated pipeline.

4. This comment expresses opposition to constructing the pump station at Site A4 because the site is used for recreation and its development would diminish views. Site A4 is on property owned by DERWA. DERWA does not authorize its use for recreation. IS/MND Section 2.2.15, Recreation (page 2-105), acknowledges that West Alamo Creek Trail is approximately 70 feet away from Site A4, and that although pipeline construction may temporarily interfere with a small portion of the trail, the trail would still be accessible during construction and would not be impacted in the long term. Please refer to Master Response 4 regarding the visual impacts associated with the pump station at Site A4.

5. This comment requests that EBMUD consider a less residential area to install the pump station. Please refer to Master Response 6 and Appendix A regarding the sites that were evaluated for the proposed pump station.

6. In addition to the comments addressed above, Bommadevara, S. stated that “increased noise can definitely be felt and bad odor from this station.” Please refer to Master Response 2 regarding operational noise of the pump station at Site A4, and Master Response 8 regarding operational odors. Bommadevara, S. also stated that the Project

will decrease property values in the community. Please refer to Master Response 9 regarding property values.

7. In addition to the comments addressed above, Goundar, N. stated that the traffic congestion on Lilac Ridge Road in conjunction with the Coyote Creek Elementary School traffic would be worse on school days. Please refer to Master Response 1 regarding traffic associated with the construction of the proposed pump station at Site A4 and associated pipeline.

2.2.3 Form Letter 3

These responses address comments presented in a form letter in the following submittals:

Balaka, J. Janbakhsh, M. Marpu, L. Puppala, K. Wu, J.

1. This statement that the comments in the letter are about the proposed pump station at Site A4 is acknowledged.

2. This comment states that the visibility of Site A4 would severely affect homes on Laurelspur Loop and other nearby streets. Please refer to Master Response 4 regarding the visual impacts of the pump station at Site A4. As explained therein, there is no evidence that placing the pump station at site A4 would cause significant visual impacts.

3. This comment states that Site A4 is located near a residential area and the pump noise would be audible to nearby homes, especially at night. Please refer to Master Response 2 regarding operational noise of the pump station at Site A4. This master response explains that there would be no significant noise impacts resulting from pump station operation, either during the day or at night.

4. This comment states that Site A4 could become a fire risk to the community due to the presence of heavy electrical equipment. Please refer to Master Response 5 regarding this issue, which confirms that the Project would not cause significant impacts related to wildfire risk.

5. This comment states that the construction process for Site A4 and associated pipeline would be expensive and long in duration due to road trenching, repaving, and leveling the hillside. Please refer to Master Response 3 for a discussion of the construction cost and duration.

6. This comment states that construction of the Project would present a safety risk to children who use Coyote Creek Elementary School during the summer and winter months. Please refer to Master Response 1 for more information about the construction-related impacts, including safety for pedestrians at Coyote Creek Elementary School during Project construction.

2.2.4 Form Letter 4

These responses address comments presented in a form letter in the following submittals:

Louie, M.3 Wen, Y.

1. This statement that the comments in the letter are about the proposed pump station at Site A4 is acknowledged.

2. This comment states that the construction would pose a health threat associated with increased dirt. Please refer to Master Response 1 for more information about the construction-related impacts, including construction-related dust and emissions. The master response confirms that implementation of EBMUD's standard construction specifications related to controlling construction emissions and dust would ensure that impacts would be less-than-significant.

3. This comment states that construction would pose a safety risk to children walking to Coyote Creek Elementary School, and the increased dust from construction will also affect children. Please refer to Master Response 1 for more information about the construction-related impacts, including safety for pedestrians at Coyote Creek Elementary School during Project construction, and construction-related dust and emissions.

4. This comment states that there would be traffic delays during construction. Please refer to Master Response 1 regarding traffic from construction of the proposed pump station at Site A4 and associated pipeline.

5. This comment requests that EBMUD consider another location to install the pump station. Please refer to Master Response 6 and Appendix A regarding the sites that were evaluated for the proposed pump station.

2.3 Agency Comment Letters

2.3.1 California Department of Transportation (Caltrans)

Caltrans-1 This comment's description of the California Department of Transportation's (Caltrans's) mission to modernize its approach to evaluating and mitigating impacts on the State Transportation Network is acknowledged.

Caltrans-2 This comment's description of Caltrans' understanding of the Project is acknowledged.

Caltrans-3 This comment states that any work or traffic control that encroaches onto the State Right-of-Way requires an encroachment permit issued by Caltrans. This comment also explains how to obtain an encroachment permit. This comment is noted. IS/MND Section 1.8, Approvals

Required (page 1-18), lists an Encroachment Permit from the City of San Ramon as an approval that may be required for Project implementation. The Project does not require any approvals from Caltrans for implementation.

Caltrans-4 This comment states that as the Lead Agency, EBMUD is responsible for Project mitigation, including any needed improvements to the State Transportation Network, and that the Project's fair share contribution, financing, scheduling, implementation responsibilities, and monitoring should be fully discussed for all proposed mitigation measures. This Project would not affect any roadways within the State Transportation Network, and no mitigation is required. Please refer to IS/MND Appendix A for the EBMUD Practices and Procedures Monitoring and Reporting Plan, and IS/MND Appendix D for the Mitigation Monitoring and Reporting Plan associated with the Project.

Caltrans-5 This comment thanks EBMUD for including Caltrans in the environmental review process is acknowledged.

2.4 Individual Comment Letters

2.4.1 Babul, Z.

Babul, Z.1

Babul, Z.1-1 This comment requests the presentation from the October 17, 2018, public meeting and the list of current EBMUD pump stations. Staff informed the public at the meeting that the Project information presented would be posted on the Project website. The October 17, 2018, public meeting presentation and additional materials were uploaded to the Project website on October 19, 2018: https://www.ebmud.com/water/recycled-water/current-recycled-water-users/san-ramon-valley/recycled-water-pump-station-dougherty-roadsan-ramon/.

2.4.2 Bauer, L.

Bauer, L-1 This comment that the neighborhood by Site A4 has experienced non-stop construction since homes were built in 2000 is acknowledged.

Bauer, L-2 This comment states that the previous contractors and developers have had no regard for neighbors in the area during construction is acknowledged. Regarding the commenter's request as to why the neighbors have to be subjected to construction again, the objective of the Project is to enhance the delivery of recycled water to the San Ramon, Danville, and Blackhawk communities to help meet EBMUD's long-range water supply needs (see IS/MND Section 1.2, page 1-3). EBMUD

has identified a number of standard practices and procedures applicable to all projects for construction contractors to reduce effects on the community where a project is constructed, and the IS/MND identifies additional, Project-specific measures as well. These measures, and the steps EBMUD will take to monitor their implementation, are described in Appendix A and Appendix D of the IS/MND. EBMUD, not Contra Costa County, will have oversight of the Project and is committed to ensuring robust outreach during construction and attention to all specifications and requirements. Regarding the commenter's question about being subjected to construction impacts again, the construction of Pump Station R3000 at Site A4 would entail significantly fewer construction impacts than most of the other projects mentioned in the comment letter. The completed pump station at Site A4 would have a footprint of approximately 5,500 square feet, compared to the Capella at Gale Ranch development or Coyote Creek Elementary School, each of which takes up over 600,000 square feet and required more complex construction methods because of the variety of utilities, landscaping, and livable spaces that were implemented.

Bauer, L-3 This comment requests more information about the selection of Sites A2 and A4, and if EBMUD considered the Castenada Yard at 5050 Crow Canyon Road. This comment also asks whether EBMUD considered the Dougherty Road and Bollinger Canyon Road intersection for the pump station. Please refer to Master Response 6 and Appendix A of this document regarding the sites that were evaluated for the proposed pump station. These sites were evaluated against several criteria, including but not limited to, avoiding impacts to the existing Geologic Hazard Abatement Districts (GHAD)/conservation easement and minimizing pipeline length. The sites near the intersection of Bollinger Canyon Road and Dougherty Road would have impacts on GHAD and existing conservation easements, and would require more pipeline than other alternatives. The Castenada Yard site is not at appropriate hydraulic elevations to meet system requirements and is farther from existing pipelines in Dougherty Road, and was therefore not a feasible option.

Bauer, L-4 This comment requests more information about EBMUD's preferred site for the Project. As explained in Master Response 7, EBMUD's preferred site is Site A2, and EBMUD staff will recommend selection of site A2 to EBMUD's Board of Directors when it considers project approval.

Bauer, L-5 This comment expresses the opinion that the construction-related impacts cannot be mitigated to less-than-significant levels. As stated in the IS/MND, Section 1.6 (page 1-17), EBMUD has incorporated a number of standard construction specifications, standard practices from EBMUD's Environmental Compliance Manual, and Engineering Standard Practices into the Project. These standard specifications and standard practices, which apply to all EBMUD projects and reflect

generally applicable EBMUD standard operating procedures, are designed to address typical characteristics of EBMUD construction projects. IS/MND Appendix A of the IS/MND includes the EBMUD Practices and Procedures Monitoring and Reporting Plan.

EBMUD builds and maintains facilities of all sizes across a 332-square-mile service area, and has built multiple pump stations in residential neighborhoods within the past 5 years. EBMUD staff have expertise in the design, construction, and operation of similar projects with a focus on reducing potential impacts on residents. Also, EBMUD will have oversight of the Project and is committed to ensuring robust outreach during construction and attention to all specifications and requirements.

Under CEQA, impact significance is determined by comparing an impact to a threshold and determining whether the impact would exceed that threshold. The basis for EBMUD's conclusions about impact significance is indicated throughout the IS/MND in Section 2, for various environmental resource topics. Additionally, as stated in the IS/MND, EBMUD has incorporated mitigation measures into the Project to mitigate the potentially significant impacts identified, such that no significant impacts would occur. Based on the results of the IS/MND, Project-related construction could potentially generate environmental impacts on aesthetic, biological, and cultural resources. Mitigation measures incorporated into the Project that would reduce impacts to less-than-significant levels are described in Chapter 2 of the IS/MND. These mitigation measures are summarized in the Mitigation Monitoring and Reporting Plan (MMRP) presented in IS/MND Appendix D.

Bauer, L-6 This comment states that EBMUD and DSRSD's track record of complying with permitting conditions during construction of Reservoir R200 was abysmal, and requests more clarification regarding measures to address construction impacts from the Project. To ensure implementation of all applicable mitigation measures and standard practices and procedures—including construction specifications that minimize construction-related impacts—EBMUD has prepared a Practices and Procedures Monitoring and Reporting Plan (Appendix A of the IS/MND) and an MMRP (Appendix D of the IS/MND) to guide compliance with mitigation measures and EBMUD standard practices and procedures. If the Project is approved by EBMUD's Board of Directors, that approval would include adoption of the PPMRP and MMRP, along with direction to EBMUD's General Manager to ensure implementation of all standard construction practices, procedures, and mitigation measures contained therein. This helps ensure that all measures called for in the MND related to construction impacts will be implemented during construction. EBMUD would also comply with requirements in other approvals, such as encroachment permits. The commenter can review the Practices and Procedures Monitoring and

Reporting Plan and MMRP requirements to understand the commitments that EBMUD, in approving the Project, will be committing to implement. EBMUD will be responsible for enforcement and ensuring that contractors adhere to Project specifications and mitigation measures. EBMUD has developed a strong commitment to community engagement during construction, and has significant experience in working with communities while building projects of similar size and scope to Pump Station R3000. Community Affairs representatives will be available to receive feedback and concerns regarding Project construction activities.

Bauer, L-7 This comment requests more information about the power supply for the pump station, the provisions for backup energy, where the backup generators would be located and their operational noise levels, and how often the backup system would be tested. Once operational, the pump station would use electricity supplied by PG&E through a 480 volt 300 kVA transformer. No backup generators would be needed because recycled water is used for landscape irrigation only, and short-term service disruptions would be acceptable; during an electrical outage, no provisions for backup power would be used. The pump station design would incorporate noise reduction methods, including acoustical louvers in two building walls to reduce noise transmission while allowing air circulation. The distribution panel, switchgear, and motor control center would be located outside of the pump station building, but within the boundary of the site. Please refer to Master Response 2 for a discussion of operational noise impacts.

Bauer, L-8 This comment asserts that the distance between Site A4 and the nearest residence stated on IS/MND page 1-3 is incorrect. The referenced distances were measured as ground distances in Google Earth. The measurements were taken from the southeast corner of Site A4 to the nearest residence in the Capella at Gale Ranch development (i.e., approximately 170 feet) and from the middle of the south boundary of the site to the nearest residence in the Bridges at Gale Ranch development (i.e., approximately 350 feet).

Bauer, L-9 This comment requests more information about other sites considered besides Sites A2 and A4 specifically Castenada Yard, or near the intersection of Dougherty Road and Bollinger Canyon Road. Please refer to Master Response 6 and Appendix A regarding the sites that were evaluated for the proposed pump station. These sites were evaluated against several criteria, including but not limited to, avoiding impacts to the GHAD/conservation easement and minimizing pipeline length. The sites near the intersection of Bollinger Canyon Road and Dougherty Road would have impacts on the GHAD and existing conservation easements, and would require more pipeline than other alternatives. Regarding Castenada Yard, this site is not at appropriate hydraulic

elevations to meet the system requirements and is farther away from existing pipelines in Dougherty Road, and was therefore not a feasible option.

Bauer, L-10 This comment asserts that the length of pipeline at Site A2 (150 feet) is excessive. The pipeline length accounts for the total maximum length of both the supply and discharge pipelines, approximately 150 feet.

Bauer, L-11 This comment requests more information about locating the pipeline for Site A4 through the hillside to the tie-in in Dougherty Road. The GHAD/conservation easement begins immediately adjacent to most of Dougherty Road, behind the Miravilla and Capella at Gale Ranch developments on the west of Dougherty Road, and behind the Alta Mira development and Red Willow Park on the east side of Dougherty Road. In 2006, a Perpetual Conservation Easement Deed was granted to the Wildlife Heritage Foundation (by Shapell Industries), establishing the conservation easement (or Protected Property). The conservation easement ensures that the Protected Property will be retained as open space and prevents any use within the Protected Property that would impair or interfere with conservation purposes or the ecological and habitat values of benefit to threatened, endangered, and rare species. Construction of a recycled water pipeline within the established conservation easement would have greater environmental impacts than the other alternatives, as discussed further in Appendix A of this document. Pipeline construction may be completed by traditional open trench or by trenchless (jack and bore, or tunneling) technology. Trenchless construction through the GHAD/conservation easement may have less environmental impacts than traditional open trench methods through the same area, but would have greater impacts on the physical environment than trenching the pipeline in Lilac Ridge Road and North Gale Ridge Road because of impacts related to excavation of large pits and its disturbance to biological resources. In making determinations regarding pipeline routing, EBMUD preferentially chose to avoid impacts to open space, while also ensuring that impacts associated with installation of pipeline in existing roadways would be less-than-significant.

Bauer, L-12 This comment asserts that the construction schedule in the IS/MND could be shortened and requests more information about the location of the construction offices. The IS/MND describes a conservative construction period based on previous similar construction activities completed by EBMUD. Actual construction schedules may vary from the proposed schedule depending on Project conditions; efficiencies or delays that may occur. Pump station and pipeline construction would not be constant during the 24-month period, but would be intermittent and completed in phases interspersed with down time (e.g., to account for equipment or materials availability). Construction of the pump station

and pipelines for Site A2 would be completed concurrently, shortening the overall construction period. Construction offices would be located in either Staging Area 1 or 2, shown on Figure 2 (page 1-4) of the IS/MND.

Regarding construction of the pipeline work occurring independently of the pump station, as stated in Section 1.5.3 of the IS/MND (page 1-16), pump station and pipeline construction may occur simultaneously, except during pump station concrete work. Section 1.5.3 of the IS/MND (page 1-16) has been modified to clarify that pump station and pipeline construction work may occur except where traffic plans to reduce impacts on Coyote Creek Elementary School would limit traffic and pipeline construction during school sessions as follows (<u>single underlined text</u> represents language that has been added to the IS/MND):

> EBMUD would decide whether to implement Site A2 or Site A4 based primarily on whether a property transfer agreement can be negotiated with the City of San Ramon regarding Site A2. Pump station and pipeline construction may occur simultaneously, except during pump station concrete work<u>, and where traffic plans to reduce impacts on Coyote Creek Elementary School would limit truck traffic and pipeline construction during school sessions</u>. For purposes of analysis, pump station construction is anticipated to take approximately 24 months and would occur anytime between 2020 and 2024, and pipeline construction is anticipated to take approximately four months within this same timeframe.

As stated in Section 1.5.2 (page 1-16 of the IS/MND), construction at Site A2 would require approximately 150 feet of pipeline work and would be completed concurrently with the pump station construction, reducing the number of haul trucks required.

Bauer, L-13 This comment requests more information about the maximum number of one-way worker vehicle and truck trips per day during construction. EBMUD estimated vehicle trips for the Project based on construction of similar projects (the pump station building would be approximately 1,200 square feet in area) and Project-specific information such as phasing and earthwork quantities.

As stated in the IS/MND Section 1.5, Construction Methods and Schedule (page 1-10), for pump station construction at either Site A2 or Site A4, there would be a maximum of 10 one-way worker vehicle trips per day (5 commute trips in the morning and 5 commute trips in the afternoon) and a maximum of 8 one-way truck trips per hour (assuming an 8-hour work day, this equals 64 truck trips per day). The total maximum estimated one-way worker vehicle trips and truck trips

combined during pump station construction at either Site A2 or Site A4 would be 74 trips per day. Table 10 in IS/MND Section 2.2.16, Transportation and Traffic (page 2-109) includes a breakdown of the maximum number of truck and construction worker vehicle trips that would be needed for pump station and pipeline construction.

As stated in the IS/MND Section 1.5, Construction Methods and Schedule (page 1-16), the pipeline for Site A2 would be constructed concurrently with the pump station construction described above; therefore, the haul trucks and trips per day for the pump station and pipeline construction at Site A2 are additive, and the trip numbers for the pipeline construction for Site A2 already include the trip numbers for the pump station construction. Pipeline construction at Site A4 would require approximately 14 haul trucks per day for trench pavement, soil disposal, and fill import deliveries. Four materials trucks would be used per day for deliveries of pipeline, appurtenance, paving, and other equipment delivery. There would be approximately 13 worker trips per day for pipeline construction at Site A4.

Bauer, L-14 This comment requests more information about the frequency of weekend construction work, construction holidays, the definition of "work" on weekdays, and enforcement of work hours and activities. As stated in IS/MND Section 1.5, Construction Methods and Schedule (page 1-10), pump station and pipeline construction would primarily occur Monday through Friday, although weekend construction work could occur between 9:00 a.m. to 6:00 p.m. if needed for required outages and/or emergencies. Outages refer to periods when EBMUD takes the recycled water system out of service. For the Project, outages could occur during pipeline connections and would not last more than 1 day. No construction would occur on the following holidays: New Year's Day, Martin Luther King Jr. Day, Lincoln's Birthday, President's Day, Cesar Chavez Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, the day after Thanksgiving, Christmas Day, and the day after Christmas.

The Project's construction hours for most activities would be 7:30 a.m. to 7:00 p.m., Monday through Friday. Construction-related vehicles could travel on neighborhood streets prior to 7:30 a.m. to reach the site by 7:30 a.m. Typical 7:30 a.m. to 7:00 p.m. weekday construction work hours reflect activities such as mobilization, excavation/site work, concrete work, backfill, landscaping/site restoration, demobilization for pump station construction, pipeline layout and excavation, pipeline installation, testing, pavement restoration, and demobilization for pipeline construction. Regarding enforcement of construction hours and activities, EBMUD's construction manager would monitor contractor compliance with contract requirements, including construction hours and all other Standard Construction Specifications as listed in IS/MND

Section 1.6, EBMUD Practices and Procedures (page 1-17). EBMUD will post a phone number at the access point to the construction site, which neighbors and other concerned individuals can use if, for example, they have questions regarding contractor compliance with the requirements described in the EBMUD Practices and Procedures Monitoring and Reporting Plan (Appendix A of the IS/MND).

Bauer, L-15 This comment states that school traffic at Coyote Creek Elementary School on Lilac Ridge Road, Gale Ridge Road, and Lantana Way is gridlocked three times a day and requests more information about impacts associated with school drop-off and pick-up times. Please refer to Master Response 1 regarding the construction traffic during school hours associated with the construction of the proposed pump station at Site A4 and associated pipeline.

Bauer, L-16 This comment concerns the feasibility of using Staging Area 2 and the description of the staging area. Staging Area 2 is shown in the IS/MND, Figure 2 (page 1-4), is located on land owned by DERWA, includes a concrete pad approximately 50-feet-long by 40-feet-wide, and currently provides truck access to Reservoir R200. An additional unpaved area is available for material laydown at the site. The second bullet in the sixth paragraph under Section 1.5.1, Pump Station Construction, on page 1-13 of the IS/MND has been revised as follows to clarify the location of Staging Area 2:

> **Staging Area 2.** The second potential staging area is the paved area approximately 170 feet ~~north~~ south of the Reservoir R200 (Staging Area 2 on Figure 2) and is located about one mile by road southwest of Site A2.

Bauer, L-17 This comment requests more information about the view of Site A4 from Lantana Way. As discussed in the IS/MND Section 2.2.1 Aesthetics (page 2-4), Site A4 is visible from parts of Lilac Ridge Road and Lantana Way, and slightly visible from the corner of Sky Jasmine Way and Laurelspur Loop. More people would experience (short-duration) views of the pump station at Site A4 from Lilac Ridge Road than from Lantana Way because there is more traffic on Lilac Ridge Road; consequently, that view was presented in the IS/MND in Figure 5.

As indicated in the IS/MND, as well as by the commenter and shown in the image below, Site A4 is also visible to motorists and pedestrians on the northern most segment of Lantana Way, approaching Lilac Ridge Road. Views of Site A4 from this segment of Lantana Way are partially screened by existing mature landscaping along Lilac Ridge Road and topography. Even though Site A4 is visible directly from this segment of Lantana Way and viewers would be exposed for a longer duration compared to views from Lilac Ridge Road, the view of Site A4 is

partially obscured by vegetation and existing topography, and would have a lower viewer exposure.[5] Please refer to Master Response 4 regarding the visual impacts of the pump station at Site A4.

Bauer, L-18 This comment is about the project visibility from West Alamo Creek Trail. Please refer to Master Response 4 regarding the visual impacts associated with the pump station at Site A4.

Bauer, L-19 This comment states that Site A4 is visible from their home on Lantana Way. Please refer to response Bauer, L-17 and Master Response 4. As explained in Master Response 4, the MND's analysis appropriately focused on aesthetic impacts that would be experienced from publicly accessible viewpoints.

Bauer, L-20 This comment disagrees with the conclusion in the IS/MND that visual impacts associated with Project construction activities would be

[5] The identification of viewer types and volumes (i.e., how many viewers) describes the type and quantity of potentially affected viewers within the visual study area. Viewer exposure addresses the variables that affect the viewing conditions of a site. Viewer exposure considers some or all of the following factors: landscape visibility (the ability to see the landscape); viewing distance (i.e., the proximity of viewers to the Project); viewing angle (whether the Project would be viewed from a superior, inferior, or level line of sight); extent of visibility (whether the line of sight is open and panoramic to the Project area or restricted by terrain, vegetation, and/or structures); and duration of view.

temporary and less than significant. The sentence that the commenter is referring to in the IS/MND discussion under Section 2.2.1, Aesthetics (page 2-8), is related to visual impacts during construction. The following text changes have been made to the third paragraph under Section 2.2.1, Aesthetics, on page 2-9 of the IS/MND to include more information about the potential changes in views and the effect on the visual character and quality during construction:

> Construction activities (excavation, grading, haul road, open trenches, machinery and vehicle storage) would have a temporary effect on the visual quality at both of the potential pump station sites and along the pipeline alignments during construction. Construction vehicles, materials, and equipment may be noticeable visual features. However, a majority of the visible construction equipment would be similar in height to the existing structures around the site such as the two-story residences in the surrounding area. In addition, any remaining trees on site and within the construction easement at Site A2 would be protected and preserved to the extent possible as part of the Project, which would further screen views of the construction activities. As detailed in the Project Description, a number of EBMUD standard practices and procedures, applicable to all EBMUD projects, have been incorporated into the Project, including Standard Construction Specification 01 35 44, Environmental Requirements. Section 3.7, Protection of Native and Non-Native Protected Trees, of this specification includes best practices for protecting trees that are not to be removed within the Project construction limits. EBMUD Standard Construction Specifications 01 74 05 and 01 35 44, Section 1.1(B), require construction practices that will ensure the site is maintained in as orderly and clean condition as possible throughout the construction period. Through compliance with EBMUD Standard Construction Specification Section 3.7, Tree Protection, and Section 1.1(B), Site Activities, of Standard Construction Specification 01 35 44, and Standard Construction Specification 01 74 25, Cleaning, the Project would maintain an orderly construction site and protect trees, and, due to the limited duration of construction activities, potential visual impacts due to construction activities would be ~~temporary and~~ less than significant. (**Less than Significant**)

Bauer, L-21 This comment expresses concern about the use of wet power vacuum street sweepers “daily or as often as deemed necessary by EBMUD’s construction manager” during construction. Street sweeping will be completed daily or as often as necessary to ensure that dirt and other debris from construction do not accumulate on the roads.

Bauer, L-22 This comment, stating that the commenter will be watching to verify compliance with the EBMUD Standard Construction Specification 01 35 44, Environmental Requirements, is acknowledged. Please refer to response Bauer, L-5 and Bauer L-6.

Bauer, L-23 This comment requests that item G of EBMUD's Standard Construction Specification 01 35 44 regarding notification of neighbors/occupants of project construction in advance of extreme noise-generating activities be expanded to include notification of additional residents (neighbors/occupants within 750 feet of Lilac Ridge Drive east of the 8th tee of the Bridges Golf Course, all residents of the Capella at Gale Ranch subdivision, all residents on Lantana Way, and Coyote Creek Elementary School attendees). If the Project is built at Site A4, EBMUD will notify all residents within 750 feet of construction as well as all residents on Lilac Ridge Road, Cattleya Drive, and Lantana Way east of the Bridges Golf Course, and all residents of the Capella at Gale Ranch subdivision. EBMUD will also coordinate with Coyote Creek Elementary School.

Bauer, L-24 This comment, which requests that all residents of Lilac Ridge Drive east of the 8th tee of the Bridges Golf Course, all residents of the Capella at Gale Ranch subdivision, all residents on Lantana Way, and Coyote Creek Elementary School attendees be provided a weekly or biweekly report that summarizes Project construction activities and schedule, is acknowledged. If Project construction takes place at Site A4, EBMUD will conduct initial outreach to confirm community interest in regular bi-weekly email updates, and will send out such notifications during periods of significant construction if desired by residents.

2.4.3 Chakrabarti, R.

Chakrabarti, R-1 This comment requests that EBMUD post the IS/MND on-line. The Draft IS/MND was made available on the Project website on October 9, 2018: https://www.ebmud.com/water/recycled-water/current-recycled-water-users/san-ramon-valley/recycled-water-pump-station-dougherty-roadsan-ramon/.

2.4.4 Emany, M.

Emany, M-1 This comment requests information about the area that will be served by the proposed pump station. As stated in IS/MND Section 1.0, Project Description (page 1-1), the Project would be owned and operated by EBMUD and would allow the provision of recycled water for landscape irrigation within areas served by EBMUD within the DERWA system. Pump Station R3000 would pump recycled water to Reservoir R3000, which serves areas north of the pump station (i.e., parts of the San Ramon,

Danville, and Blackhawk communities) above elevation 570 feet. The recycled water would be used for landscape irrigation by municipal and commercial customers in those areas. The pump station would serve recycled water to additional locations within the City of San Ramon including common area landscaping in the Miravilla community and at Red Willow Park.

2.4.5 Flicek, D.

Flicek, D-1 This comment states that the 30-foot tall antenna is too tall, requests more information about the need for the antenna, and asks whether the pump station can operate without it. Based on a radio path survey, an analysis to obtain optimal signal strength, the required antenna height is 30 feet. The pump station would be operated remotely via EBMUD's Supervisory Control and Data Acquisition (SCADA) system, which requires a network with a secure communication path. EBMUD-owned radio systems using wireless communication are the most reliable and economical communication method for EBMUD.

Flicek, D-2 This comment asks whether commercial and personal trucks would be allowed to fill up with recycled water at the pump station site. The recycled water pump station would not include any facilities for providing recycled water to tanker trucks or for personal use. As described in the IS/MND Section 1.4 Project Description, the purpose of the recycled water pump station is to convey recycled water to the existing Reservoir R3000 for storage and to approved customer irrigation sites. The site will not be used as a recycled water fill station for commercial or public use.

Flicek, D-3 This comment states that the pump station should be brown because white does not fit in with the surrounding community. As stated in the IS/MND Section 1.4.2, Project Description (page 1-7), the proposed pump station building would be designed to match the architectural styles of surrounding subdivisions, including a beige-colored building with a slanted, clay-tiled roof, similar to other public structures along Dougherty Road. The pump station building would not be brown to maintain consistency with similar public structures along Dougherty Road. As shown in Master Response 4, architectural renderings were revised to include a darker colored roof to better blend with the existing environment.

Flicek, D-4 This comment requests more information about the transformer noise from the proposed pump station. IS/MND Section 2.2.12, Noise, discusses operational noise, and determined that the simultaneous operation of the three pumps and transformer at either site would not be audible over the existing ambient noise levels. Please refer to Master

Response 2 for additional information on the operational noise impacts of the proposed pump station.

Flicek, D-5 This comment expresses opposition to the fence around the proposed pump station. IS/MND Section 1.0, Project Description (page 1-8), includes a description of security fencing around the perimeter of the pump station site. For purposes of the environmental impact analysis, the IS/MND assumes the site would be fenced. However, following community meetings and further consideration, EBMUD determined that, if Site A2 is chosen, the Project would be constructed without fencing, as shown in Project renderings presented in Master Response 4. As with all EBMUD facilities, if security issues arose in the future, EBMUD may consider adding fencing at that time. If Site A4 is chosen, previous security issues at Reservoir R200 adjacent to the site would require that security fencing be included. The proposed fencing would include a no-climb, ClearView type fence with no razor wire. An example of this type of fence is shown below.

Security Fence

Flicek, D-6 This comment inquires if the proposed pump station could be built in the hills and states that Site A4 would be a better location. The statement that Site A4 would be a better location is acknowledged. The site selection process, including constraints on siting the Project in open space areas in the hills, is discussed in Master Response 6. Preference of Site A2 over Site A4 is discussed in Master Response 7.

Flicek, D-7 This comment asks whether the pipeline from Site A4 could go through the hills (i.e., follow an alignment through open space) to decrease the

amount of pipeline associated with connecting Site A4 to the existing recycled water pipeline in Dougherty Road. Please see response Bauer L-11, which discusses routing the pipeline through open space to Dougherty Road.

Flicek, D-8 This comment is about the renderings for Site A2 and the location of the fencing. Renderings of Site A2 (presented at the public meeting) are included below. Refer to response Flicek, D-5 for information regarding security fencing at the proposed pump station.

Flicek, D-9 This comment asks if the pump station could be constructed underground to reduce visibility. Buried facilities were considered; however, local soil conditions and groundwater may be unsuitable for below-grade construction. Operations and maintenance of below-grade facilities are more complicated due to the inability to readily access equipment. Equipment failures may be more prevalent due to potential drainage or flooding issues. In addition, construction time frames may be longer due to depth of excavation, increasing construction truck impacts for the disposal of additional soil materials. For these reasons, the site evaluation and environmental analysis evaluated fully above-grade facilities. Also, as explained in the IS/MND, EBMUD determined that the pump station would not cause significant aesthetic impacts.

Flicek, D-10 This comment requests that the pump station be constructed behind Site A4 and the existing Reservoir R200, or somewhere else on Site A4. Please refer to Master Response 6, Appendix A and responses Flicek, D-6 and Lahiji, C.1-9, regarding the sites that were evaluated for the proposed pump station.

Flicek, D-11 This comment states that the renderings shown at the October 17, 2018, public meeting were not accurate because they did not show the proposed antenna. The renderings of the pump station at Site A2 presented at the public meeting included the antenna. Based on comments received at the October 17, 2018 public meeting, the renderings were revised to more clearly show the building and antenna. These updated renderings were presented at the public meeting on November 13, 2018 and are included in Master Response 4.

Flicek, D-12 This comment requests more information about the operation of the permanent lighting at the proposed pump station. As stated in IS/MND Section 1.4, Project Description (page 1-8), and Section 2.2.1, Aesthetics (pages 2-19 to 2-10), outdoor security lighting would be provided with motion detectors in addition to manual switches and timers. Lights would typically be used in the manual mode and therefore would only be turned on when staff are present for maintenance activities. Luminaire shields would be installed such that no light is directed off the site or into the sky. Section 2.2.1, Aesthetics, also

includes a mitigation measure (Mitigation Measures AES-1: Shield Night Lighting) to include shielding and directing of nighttime lighting downward to ensure that the light source is not directed toward residential areas or into streets. Please refer to IS/MND Section 1.4 and Section 2.2.1 for more information regarding lighting.

2.4.6 Karmalawy, Y.

Karmalawy, Y.1

Karmalawy, Y.1-1 This comment asks how the pump station (including antenna and parking area) can be made aesthetically pleasing. Please refer to response Flicek, D-1 regarding the antenna and Master Response 4 regarding other visual impacts of the pump station.

Karmalawy, Y.1-2 This comment that the Valley View Pump Station is at a park, and is not a new structure by residences is acknowledged.

Karmalawy, Y.1-3 The comment asks why EBMUD is not using sites on land already owned by DERWA. Site A4 was included in the CEQA analysis because although it met fewer selection criteria than other sites, Site A4 is on property owned by DERWA and would not require property acquisition from the City. Please refer also to Master Responses 6 and 7 and Appendix A of this document regarding the sites that were evaluated for the proposed pump station.

Karmalawy, Y.1-4 This comment requests that EBMUD consider alternative site locations, including Red Willow Park. Please refer to Master Response 6 and Appendix A of this document regarding the sites that were evaluated for the proposed pump station. As stated in Appendix A, alternative sites between Red Willow Park and Diablo Park would require more pipeline impact to park facilities and designated scenic lands more than other alternative sites.

Karmalawy, Y.1-5 This comment requests more information about the alternative sites previously evaluated, including consideration of other San Ramon locations. Please refer to Master Response 6 and Appendix A of this document regarding the sites that were evaluated for the proposed pump station.

Karmalawy, Y.1-6 This comment states that the renderings presented at the October 17, 2018, meeting were not accurate and requests a better depiction, clearly showing the building height and antenna. Based on comments received at the October 17, 2018 public meeting, the renderings were revised to more clearly show the building and antenna. The initial renderings presented at the October 17, 2018, meeting included shadowing in the background. These updated

renderings were presented at the public meeting on November 13, 2018, and are included above in Master Response 4, D. In addition, as explained in response Flicek, D-5, in response to community input, and upon further consideration, EBMUD determined that it could construct the pump station at site A2 without security fencing. The renderings of the project at Site A2, presented in Master Response 4, reflect that determination and do not include security fencing.

Karmalawy, Y.1-7 The comment asks why EBMUD employees could not answer questions at the public meeting on October 17, 2018. A variety of questions were posed at the meeting that required more staff research to provide complete answers. The purpose of the meeting was to gather public comments so they could be reviewed and addressed holistically following the end of the public comment period.

Karmalawy, Y.1-8 This comment requests another opportunity to speak about the Project. An additional public meeting was held on November 13, 2018, that provided the public a second opportunity to ask questions and engage openly with staff, as opposed to the formal Board meeting format that would put time restrictions on public comment and limit direct interaction with staff.

The Project was presented to the EBMUD Planning Committee on May 14, 2019. Emails informing the public about the Planning Committee presentation were sent to those that attended previous public meetings on April 4, May 3, and May 10, 2019. A notice of the Planning Committee meeting was also posted on the Project website. A copy of the staff report to the Planning Committee was included in the May 10, 2019, email and was also available on EBMUD's website prior to the Planning Committee meeting. No members of the public commented on the pump station during the planning committee meeting.

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Karmalawy, Y.1-9 This comment asks why the Valley View Pump Station does not have a fence around it. Regarding fencing, please see response Flicek, D-5. As explained therein, as with the Valley View Pump Station, EBMUD has determined that it could construct the pump station at site A2 without security fencing given that location's high visibility along a public roadway. However, given prior security issues at Tank R200, fencing would be necessary if the project were constructed at site A4.

Karmalawy, Y.1-10 This comment states that that the Project does not benefit the commenter, and that the pump station should be put on a golf course.

As stated in IS/MND Section 1.0, Project Description (page 1-1), the Project would be owned and operated by EBMUD and would allow the provision of recycled water to EBMUD municipal and commercial customers. Use of recycled water offsets potable water use, thus safeguarding potable water supplies for residential customers and reducing the need for severe rationing during droughts. As such, recycled water projects potable water savings benefit EBMUD's customers throughout its service area, regardless of whether they use recycled water.

Pump Station R3000 would deliver recycled water to the existing Reservoir R3000, serving portions of the San Ramon, Danville, and Blackhawk communities in the future that are north of the potential Project sites, as shown in IS/MND Figure 1. Approximately 190 acre-feet per year (afy) (19 percent of the water delivered) of recycled water would be provided to locations within the town of Danville, and approximately 790 afy (81 percent of the water delivered) of recycled water would be provided to locations within the city of San Ramon in neighborhoods along Dougherty Road and Crow Canyon Road. The recycled water would be used for landscape irrigation in parks, greenbelts, schools, common areas, and golf courses. The pump station would allow for recycled water service to be expanded to San Ramon's Red Willow Park as well as median and greenbelt landscaping within numerous San Ramon neighborhoods in the Dougherty Valley including Miravilla, Alta Mira, and Trevari.

(Please note that irrigation with potable water is restricted during droughts. Recycled water service also benefits the City of San Ramon and local residents by protecting existing community assets in neighborhood landscaping, schools, and parks, ensuring that irrigation are maintained during droughts for those public landscape and turf resources.)

Karmalawy, Y.2

Karmalawy, Y.2-1 This comment requests a copy of the PowerPoint presentation from the October 17, 2018, public meeting as well as photos of the map and renderings of the pump station at Site A2 that were presented at the public meeting. Staff informed the public at the meeting that the Project information presented would be posted on the Project website. The meeting presentation and additional materials were posted on October 19, 2018, on the Project website: https://www.ebmud.com/water/recycled-water/current-

recycled-water-users/san-ramon-valley/recycled-water-pump-station-dougherty-roadsan-ramon/.

Karmalawy, Y.2-2 This comment states that the renderings presented at the October 17, 2018, meeting were not accurate and requests a better depiction. Please refer to response Karmalawy, Y.1-6.

Karmalawy, Y.3

Karmalawy, Y.3-1 This comment states that time is of the essence due to an approaching deadline for submittal of comments. This comment is acknowledged.

Karmalawy, Y.3-2 This comment requests a copy of the PowerPoint presentation from the October 17, 2018, public meeting as well as photos of the map and renderings of the pump station at Site A2 that were presented at the public meeting. Staff informed the public at the meeting that the Project information presented would be posted on the Project website. The meeting presentation and additional materials were posted on October 19, 2018, on the Project website: https://www.ebmud.com/water/recycled-water/current-recycled-water-users/san-ramon-valley/recycled-water-pump-station-dougherty-roadsan-ramon/.

Karmalawy, Y.4

Karmalawy, Y.4-1 This comment requests updated rendering of Site A2. Based on comments received at the October 17, 2018, public meeting, the renderings were revised to more clearly show the building and antenna. These updated renderings were presented at the public meeting on November 13, 2018, and are included in Master Response 4.

The Project and the project renderings were presented to the EBMUD Planning Committee on May 14, 2019. Emails informing the public about the Planning Committee presentation were sent to those that attended previous public meetings on April 4, May 3, and May 10, 2019. A notice of the Planning Committee meeting was also posted on the Project website. A copy of the staff report to the Planning Committee was included in the May 10, 2019, email and was also available on EBMUD's website prior to the Planning Committee meeting. No members of the public commented on the pump station during the planning committee meeting.

Karmalawy, Y.5

Karmalawy, Y.5-1 This comment requests that EBMUD consider alternative site locations for the pump station, including between Red Willow Park and Diablo Park. Please refer to Master Response 6 and Appendix A of this document regarding the sites that were evaluated for the proposed pump station. Site evaluation criteria include pipeline length and impacts on parks and scenic view designated land. As stated in Appendix A, alternative sites between Red Willow Park and Diablo Park would require more pipeline, impacting park facilities and scenic designated lands more than other alternative sites.

Karmalawy, Y.5-2 This comment requests that EBMUD consider alternative site locations along Dougherty Road that would move the pump station farther away from homes. Please refer to Master Response 6 and Appendix A of this document regarding the sites that were evaluated for the proposed pump station.

Karmalawy, Y.5-3 This comment requests that EBMUD research the risk of people breaking into the pump station site, and requests that EBMUD consider removal of the fence if there are no major safety concerns. IS/MND Section 1.0, Project Description (page 1-8), includes a description of security fencing around the perimeter of the pump station site. The Project will be initially constructed without fencing at Site A2, but fencing could be constructed at a later date if security issues arise. However, for purposes of the environmental impact analysis, the IS/MND assumes the site would be fenced.

The proposed fencing would include a no-climb, ClearView type fence with no razor wire. A sample of this type of fence is included above under response Flicek D-5. Previous security issues at Reservoir R200, adjacent to Site A4, require that security fencing be included from inception at Site A4.

Karmalawy, Y.5-4 This comment asks about the reasons for the removal of trees at Site A2. As stated in the IS/MND Section 1.4, Project Description (page 1-11), up to 13 trees would be removed during pump station construction at Site A2. Tree removal is required to accommodate the pump station facilities on the site. No trees would be removed for construction at Site A4, or for use of either Staging Area 1 or Staging Area 2. After construction of the pump station, landscaping at Site A2 would include the installation of about 13 trees within the landscaped areas and the temporary construction easement. The landscaping would also include a mix of shrubs. The proposed landscaping is consistent with the City of San Ramon's Architecture Review Board.

As stated in IS/MND Section 2.2.1, Aesthetics (page 2-8), and Section 2.2.4, Biological Resources (pages 2-43 to 2-44), implementation of EBMUD Standard Construction Specification 01 35 44, Environmental Requirements, Section 3.7, Protection of Native and Non-native Protected Trees, includes best practices for protecting trees that are not removed within the Project construction limits, including showing tree protection on the construction drawings, pruning pursuant to Tree Pruning Guidelines of the International Society of Arboriculture, installation of exclusion fencing, exclusion of work or storage inside of the tree protection zone, and consulting with an arborist for pruning or tree replacement. Please refer to IS/MND Section 1.4, Project Description, Section 2.2.1, Aesthetics, and Section 2.2.4, Biological Resources, for more information about trees.

Karmalawy, Y.5-5 This comment asks if the decibels are calculated for the pump station operational noise based on average or peak levels. Both the existing ambient average noise level and the peak noise level were measured. A short-term ambient noise measurement (ST-1) was taken adjacent to the nearest residential receptor to the west of Site A2, approximately 250 feet west of the edge of Dougherty Road. The measured average noise level, (L_{av}) was 49.6 dBA while the noise level exceeded 90 percent of the time (i.e., L_{90} [maximum]), was 42 dBA. Another short-term measurement (ST-2) was taken 25 feet west of Site A2 and approximately 50 feet from the west edge of Dougherty Road to represent the ambient noise level at the site. Measured noise levels at this location were higher with an L_{av} of 63.1 dBA and L_{90} of 54 dBA. A short-term ambient noise measurement (ST-3) was taken at the southern boundary of the open space across the street from the nearest residences to Site A4 on Lilac Ridge Road and Lantana Way to capture the existing noise environment at these receptors. The measured L_{av} was 50.4 dBA and L_{90} was 42 dBA. Construction related and operational related noise impacts were found to be less than significant. Please refer to Master Response 2 regarding operational noise of the pumps. Please also refer to IS/MND Section 2.2.12, Noise (page 2-88), for more information about noise.

Karmalawy, Y.5-6 This comment requests more information about the source for the noise decibels. The noise levels were calculated based on industry standards for pumps similar to those that will be installed for the

Project.[6] Please refer to IS/MND Section 2.2.12, Noise, for more information about noise.

Karmalawy, Y.5-7 This comment requests that the public comment period for the EBMUD Board meeting be changed from 2:00 p.m. so that people who work could attend. EBMUD Board meetings will be held at their normally scheduled time, with at least 10 days of advanced notice to the public.

Karmalawy, Y.5-8 This comment requests that the presentation to the Board of Directors include information about how the pump station will not benefit the owners of neighboring homes. Please see response Karmalawy, Y.1-10.

Karmalawy, Y.5-9 This comment requests that the rendering presented at the public meeting on November 13, 2018, be updated to accurately depict the fence and electric pole for presentation to the Board of Directors.

Project renderings presented at the public meeting on November 13, 2018 accurately depicted the pump station building, fencing, and antenna to scale. Refer to response Karmalawy, Y.5-3 about security fencing at the pump station.

Karmalawy, Y.5-10 This comment requests that the roadway impacts be clarified to the Board of Directors. Please refer to Master Response 1 regarding traffic impacts associated with the construction of the proposed pump station at Site A4 and associated pipeline, which states that standard construction specifications plans would be implemented to minimize construction related traffic impacts. Project descriptions including length of pipeline in local roadways are included in IS/MND Section 1.4, Project Description. As described within Section 2.2.16 Transportation and Traffic (Page 2-109) of the IS/MND, the following traffic related impacts on roadways would occur for each site:

- Site A2 would require 150 linear feet of pipeline installation in Dougherty Road
- Site A4 would require approximately 930 linear feet of pipeline installation in Lilac Ridge Road, 1,350 linear feet of pipeline installation in North Gale Ridge Road, and

[6] Section 2.2.12, Noise, references the EBMUD Water Treatment and Transmission Improvements Program Draft Environmental Impact Report Section 3.10 – Noise and Vibration. This document includes industry standards for pumps similar to those that would be installed for the Project and is available at: https://www.ebmud.com/about-us/construction-my-neighborhood/water-treatment-and-transmission-improvements-program/water-treatment-and-transmission-improvements-draft-environmental-impact-report/.

2,150 linear feet of pipeline installation in Dougherty Road. Approximately 2,280 linear feet of residential roadways would be impacted.

Contractors can typically install 80 to 200 linear feet of pipeline in paved areas per workday. One paving crew could typically pave 700 linear feet of trench per day.

Construction activities at Site A4 would generate traffic including trucks hauling equipment and materials to and from the project sites. Pipelines would be constructed in sections, and one-lane closures of Lilac Ridge Road, North Gale Ridge Road, and Dougherty Road would be required. It is anticipated that one or two lanes on Dougherty Road would be closed during non-commute hours during pipeline construction, with traffic being funneled into the remaining available lanes. As detailed in IS/MND Section 1.6, Practices and Procedures (Page 1-17), a number of standard practices and procedures, applicable to all EBMUD projects, have been incorporated in the Project, including Standard Construction Specification 01 14 00, Work Restrictions, and Standard Construction Specification 01 55 26, Traffic Regulation, which would further reduce potential traffic impacts by limiting work and haul truck hours and requiring a Traffic Control Plan that minimizes impacts to traffic circulation.

Traffic control measures (e.g. signage, cones, flaggers) would be implemented in order to route traffic around the construction area at Site A4.

Karmalawy, Y.5-11 This comment requests that EBMUD consider site locations for the pump station, including sites farther from residences. Please refer to Master Response 6 regarding the sites that were evaluated for the proposed pump station.

2.4.7 Kelshikar, S.

Kelshikar, S.1

Kelshikar, S.1-1 This comment states that the aesthetics of the pump station will not fit within the aesthetics of the surrounding community. Please refer to Master Response 4 regarding the visual impacts of the pump station. As stated in Maser Response 4, because landscaping would be incorporated into the Project, and the size and design of the pump station building would match the architectural styles of surrounding subdivisions and be consistent with the surrounding manmade

features, the Project would not substantially degrade the existing visual character or quality of the site and its surroundings.

Kelshikar, S.1-2 This comment states that Site A4 is 170 feet from the nearest homeowner in the Capella at Gale Ranch neighborhood. Section 1.3, Environmental Setting (page 1-3 of the IS/MND), notes that the Capella at Gale Ranch subdivision is approximately 170 feet east of Site A4.

Kelshikar, S.1-3 This comment states that Project construction will be disruptive to traffic going in and out of the Capella at Gale Ranch neighborhood and disrupt the Coyote Creek Elementary School traffic. Please refer to Master Response 1 regarding traffic associated with the construction of the proposed pump station at Site A4 and associated pipeline. As stated in Master Response 1, EBMUD's Standard Construction Specification 01 55 26, has been incorporated into the Project and includes provisions for traffic circulation, detour plans (for automobiles, bicycles, and pedestrians), and coordination with administration at Coyote Creek Elementary School.

Kelshikar, S.1-4 This comment states that San Ramon Valley Unified School District did not provide input on the traffic study completed for the Project. A traffic analysis was prepared as part of the IS/MND. The San Ramon Valley Unified School District was not specifically consulted as part of the CEQA process, but public meetings were held and the IS/MND notifications were posted to notify the public. Future coordination with the San Ramon Valley Unified School District will be included as part of the Traffic Control Plan to be implemented as part of the Project, consistent with EBMUD's Standard Construction Specification 01 55 26. The estimated trips in the traffic analysis were developed in close coordination with EBMUD. Refer to IS/MND Section 2.2.16, Transportation and Traffic (page 2-107), for more information about traffic.

Kelshikar, S.1-5 This comment states that Red Willow Park is large and would be less intrusive on neighborhoods. Please refer to Master Response 6 and Appendix A of this document regarding the sites that were evaluated for the proposed pump station. As stated in Appendix A, sites between Red Willow Park and Diablo Park would require more pipeline, impacting park facilities and scenic designated lands more than other alternative sites.

Kelshikar, S.1-6 This comment states that the recycled water supply from the pump station will not serve the Capella at Gale Ranch neighborhood. Recycled water is currently used to irrigate landscape areas along Lilac Ridge Road and Coyote Creek Elementary School adjacent to the

Capella at Gale Ranch neighborhood. Please see response Karmalawy, Y.1-10.

Kelshikar, S.2

Kelshikar, S.2-1 This comment states that the commenter lives near Site A4, and is concerned about: (1) noise downhill in the direction of their community, (2) traffic congestion to Coyote Creek Elementary School families during construction, and (3) proximity of the Project to their neighborhood and decreased home value.

Please refer to Master Response 1 for information about construction impacts, including construction noise and traffic. As stated in Master Response 1, because EBMUD's Standard Construction Specification 01 55 26, has been incorporated into the Project and includes provisions for traffic circulation, detour plans (for automobiles, bicycles, and pedestrians), and coordination with administration at Coyote Creek Elementary School, Project impacts from short-term construction traffic delays and traffic safety would be less than significant.

Please refer to Master Response 2 for information about operational noise from the proposed pump station. As stated in Master Response 2, simultaneous operation of the three pumps and transformer would not be audible over the existing ambient daytime noise levels, and although nighttime noise levels would be increased, the increase in noise level would be below San Ramon General Plan standards.

Please refer to Master Response 9 for information about property values which states that there is no evidence of a connection between construction of a facility such as the proposed pump station and property values.

Kelshikar, S.2-2 This comment expresses concern that the other sites considered, such as Red Willow Park, were removed from further evaluation due to the criteria that EBMUD applied. Please refer to Master Response 6 and Appendix A of this document regarding the sites that were evaluated for the proposed pump station. As stated in Appendix A, sites between Red Willow Park and Diablo Park would require more pipeline, loss of park land, temporary impacts to recreational trails, and scenic designated lands more than other alternative sites.

Kelshikar, S.2-3 This comment states that the commenter attended the October 17, 2018, public meeting and asks for an update on comments submitted at the meeting. Refer to response Kelshikar, S.1 for responses to comment letter Kelshikar, S.1 submitted at the public meeting. This comment also states that the commenter notified personnel at the San Ramon Valley Unified School District about the Project, and that they would be

looking into traffic impacts. Please refer to Master Response 1 for more information about the construction impacts, including traffic.

Kelshikar, S.2-4 This comment states that the commenter is available for further discussions and that the commenter appreciates EBMUD's time and assistance in resolving issues with the Project. This comment also requests more information about alternative sites for the pump station, including locations away from neighborhoods and schools. Please refer to Master Response 6 and Appendix A of this document regarding the sites that were evaluated for the proposed pump station.

2.4.8 Lahiji, C.

Lahiji, C.1

Lahiji, C.1-1 This comment requests information about existing pump station locations in Alamo and Lafayette that were presented as examples at the October 17, 2018, public meeting. Pump stations in Alamo and Lafayette that were mentioned at the public meeting are potable water pump stations in proximity to residential locations. The Diablo Vista Pump Station is at the intersection of Mount Diablo Boulevard and Mount Diablo Court in Lafayette. The Danville Pump Station is adjacent to the Iron Horse Trail near the intersection with Danville Boulevard. The pump stations were discussed at the October 17, 2018, and November 13, 2018, public meetings.

Lahiji, C.1-2 This comment requests an example of an EBMUD pump station structure that has already been built. The Valley View Pump Station in the north parking lot of Valley View Park in San Ramon is an existing DSRSD-owned pump station. Although EBMUD does not own this pump station, it is part of the DERWA recycled water system. The pump station was presented and discussed at the October 17, 2018 and November 13, 2018 public meetings.

Lahiji, C.1-3 This comment requests information about potential noise and odors from the Project. Operational noise from the simultaneous operation of the three pumps and transformer at either site would not be audible over the existing ambient noise levels. Nighttime noise from the pump station at either site would also be below general plan standards. Please refer to IS/MND Section 2.2.12, Noise, for more information about noise. Please also refer to Master Response 2 regarding operational noise. Please refer to Master Response 8 regarding operational odors. As stated in Master Response 8, the recycled water that would be handled by the pump station is highly treated and generates no odors. The pumps used to transfer recycled water would be powered by electricity and would not generate any odors. Odor

impacts are further discussed in the IS/MND, Section 2.2.3, Air Quality.

Lahiji, C.1-4 This comment requests that the pump station be built in an area that is not close to homes. Please refer to Master Response 6 and Appendix A regarding the sites that were evaluated for the proposed pump station.

Lahiji, C.1-5 This comment requests that EBMUD mark potential alternative site locations on the map. A map of the sites evaluated with the locations marked was posted on the Project website on October 19, 2018: https://www.ebmud.com/water/recycled-water/current-recycled-water-users/san-ramon-valley/recycled-water-pump-station-dougherty-roadsan-ramon/. A map of the sites evaluated is also located in Appendix A.

Lahiji, C.1-6 This comments requests more information on what other locations were considered for the pump station. Please refer to Master Response 6 and Appendix A of this document regarding the sites that were evaluated for the proposed pump station.

Lahiji, C.1-7 This comment requests a representation of the proposed antenna. Renderings of the pump station at Site A2 were presented at the public meeting on October 17, 2018, which included the antenna. Based on comments received at the public meeting, the renderings were revised to more clearly show the building and antenna. These updated renderings were presented at the public meeting on November 13, 2018, and are included in Master Response 4.

The Project was presented to the EBMUD Planning Committee on May 14, 2019. Emails informing the public about the Planning Committee presentation were sent to those that attended previous public meetings on April 4, May 3, and May 10, 2019. A notice of the Planning Committee meeting was also posted on the Project website. A copy of the staff report to the Planning Committee was included in the May 10, 2019, email and was also available on EBMUD's website prior to the Planning Committee meeting. No members of the public commented on the pump station during the planning committee meeting. No members of the public attended the Planning Committee meeting, and no public comments were received.

Lahiji, C.1-8 This comment states that the renderings presented at the October 17, 2018, meeting were not accurate and requests a better depiction. Based on comments received at the public meeting, the renderings were revised to more clearly show the building and antenna. These updated renderings were presented at the public meeting on November 13, 2018, and are included above in Master Response 4.

Lahiji, C.1-9 This comment requests that the pump station be built behind Reservoir R200. Please refer to Master Response 6 and Appendix A of this document regarding the sites that were evaluated for the proposed pump station. This alternative was evaluated as Site B1 as described in Appendix A, Attachment 2. Site B1 meets fewer key criteria than Site A2, and would result in additional visual, noise, and traffic impacts on the surrounding community, as well as increased Project costs. Therefore, Site A2 is preferred over Site B1.

Lahiji, C.1-10 This comment requests another public meeting to discuss the Project. Another public meeting was held on November 13, 2018.

The Project was presented to the EBMUD Planning Committee on May 14, 2019. Emails informing the public about the Planning Committee presentation were sent to those that attended previous public meetings on April 4, May 3, and May 10, 2019. A notice of the Planning Committee meeting was also posted on the Project website. A copy of the staff report to the Planning Committee was included in the May 10, 2019, email and was also available on EBMUD's website prior to the Planning Committee meeting. No members of the public commented on the pump station during the planning committee meeting.

Lahiji, C.2

Lahiji, C.2-1 This comment stating the commenter's distaste of the visual aesthetics of the Project is acknowledged. Comment noted. Please refer to Master Response 4 regarding the visual impacts of the pump station.

2.4.9 Lee, C.

Lee, C-1 This comment stating that the commenter bought their house 2 years ago and were told, based on their research, that there would be no construction near their community is acknowledged.

Lee, C-2 This comment states that the Project will negatively impact house prices, the aesthetics and peaceful environment of the community, and children going to Coyote Creek Elementary School. Please refer to Master Response 9 regarding property values, which states that there is no evidence of a connection between construction of a facility such as the proposed pump station and property values.

Please refer to Master Response 4 regarding the visual impacts of the pump station, which states that landscaping would be incorporated into the Project, and the size and design of the pump station building would match the architectural styles of surrounding subdivisions and be consistent with the surrounding manmade features.

Please refer to Master Response 1 for information about construction impacts, including noise and safety for Coyote Creek Elementary School pedestrians. Master Response 1 states that a number of EBMUD standard practices and procedures applicable to all EBMUD projects have been incorporated into the Project to restrict the hours for operation of construction equipment and minimization measures for noise control of construction equipment. These requirements would be incorporated into the Project, reducing noise levels to less than the 70 dBA speech interference threshold and ensuring that Project impacts from short-term construction noise would be less than significant.

Please refer to Master Response 2 regarding operational noise from the proposed pump station. As stated in Master Response 2, simultaneous operation of the three pumps and transformer would not be audible over the existing ambient daytime noise levels, and although nighttime noise levels would be increased, the increase in noise level would be below San Ramon General Plan standards. Please refer to IS/MND Section 2.2.12, Noise (page 2-88), for more information about noise.

Lee, C-3 This comment requesting that the Site A4 location be removed from consideration is acknowledged. Please see Master Response 7, which discusses EBMUD's preference for Site A2.

2.4.10 Lee, D.

Lee, D-1 This comment expressed concern about the operational noise of the pump station, the visual effects on the surrounding community, and the potential for exposure to electricity from the pump station at Site A4. Please refer to Master Response 2 for a discussion of the operational noise impacts from the proposed pump station. Please refer to Master Response 4 regarding the visual impacts of the pump station. Regarding electrical exposure, the antenna at the pump station would have a radio output of 5 watts, which is licensed by the Federal Communications Commission (FCC).[7] For this Project, the antenna will radiate 5 watts in the air, which would dissipate rapidly. The power density from the antenna would decrease as distance from the antenna increases. For comparison, a typical iPhone has a radio frequency output of 1.6 to 2 watts.

Lee, D-2 This comment states that construction of the pump station at Site A2 would occur in proximity to existing residences and disrupt the existing scenery. As discussed in IS/MND Section 2.2.1, Aesthetics

[7] https://www.fcc.gov/engineering-technology/electromagnetic-compatibility-division/radio-frequency-safety/faq/rf-safety#Q10

(page 2-6), Site A2 is not part of a scenic vista. Site A2 is currently occupied by trees and shrubs. Although up to 13 trees would be removed for construction of the pump station, EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements, Section 3.7, Protection of Native and Non-Native Protected Trees, would be implemented as part of the Project, and includes best practices for protecting trees that are not removed within the Project construction limits. As described in IS/MND Section 1.0, Project Description (page 1-9), EBMUD would also landscape the frontage of Site A2 following construction, to soften the transition from natural to manmade elements. The landscaping would filter views of the pump station for passing motorists and pedestrians. In accordance with the City of San Ramon Zoning Ordinance for tree preservation, the landscaping would accommodate as many trees in-kind as feasible and the remainder of the new trees/landscaping would match the existing tree landscaping along Dougherty Road. Therefore, the landscape design for the Project maximizes the site's post-construction capacity for new trees and would match the nearby landscaping. Please refer to IS/MND Section 2.2.1, Aesthetics, for more information about aesthetics.

Lee, D-3 This comment requests that the pump station be located farther away from residences, and states that there should be a better location for the pump station. Please refer to Master Response 6 and Appendix A of this document regarding the sites that were evaluated for the proposed pump station.

2.4.11 Leww, Y.

Leww, Y-1 This comment expresses concern about the potential for noise, odors, and other environmental consequences on the surrounding community. The IS/MND assesses the potential environmental impacts from the Project and was prepared in accordance with the CEQA statutes and guidelines with EBMUD as the lead agency. Please refer to the IS/MND for analyses related to 18 different environmental resources categories. Please refer to Master Response 2 regarding operational noise of the pump station. Please refer to Master Response 8 regarding operational odors.

Leww, Y-2 This comment thanks EBMUD for the opportunity to comment, and suggests that other locations away from a residential area and school be considered. Please refer to Master Response 6 and Appendix A of this document regarding the sites that were evaluated for the proposed pump station.

2.4.12 Louie, M.

Louie, M.2

Louie, M.2-1 This comment requests that EBMUD provide the PowerPoint presentation from the October 17, 2018, meeting. Staff informed the public at the meeting that the Project information presented would be posted on the Project website. The public meeting presentation was made available on October 19, 2018, on the Project website: https://www.ebmud.com/water/recycled-water/current-recycled-water-users/san-ramon-valley/recycled-water-pump-station-dougherty-roadsan-ramon/.

Louie, M.2-2 The comment stating that the commenter does not like the Site A4 location because it is too close to their home is acknowledged.

2.4.13 Lucey, R.

Lucey, R-1 This comment requests more information about EBMUD's preference for Site A2 versus Site A4. Please refer to Master Response 7 regarding EBMUD's preference for Site A2.

Lucey, R-2 This comment requests more information about the acoustic louvers to mitigate turbine noise. As stated in IS/MND Section 1.4, Project Description (page 1-7), the pump station design incorporates noise reduction methods, including acoustical louvers (i.e., vents with noise-absorbing material). The louvers are included to allow for necessary air circulation, and are built with noise absorbing material so that the openings created by the louvers do not allow excess noise to escape from the building. The pumps would be constructed in an enclosed building to reduce noise. Please refer to Master Response 2 regarding operational noise associated with the proposed pump station. Please refer to IS/MND Section 2.2.12, Noise (pages 2-97 to 2-98), for additional information about noise.

Lucey, R-3 This comment requests more information about the design of Site A4, and how it differs from the design of Site A2 that was shown in renderings at the public meeting. The Site A4 design would generally be the same as Site A2. The pump station at Site A4 would have all of the same components and design elements as Site A2, but those components would be arranged in a different layout as shown on Figures 3 and 4 (pages 1-5 and 1-6) in the IS/MND. Landscaping would be different at Site A4 to be more specific to its location on the hillside. In addition, EBMUD has determined that the pump station would be constructed at Site A2 without security fencing, but that fencing would be required at Site A4 due to previous security issues at Tank R200. Please also see response Flicek, D-5.

Lucey, R-4 This comment states that the pump station would be much better located behind Reservoir R200 or underground. Please refer to Master Response 6 and Appendix A of this document regarding the sites that were evaluated for the proposed pump station. This alternative was evaluated as Site B1 as described in Appendix A, Attachment 2. Site B1 meets fewer key criteria than Site A2, and would result in additional visual, noise, and traffic impacts on the surrounding community, as well as increased Project costs. Therefore, Site A2 is preferred over Site B1.

Please refer to Flicek, D-9 regarding information on buried facilities.

2.4.14 Nalam, N.

Nalam, N.1

Nalam, N.1-1 The commenter lives near Site A4 and the commenter concern about the site as an option for the Project is acknowledged.

Nalam, N.1-2 This comment requests more information about other sites considered for the Project, including the Castenada Yard at 5050 Crow Canyon Road. Please refer to Master Response 6 and Appendix A of this document regarding the sites that were evaluated for the proposed pump station. Although EBMUD owns the Castaneda Yard, it is not within the appropriate hydraulic elevations to meet the system requirements, so it is not feasible for the Project.

Nalam, N.2

Nalam, N.2-1 This comment asks about the feasibility of EBMUD to purchase Site A2. The City of San Ramon approved a resolution in July 2016 to negotiate sale of Site A2 to EBMUD. Site appraisals and property surveys are completed. Property purchase of Site A2 from the City would be completed following EBMUD Board approval of the Project. A street vacation clearing the public right-of-way on the property would be completed through the City.

Nalam, N.2-2 This comment asks if the pump station could be constructed underground.

Please refer to Flicek, D-9 regarding information on buried facilities.

Nalam, N.2-3 This comment asks if Site A4 could be moved closer to the hills away from the nearby residences. Please refer to Master Response 6 and Appendix A of this document regarding the sites that were evaluated for the proposed pump station. This alternative was evaluated as Site B1 as described in Appendix A, Attachment 2. Site B1 meets fewer

key criteria than Site A2, and would result in additional visual, noise, and traffic impacts on the surrounding community, as well as increased Project costs. Therefore, Site A2 is preferred over Site B1.

Please see response Bauer L-11, which discusses routing pipeline through the hills to Dougherty Road.

Nalam, N.2-4 This comment requests more information about the five sites that were considered by EBMUD in 2016. Please refer to Master Response 6 and Appendix A of this document regarding the sites that were evaluated for the proposed pump station.

Nalam, N.2-5 This comment requests more information about other sites considered for the Project, including the Castenada Yard at 5050 Crow Canyon Road. Although EBMUD owns the Castaneda Yard, it is not within the appropriate hydraulic elevations to meet the system requirements, so it is not feasible for the Project. Please refer to Master Response 6 and Appendix A of this document regarding the sites that were evaluated for the proposed pump station.

Nalam, N.3

Nalam, N.3-1 The comment stating that they live at the home closest to Site A4 is acknowledged

Nalam, N.3-2 The comment stating that they hope Site A4 will be removed from consideration, and that Site A2 is a better choice for homeowners, the City of San Ramon, and EBMUD, is acknowledged.

Nalam, N.3-3 This comment states that the pump station at Site A4 would impact views from their home, and expresses concern about potential fire hazards from constructing the pump station on the hill at Site A4. Please refer to Master Response 4 and response Bauer L-19 regarding the visual impacts of the pump station. Please refer to Master Response 5 regarding fire hazards from the construction and operation of the pump station.

2.4.15 O'Hanlon, J.

O'Hanlon, J-1 This comment states that the commenter lives near Site A2 and is concerned about impacts on the neighborhood. The IS/MND assesses the potential environmental impacts from the Project and was prepared in accordance with the CEQA statutes and guidelines, with EBMUD as the lead agency. Please refer to the IS/MND for analyses related to 18 different environmental resources categories. Please refer to Master Response 1 for a discussion about construction impacts, including noise, debris, traffic and safety, and emissions and dust. As stated in

Master Response 1, a number of EBMUD standard practices and procedures applicable to all projects would be incorporated, ensuring that Project impacts from short-term construction noise, debris, traffic, traffic, and emissions and dust would be less than significant.

Please refer to Master Response 2 for a discussion about operational noise impacts which states that simultaneous operation of the three pumps and transformer would not be audible over the existing ambient daytime noise levels, and although nighttime noise levels would be increased, the increase in noise level would be below San Ramon General Plan standards. Please refer to IS/MND Section 2.2.12, Noise, (page 2-88) for more information about noise.

Please refer to Master Response 4 for a discussion about visual impacts, which states that landscaping would be incorporated into the Project, and the size and design of the pump station building would match the architectural styles of surrounding subdivisions and be consistent with the surrounding manmade features.

Please refer to Master Response 8 regarding operational odors. As stated in Master Response 8, the recycled water that would be handled by the pump station is highly treated and generates no odors. The pumps used to transfer recycled water would be powered by electricity and would not generate any odors. Odor impacts are further discussed in the IS/MND, Section 2.2.3, Air Quality (page 2-13).

O'Hanlon, J-2 This comment requests confirmation that most of the environmental concerns would occur during the construction phase. As noted in the various resource analyses in the IS/MND, the majority of impacts from the Project, including those associated with dust or odors would occur during construction. Please refer to Master Response 1 for a discussion about the construction impacts, including noise, debris, traffic and safety, and emissions and dust.

O'Hanlon, J-3 This comment requests more information about potential odors from operation of the Project. There would be no odors during Project operation as the recycled water is highly treated and would not be exposed to air as part of the pump station facilities. Please refer to Master Response 8 regarding operational odors.

O'Hanlon, J-4 This comment states that noise and visual environmental concerns for the pump station at Site A2 could be addressed satisfactorily. This commenter also suggests that improvements to the landscaping would help mitigate noise and visual concerns. As stated in Section 1.4, Project Description (page 1-7), the proposed pump station building would be designed to match the architectural styles of surrounding subdivisions, including a beige-colored building with a slanted, clay-

tiled roof. Site A2 would include new landscaping in the unpaved area between the pump station and sidewalk, between the driveway and sidewalk, and construction easement area (refer to Figure 3 [page 1-5] of the IS/MND). Landscaping would include the installation of about 13 trees within the pump station landscaped areas and the temporary construction easement. The proposed landscaping is consistent with the City of San Ramon's Architectural Review Board (ARB). Please refer to IS/MND Section 1.4, Project Description, and Section 2.2.1, Aesthetics, for more information about aesthetics and Project design. Please also see Master Response 4, which explains aesthetic modifications to the proposed project EBMUD made in response to community concerns.

As stated in IS/MND Section 1.4, Project Description (page 1-7), the pump station design would incorporate noise reduction methods, including acoustical louvers (i.e., vents with noise-absorbing material) in two building walls to reduce noise transmission while allowing air circulation in the pump station building. The pumps would be constructed in an enclosed building to reduce noise. Please refer to Master Response 2 regarding operational noise associated with the proposed pump station. Please refer to IS/MND Section 2.2.12, Noise (pages 2-97 to 2-98), for additional information about noise.

O'Hanlon, J-5 This comment requests more information about potential odors from Project operation. There would be no odors. Please refer to response O'Hanlon, J-3.

2.4.16 Panconi, M.

Panconi, M-1 This comment expresses concerns about the visual effects of the pump station at Site A2 and a decrease in home values. Please refer to Master Response 4 regarding the visual impacts of the pump station, which states that landscaping would be incorporated into the Project, and the size and design of the pump station building would match the architectural styles of surrounding public structures and subdivisions and be consistent with the surrounding manmade features.

Please refer to Master Response 9 regarding property values, which states that there is no evidence of a connection between construction of a facility such as the proposed pump station and property values.

Panconi, M-2 This comment requests more information about potential odors from Project operation. There would be no odors during Project operation as the recycled water is highly treated and would not be exposed to air as part of the pump station facilities. Please refer to Master Response 8 regarding operational odors.

Panconi, M-3 This comment requests that EBMUD look at an alternative location for the new pump station. Please refer to Master Response 6 and Appendix A of this document regarding the sites that were evaluated for the proposed pump station.

2.4.17 Peng, D.

Peng, D-1 This comment requests more information about the effects of the pump station on the surrounding environment, including noise and odors. The IS/MND assesses the potential environmental impacts from the Project and was prepared in accordance with the CEQA statutes and guidelines with EBMUD as the lead agency. Please refer to the IS/MND for analyses related to 18 different environmental resources categories. Please refer to Master Response 2 regarding operational noise associated with the proposed pump station, which states that simultaneous operation of the three pumps and transformer would not be audible over the existing ambient daytime noise levels, and although nighttime noise levels would be increased, the increase in noise level would be below San Ramon General Plan standards. Please refer to IS/MND Section 2.2.12, Noise (page 2-88), for more information about noise.

Please refer to Master Response 8 regarding operational odors, which states that there would be no odors during Project operation as the recycled water is highly treated and would not be exposed to air as part of the pump station facilities.

Peng, D-2 This comment asks about the Project's effect on property values. Please refer to Master Response 9 regarding property values.

Peng, D-3 This comment asks how the Project will solve traffic problems, noting the Coyote Creek Elementary School. Please refer to Master Response 1 regarding the construction traffic and potential short-term traffic disruptions near Coyote Creek Elementary School. The Project would not cause long-term effects on transportation or traffic because, once installed, the pump station would generally be operated remotely via the EBMUD SCADA system. One worker vehicle trip per week is anticipated for pump station operation and maintenance.

2.4.18 Pham, N.

Pham, N-1 This comment states a preference for building the pump station on Site A4, and asserts that the pump station at Site A2 will obstruct the landscape and be an eye sore on Dougherty Road. Please refer to Master Response 4 regarding the visual impacts of the pump station which states that landscaping would be incorporated into the Project, and the size and design of the pump station building would match the

architectural styles of surrounding public structures and subdivisions and be consistent with the surrounding manmade features.

Pham, N-2 The comment stating that the commenter is a resident near Dougherty Road is acknowledged.

2.4.19 Shen, J.

Shen, J.1

Shen, J.1-1 This comment states the opinion that Site A2 and Site A4 are too close to the Capella at Gale Ranch community, and requests that other sites be considered. Please refer to Master Response 6 and Appendix A of this document regarding the sites that were evaluated for the proposed pump station.

Shen, J.2

Shen, J.2-1 The statement that the commenter attended the October 17, 2018 public meeting is acknowledged.

Shen, J.2-2 The statement that the commenter found the 2016 news related to the Project is acknowledged.

Shen, J.2-3 The comment that includes a quote from a 2016 news article stating that the previously evaluated Site A4 is *"less desirable because it would be more visible to residents, located near a planned subdivision, and would require about 2,700 feet of new pipeline, which would result in higher project costs and more traffic impacts"* is acknowledged. Site A4 was included as an alternative Project location because it is owned by DERWA and does not require property acquisition.

Shen, J.2-4 This comment requests more information about why Site A4 is the second choice for the pump station. Although Site A4 does not meet all of the Project criteria, Site A4 was included as an alternative Project location because it is owned by DERWA and does not require property acquisition. Please refer to Master Response 7 about why Site A4 is not EBMUD's preferred site for the proposed pump station.

Shen, J.4

Shen, J.4-1 This comment is noting that the commenter would like to understand the discrepancies between the 2016 report, and the slide from the public meeting presentation that included a map with the previously evaluated alternative site locations and why some of the sites were not chosen. The difference between the information presented in the 2016 report and the slide from the public meeting presentation that included

a map with the previously evaluated alternative site locations and why some of the sites were not chosen is because the information presented at the public meeting was focused on presenting information relevant to the surrounding community, as opposed to the 2016 report that was focused on providing information to City staff. Please refer to Master Response 6 and Appendix A of this document regarding the sites that were evaluated for the proposed pump station.

Shen, J.4-2 This comment states that there is a discrepancy in the information for the alternative site locations presented in the 2016 report versus the map that was presented at the public meetings, specifically about the location of the previously evaluated Site A5. The difference between the information presented in the 2016 report and the sites presented in the public meeting is because the alternative site locations map presented at the public meetings included options of locating the pump station at various locations within Red Willow Park, some of which were not previously considered that were outside of the park play area, but were closer to existing homes.

Shen, J.4-3 The statement that the new Capella at Gale Ranch community was built close to Site A4 since potential sites were initially considered is acknowledged.

Shen, J.4-4 This comment requests more information about site locations near Diablo Vista Park that have existing utilities. Please refer to Master Response 6 and Appendix A of this document regarding the sites that were evaluated for the proposed pump station including those referenced in the comment. As stated in Appendix A, alternative sites near Diablo Vista Park would require more pipeline, impacting park facilities and designated scenic lands more than other alternative sites.

2.4.20 Sinha, A.

Sinha, A.1

Sinha, A.1-1 This comment requests that the pump station not be built in the residential neighborhood due to noise, aesthetic, and safety concerns.

Please refer to Master Response 2 regarding operational noise of the pump station. Please refer to Master Response 4 regarding information on the visual impacts of the pump station. Please refer to IS/MND Section 1.0, Project Description (page 1-8), for more information about safety features associated with the Project. Please refer to Master Response 1 for more information about the construction-related impacts, including construction traffic and safety.

Sinha, A.1-2 This statement that the commenter signed a petition opposing the Project is acknowledged.

Sinha, A.1-3 This comment is about the zoning of the Project sites and the character of the surrounding area. As a water transmission facility, the pump station is exempt from local zoning pursuant to California Government Code Section 53091. Nonetheless, as stated in IS/MND Section 2.2.10, Land Use and Land Use Planning (pages 2-85 to 2-86), the Project is consistent with the General Plan and zoning code. Site A2 is zoned as Medium Density Residential, and Site A4 is zoned as Open Space by the San Ramon Zoning Ordinance. The City of San Ramon Zoning Code Section D2-4 - Exemptions from Land Use Permit Requirements, Part B7 states that, "*the erection, construction, alteration, or maintenance by a public utility or public agency of utilities intended to service existing or nearby approved developments shall be permitted in any zone.*" Because the Project includes the construction of a recycled water pump station to serve areas in the City of San Ramon, the Project is consistent with the current zoning designation for both sites. Pump Station R3000 would deliver recycled water to the existing Reservoir R3000, serving portions of the San Ramon, Danville, and Blackhawk communities in the future that are north of the potential Project sites, as shown in IS/MND Figure 1. The recycled water would be used for landscape irrigation in parks, greenbelts, schools, common areas, and golf courses. Please refer to IS/MND Section 2.2.10, Land Use and Land Use Planning, for more information.

Please refer to Master Response 4 for additional information about the visual impacts of the pump station.

Sinha, A.2

Sinha, A.2-1 This comment states that the commenter is concerned about the pump station at Site A2 and would like more information about alternative pump station locations, especially near Red Willow Park. Please refer to Master Response 6 and Appendix A of this document regarding the sites that were evaluated for the proposed pump station, including sites near Red Willow Park. As stated in Appendix A, alternative sites between Red Willow Park and Diablo Park would require more pipeline, impacting park facilities and scenic designated lands more than other alternative sites.

Sinha, A.2-2 This comment states that the commenter has done their own assessment of the Red Willow Park alternative site, as well as a new one at the Bollinger Canyon Road and Dougherty Road intersection in San Ramon. As stated in Master Response 6 and Appendix A, several potential sites were considered by EBMUD as part of the site selection

process, including the sites detailed in the comment. These sites were evaluated against several criteria, including but not limited to, avoiding impacts to the existing GHAD/conservation easement and minimizing pipeline length. The sites near the intersection of Bollinger Canyon Road and Dougherty Road would have impacts on GHAD and existing conservation easements, and would require more pipeline than other alternatives.

Sinha, A.2-3 This comment includes the commenter's assessment of the Red Willow Park alternative site. Please refer to Master Response 6 and Appendix A of this document regarding the sites that were evaluated for the proposed pump station including the sites detailed in the comment. These sites were evaluated against several criteria, including but not limited to, pipeline length and the loss of existing playfield, parks, or parking areas, and impacts on the existing GHAD and open space. These sites would require the temporary closure of park and recreational trail facilities, and would have additional environmental impacts as compared to the other alternatives, as they are within the GHAD-designated open space. The sites meet fewer key criteria and would result in additional noise and traffic impacts on the surrounding community, as well as increased Project costs, as compared to the other alternatives. As stated in Appendix A, alternative sites between Red Willow Park and Diablo Park would require more pipeline, impacting park facilities and designated scenic lands more than other alternative sites.

Sinha, A.2-4 This comment includes the commenter's assessment of their proposed alternative location at the Bollinger Canyon Road and Dougherty Road intersection in San Ramon. Please refer to Master Response 6 and Appendix A of this document regarding the sites that were evaluated for the proposed pump station including the sites detailed in the comment. These sites were evaluated against several criteria, including but not limited to, avoiding impacts to the existing GHAD/conservation easement and minimizing pipeline length. The sites near the intersection of Bollinger Canyon Road and Dougherty Road would have impacts on GHAD and existing conservation easement, and would require more pipeline than other alternatives.

Sinha, A.2-5 This comment requests that the alternative locations suggested in comments Sinha, A.2-1 through Sinha, A.2-4 be considered. As stated in Master Response 6 and Appendix A, several potential sites including the sites detailed in the comment were considered during a preliminary and second evaluation. Please refer to Master Response 4 for more information about the visual impacts of the pump station.

Sinha, A.2-6 The statement that comments Sinha, A.2-7, Sinha, A.2-8, and Sinha, A.2-9 are reproduced from concerns voiced at the November 13, 2018 public meeting is acknowledged.

Sinha, A.2-7 This comment is about the zoning of the Project sites and the character of the surrounding area. Please refer to response Sinha, A.1-3.

Sinha, A.2-8 This comment requests that Site A4 be reconsidered for the pump station location instead of Site A2. Please refer to Master Response 7 regarding EBMUD's preference for Site A2.

Sinha, A.2-9 This comment is about traffic from the parking lot at Site A2 and the potential for the increase risk of accidents. As discussed in the IS/MND Section 1.7, Project Description (page 1-18), one worker vehicle trip per week is anticipated for pump station operation and maintenance. The Project would not cause long-term effects on transportation or traffic because, once installed, the pump station would generally be operated remotely via the EBMUD SCADA system. Please refer to IS/MND Section 2.2.16, Transportation and Traffic (page 2-109), for more information.

2.4.21 Supekar, B.

Supekar, B-1 This comment states that flora and fauna will be impacted by construction of the proposed pump station at Site A4, and lists several animals seen by the commenter in the Project area, including rabbit/hare, owls, eagle, turkey, squirrel, blue jay, hummingbird, deer, and butterfly (including Monarch). IS/MND Section 2.2.4, Biological Resources (page 2-26), includes information about existing plant and wildlife habitats with the potential to occur at both sites, as well as analyses of the potential impacts on these species and habitats during Project construction and operation. Mammals commonly associated with landscaped and developed areas include California ground squirrel (*Otospermophilus beecheyi).* Common and characteristic wildlife observed during the reconnaissance-level site assessment in non-native grassland included red-tailed hawk (*Buteo jamaicensis*). Special-status species that may occur on the Project area include burrowing owl (*Athene cunicularia*).

As stated in the IS/MND Section 2.2.4, Biological Resources, special-status and common breeding birds, including eagles, turkeys, blue jays, and hummingbirds, that may nest in the Project study areas could be adversely affected by Project construction through increased noise disturbance, tree removal, or visual disturbance.

As detailed in the Project Description, a number of EBMUD standard practices and procedures, applicable to all EBMUD projects, have been

incorporated into the Project, including EBMUD Standard Construction Specification 01 35 44, Environmental Requirements, Section 3.8, Protection of Birds Protected under the Migratory Bird Treaty Act and Roosting Bats, which would require all contractor construction personnel to attend an environmental training program provided by the District of up to 1-day for site supervisors, foremen, and project managers, and up to 30-minutes for non-supervisory contractor personnel, prior to the beginning of construction. The training program will be completed in person or by watching a video at an EBMUD-designated location, conducted by a qualified biologist provided by EBMUD. The program will discuss all sensitive habitats and sensitive species that may occur within the Project work limits, and the responsibilities of contractor's construction personnel, applicable mitigation measures, and notification requirements. In addition, Mitigation Measures BIO-2 requires wildlife exclusion fencing to deter common and special status wildlife from entering into the Project construction work limits. As stated in the IS/MND Section 2.2.4, Biological Resources, Project construction would not create a barrier to, or substantially interfere with, wildlife movements through the study areas or the greater Dougherty Valley. The small size and location of the potential pump station sites and staging areas make them unlikely to significantly impinge on animal movements.

Because Mitigation Measures BIO-2 and EBMUD's Standard Construction Specification 01 35 44 Environmental Requirements, Section 3.8, and Mitigation Measures BIO-1 and BIO-2, would be implemented, which requires fencing, as well as a training program to identify the responsibilities of contractor's construction personnel regarding sensitive habitats and sensitive species that may occur within the Project work area, as well as applicable mitigation measures, and notification requirements, impacts on wildlife species, including rabbit/hare and deer, as well as special-status species and birds(i.e., eagles, turkeys, blue jays and hummingbirds) , would be less than significant. Please refer to Section 2.2.4, Biological Resources (page 2-26), for more information.

Supekar, B-2 This comment is about the effects of the proposed 30-foot high antenna on wildlife. Regarding electrical exposure, the antenna at the pump station would have a radio output of 5 watts, which is licensed by the FCC.[8] For this Project, the antenna will radiate 5 watts in the air, which would dissipate rapidly. The power density from the antenna would decreases as distance from the antenna increases. For

8 https://www.fcc.gov/engineering-technology/electromagnetic-compatibility-division/radio-frequency-safety/faq/rf-safety#Q10.

comparison, a typical iPhone has a radio frequency output of 1.6 to 2 watts. There is no evidence that impacts to wildlife would occur.

Supekar, B-3 This comment expresses concern about the proximity of the 30-foot high antenna to Coyote Creek Elementary School and its impact on children's health. The commenter states that the Coyote Creek Elementary School is about 40 feet from Site A4, but the distance from the closest part of Site A4 to the closest part of Coyote Creek Elementary School is approximately 1,300 feet (0.25 mile). Please refer to response Supekar, B-2 regarding the radio output of the proposed antenna. There is no evidence that impacts to public health would occur.

Supekar, B-4 This comment states that the Project should be erected away from protected lands and an elementary school, and instead be located close to highways for easier maintenance access. Please refer to Master Response 6 and Appendix A of this document regarding the sites that were evaluated for the proposed pump station.

2.4.22 Tang, F.

Tang, F.1

Tang, F.1-1 The statement about where the commenter lives in relation to Site A2 is acknowledged.

Tang, F.1-2 This comment is about odors from the proposed pump station. There would be no odors during Project operation as the recycled water is highly treated and would not be exposed to air as part of the pump station facilities. Please refer to Master Response 8 regarding operational odors.

Tang, F.1-3 This comment is about operational noise at Site A2. Please refer to Master Response 2 regarding operational noise of the pump station at Site A2, which states that simultaneous operation of the three pumps and transformer would not be audible over the existing ambient daytime noise levels, and although nighttime noise levels would be increased, the increase in noise level would be below San Ramon General Plan standards. Please refer to IS/MND Section 2.2.12, Noise (page 2-88), for more information about noise.

Tang, F.1-4 This comment is about the market value of the commenter's home. Please refer to Master Response 9 regarding property values, which states that there is no evidence of a connection between construction of a facility such as the proposed pump station and property values.

Tang, F.1-5 This comment requests that EBMUD consider alternative site locations for the pump station, including open space areas away from residences. Please refer to Master Response 6 and Appendix A of this document regarding the sites that were evaluated for the proposed pump station including site located in open space.

Tang, F.2

Tang, F.2-1 This comment requests that EBMUD consider a site on Dougherty Road south of Bollinger Canyon Road for the pump station. Please refer to Master Response 6 and Appendix A of this document regarding the sites that were evaluated for the proposed pump station including the site noted in the comment. These sites were evaluated against several criteria, including but not limited to, avoiding impacts to the GHAD/conservation easement and minimizing pipeline length. The sites near the intersection of Bollinger Canyon Road and Dougherty Road would have impacts on GHAD and existing conservation easement, and would require more pipeline than other alternatives.

Tang, F.2-2 The statement that some home buyers may disagree with the engineering study that was done for the Project, and that the commenter will never buy a home in proximity to high power electrical lines, is acknowledged.

Tang, F.3

Tang, F.3-1 This comment requests that EBMUD follow up on the site alternative within the conservation easement and contact the appropriate agency to determine if it is possible to get approval to use the site for the pump station. Please refer to Master Response 6 and Appendix A of this document regarding the sites that were evaluated for the proposed pump station. These sites were evaluated against several criteria, including but not limited to, avoiding impacts to the existing GHAD/conservation easement. Construction within the GHAD/conservation easement is restricted to conserve and protect the natural open space and scenic resources in the city of San Ramon, as well as protection from geologic hazards and flood control. Construction within the conservation easement would have greater environmental effects than other feasible alternatives.

Tang, F.3-2 This comment requests a follow-up meeting to the October 17, 2018, public meeting. Another public meeting was held on November 13, 2018.

The Project was presented to the EBMUD Planning Committee on May 14, 2019. Emails informing the public about the Planning

Committee presentation were sent to those that attended previous public meetings on April 4, May 3, and May 10, 2019. A notice of the Planning Committee meeting was also posted on the Project website. A copy of the staff report to the Planning Committee was included in the May 10, 2019, email and was also available on EBMUD's website prior to the Planning Committee meeting. No members of the public commented on the pump station during the planning committee meeting.

Tang, F.3-3 This comment requests that EBMUD consider building the pump station behind Reservoir R200. Please refer to Master Response 6 and Alterative A of this document regarding the sites that were evaluated for the proposed pump station including the site noted in the comment. This alternative was evaluated as Site B1, as described in Appendix A, Attachment 2. Site B1 meets fewer key criteria than Site A2, and would result in additional visual, noise, and traffic impacts on the surrounding community, as well as increased Project costs. Therefore, Site A2 is preferred over Site B1.

CHAPTER 3
Text Changes

3.1 Introduction

This chapter presents revisions to the San Ramon Valley Recycled Water Program Pump Station R3000 Project (Project) Initial Study/Mitigated Negative Declaration (IS/MND) that was published on October 8, 2018. These revisions include both (1) changes made to text, tables, or figures in response to comments on the IS/MND as discussed and presented in Chapter 2, as well as (2) staff-initiated text changes to correct minor inconsistencies, to add minor information or clarification related to the Project, and to provide updated information where applicable. None of the revisions or corrections in this chapter substantially change the analysis and conclusions presented in the IS/MND.

The chapter includes all revisions by reproducing the relevant excerpt of the IS/MND in the sequential order by the chapter, section, and page that it appears in the document. Deletions in text and tables are shown in strikethrough (~~strikethrough~~) and new text is shown in underline (<u>underline</u>). Tables are noted as "(Revised)" next to the table number.

3.2 Changes to the IS/MND

3.2.1 Section 1.0 Project Description

The second paragraph under Section 1.1, Introduction and Background, on page 1-1 of the IS/MND is revised as follows:

> The SRVRWP [San Ramon Valley Recycled Water Program] Pump Station R3000 Project (Pump Station R3000 or Project) evaluated in this Initial Study/Mitigated Negative Declaration (IS/MND) is part of Phase 3 of the SRVRWP. <u>The Project was initially proposed as part of the SRVRWP Facilities Plan (Facility Plan) prepared by the DERWA in July 1996. The Facility Plan proposed a Project location to the north of the intersection of Dougherty Road and Crow Canyon Road. The Facility Plan also proposed an alternative Project location at the entrance to Diablo Vista Park on Crow Canyon Road. Both sites are owned by the City of San Ramon (City or San Ramon). These locations were analyzed pursuant to CEQA as part of the 1996 SRVRWP EIR. City staff reviewed the sites presented in the 1996 Facility Plan and SRVRWP EIR and, due to their close proximities to existing residences and park sites and potential for impacts on these uses, recommended that a further review of alternative site locations be prepared and</u>

presented to the San Ramon City Council Policy Committee. As requested by the City, staff completed an alternatives analysis of additional sites.

Due to system hydraulics and pressure requirements, the new pump station must be connected to the existing Dougherty Road recycled water pipeline somewhere north of the intersection with Lilac Ridge Road and North Gale Ridge Road. Much of the open space along Dougherty Road is protected in Geologic Hazard Abatement District (GHAD), conservation easement, scenic vista, ridgeline, or is immediately adjacent to Alamo Creek. Construction within these areas would pose visual and other environmental impacts.

A site selection analysis was completed in coordination with City staff that evaluated seven potential pump station locations (designated as Sites A1 through A7) with regards to numerous selection criteria. The Project and site selection analysis were presented to the City Policy Committee on May 25, 2016. The Committee recommended that staff further evaluate community impacts to Site A1 (located at the northern side of the intersection of Dougherty Road and Crow Canyon Road), the project location proposed in the 1996 Facility Plan and analyzed within the 1996 SRVRWP EIR. Staff reached out to residents immediately adjacent to Site A1 and the adjacent Home Owners Association management to obtain feedback regarding the proposed pump station site. Following community engagement, Site A1 was removed from further consideration by EBMUD and the City, due to its use as a park by adjacent residents, and its location within 35 feet of adjacent residences. Site A3 and Sites A5 through A7 were also removed from consideration because they did not meet the majority of the site requirements of the selection criteria.

Site A2 best met the site selection criteria as compared to other sites. EBMUD and City staff agreed that Site A2 was the preferred site. The City approved a resolution in July 2016 to authorize the City Manager to negotiate an agreement with EBMUD for the sale of an easement/and or property for the Site A2. A street vacation clearing the public right of way located on Site A2 would be completed through the City. Site A4 was included in the CEQA analysis because although it met fewer selection criteria than other sites, Site A4 is located on property owned by DERWA and would not require property acquisition from the City.

In response to comments received during the public review period of the MND, staff conducted a review of seven additional potential sites (Sites B1 through B7). Sites B1 through B7 are similar in nature to the previously analyzed sites (Sites A1 through A7) and would cause more significant impacts than the preferred Site A2. Based upon the selection criteria, there are no clear advantages to Sites B1 through B7 as compared to Site A2, and many of the sites do not minimize visual, noise, and traffic impacts to the surrounding community, and/or are located within a GHAD, conservation easement, designated open space, or major ridgelines where impacts would likely be greater. In addition, Site B1 through B7 would require thousands of feet of additional pipeline compared to Site A2. For these reasons, none of the B sites are preferred over Site A2

The Project would be owned and operated by EBMUD and would allow the provision of recycled water to areas served only by EBMUD within the DERWA system through construction of a new pump station which was included in the SRVRWP Program EIR, and EBMUD was identified a Responsible Agency for the SRVRWP. This IS/MND was prepared because the Project location was changed following further site reviews. Pursuant to CEQA Guidelines Section 15052(a)(2) and Section 15162(c), EBMUD is the Lead Agency for this IS/MND; no further approval action by the DERWA Board of Directors is necessary for Pump Station R3000 because the Project would be owned and operated by EBMUD individually.

The second bullet under Section 1.4.1, Location, on page 1-7 of the IS/MND is revised as follows:

- **Site A4** is also located within the City of San Ramon and east of I-680. Site A4 is adjacent to the access road to EBMUD's recycled water tank Reservoir R200 (or Tank R200) (see Figure 2), located off of Lilac Ridge Road near Lantana Way. The site is at an elevation of approximately 675 feet. Site A4 is owned by DERWA and would not require property acquisition. The pump station site is described in more detail in Section1.4.2 below. Pipelines associated with Site A4 would be installed in the Reservoir R200 access road, Lilac Ridge Road, North Gale Ridge Road, and Dougherty Road and are described in more detail in Section 1.4.3, below.

The fourth paragraph under Section 1.4.2, Pump Station R3000, on page 1-7 of the IS/MND is revised as follows:

Site A4 is located within open space, as shown in Figure 4. Nearby existing land uses include open space and two residential subdivisions: Bridges at Gale Ranch, approximately 3500 feet to the south of the site; and the Capella at Gale Ranch located at Laurelspur Loop, approximately 170 feet to the east of the site.

The second bullet in the sixth paragraph under Section 1.5.1, Pump Station Construction, on page 1-13 of the IS/MND is revised as follows:

Staging Area 2. The second potential staging area is the paved area approximately 170 feet ~~north~~ south of the Reservoir R200 (Staging Area 2 on Figure 2) and is located about one mile by road southwest of Site A2.

The seventh paragraph under Section 1.5.1, Pump Station Construction, on page 1-13 of the IS/MND is revised as follows:

Site A4 Earthwork, Haul Trips, and Construction Staging

The total volume of soil that would be hauled during excavation at Site A4 is approximately 1,040 cubic yards. The soil would be hauled away in approximately 115 truck trips, with nine to 16 cubic yards of soil hauled per trip. Construction at Site A4 would be staged on a paved area approximately 170 feet

~~north~~ south of the center of Reservoir R200 (Staging Area 2 on Figure 2). This site has an existing access road. Staging would occur for approximately 24 months.

The first paragraph under Section 1.5.2. Pipeline Construction, on page 1-16 of the IS/MND is revised as follows:

Site A4 Pipelines

As shown in Figure 4, the supply pipeline would be installed in the Reservoir R200 access road, and the discharge pipeline would be installed in the Reservoir R200 access road, Lilac Ridge Road, and North Gale Ridge Road, turning north on Dougherty Road and connecting to the existing recycled water pipeline in Dougherty Road. The trench typically would be up to three feet wide and seven feet deep, to account for existing buried pipelines. A minimum construction corridor width of 10 feet would be needed to accommodate pipeline storage and to allow trucks and equipment access along the trench. In some areas where the pipeline would need to be installed at greater depth to avoid other utilities, a wider trench and construction easement of up to 15 feet would be required. Other construction activities, such as the installation of pipeline connections, could also require larger excavations. One lane of Lilac Ridge Road and North Gale Ridge Road is anticipated to be closed during pipeline construction and connection. One-way traffic control around the construction site would be implemented in order to reduce traffic road congestion. It is expected that one or two lanes would be closed during non-commute hours on either the southbound or northbound side of Dougherty Road during pipeline construction (from Site A4 to the recycled water transmission main in Dougherty Road), with traffic being funneled into the remaining available lane(s). Traffic control measures (e.g., signage, flaggers) would be implemented in order to route traffic around the construction areas along Lilac Ridge and North Gale Ridge Roads, including near Coyote Creek Elementary School, to ensure vehicle and pedestrian safety.

The first paragraph under Section 1.5.3. Schedule, on page 1-16 of the IS/MND is revised as follows:

Schedule

EBMUD would decide whether to implement Site A2 or Site A4 based primarily on whether a property transfer agreement can be negotiated with the City of San Ramon regarding Site A2. Pump station and pipeline construction may occur simultaneously, except during pump station concrete work, and where traffic plans to reduce impacts on Coyote Creek Elementary School would limit truck traffic and pipeline construction during school sessions. For purposes of analysis, pump station construction is anticipated to take approximately 24 months and would occur anytime between 2020 and 2024, and pipeline construction is anticipated to take approximately four months within this same timeframe.

3.2.2 Section 2.0 Initial Study Environmental Checklist

The seventh paragraph under Section 2.2.1, Aesthetics, on page 2-6 of the IS/MND is revised as follows:

> The structure housing the pumps would be about 21 feet high to the top of the roof; thus, the pump station would be approximately 100 vertical feet below the ridgeline. While the ridgeline itself is visible in views from segments of Dougherty and Crow Canyon Roads and neighboring land uses, Site A4 is not visible from these roadways because of its elevation relative to intervening topography and vegetation, its location and orientation, and its size (see Photo 2 of Figure 5). The ridgeline is visible from Lilac Ridge Road near Lantana Way, as well as portions of Lantana Way, and from homes at higher elevation on Sky Jasmine Drive, northeast of the intersection of Dougherty Road and North Monarch Road.

The second and third paragraphs under Section 2.2.8, Hazards and Hazardous Materials, on page 2-75 of the IS/MND are revised as follows:

> ~~Once constructed, the new facilities at either site could provide a source of fuel for wildfires during operation of Pump Station R3000 if surrounding vegetation is not appropriately managed. However, as part of EBMUD's Standard Construction Specifications Section 01 35 24, Project Safety Requirements Section 1.6, Fire Prevention and Protection, the site would include a defensible space, as well as would be supplied and maintained with firefighting equipment. This defensible space would be maintained throughout the year and for the entirety of operations.~~
>
> ~~Because the sites are located in moderate fire severity hazards and Section 1.6, Fire Prevention and Protection, of EBMUD's Standard Construction Specification 01 35 24, Project Safety Requirements, has been incorporated into the Project, the Project operational impacts related to hazards resulting from wildland fires is less than significant.~~
>
> Once constructed, the new facilities would be built to meet all relevant California building standards, including building code, electrical code, and fire code requirements, and there would be no overhead electrical lines used for the Project, thereby minimizing the potential for ignition to occur at the facility. In addition, EBMUD provides routine maintenance of its sites which includes routine vegetation management to ensure a defensible space is maintained consistent with the requirements of local fire agencies. Fire protection services for the Project site are provided by the San Ramon Valley Fire Protection District and there are two fire stations within approximately 3.5 miles from the Project site. In addition, there are hydrants located approximately 150 feet north of the Project site on the west side of Dougherty Road. Because the Project would be built to modern code requirements, would be maintained by EBMUD to maintain defensible space around the facility, and fire protection services and fire hydrants are located near

and adjacent to the Project site, the Project operational impacts related to hazards resulting from wildland fires is less than significant. (**Less than Significant)**

The third paragraph under Section 2.2.1, Aesthetics, on page 2-9 of the IS/MND is revised as follows:

Construction activities (excavation, grading, haul road, open trenches, machinery and vehicle storage) would have a temporary effect on the visual quality at both of the potential pump station sites and along the pipeline alignments during construction. Construction vehicles, materials, and equipment may be noticeable visual features. However, a majority of the visible construction equipment would be similar in height to the existing structures around the site such as the two story residences in the surrounding area. In addition, any remaining trees on site and within the construction easement at Site A2 would be protected and preserved to the extent possible as part of the Project, which would further screen views of the construction activities. As detailed in the Project Description, a number of EBMUD standard practices and procedures, applicable to all EBMUD projects, have been incorporated into the Project, including Standard Construction Specification 01 35 44, Environmental Requirements. Section 3.7, Protection of Native and Non Native Protected Trees, of this specification includes best practices for protecting trees that are not to be removed within the Project construction limits. EBMUD Standard Construction Specifications 01 74 05 and 01 35 44, Section 1.1(B), which requires construction practices that will ensure the site is maintained in as orderly and clean condition as possible throughout the construction period. Through compliance with EBMUD Standard Construction Specification Section 3.7, Tree Protection, and Section 1.1(B), Site Activities, of Standard Construction Specification 01 35 44, and Standard Construction Specification 01 74 25, Cleaning, the Project would maintain an orderly construction site and to protect trees, and, due to the limited duration of construction activities, potential visual impacts due to construction activities would be ~~temporary and~~ less than significant. (**Less than Significant**)

Table 10 under Section 2.2.16 on page 2-109 of the IS/MND is revised as follows:

REVISED TABLE 10
MAXIMUM TRUCK AND WORKER TRIPS DURING CONSTRUCTION

Construction Phase	Site A2			Site A4		
	Approximate Duration (months)	Maximum trucks (per day; one way trips)	Maximum Worker vehicles (per day; one way trips)	Approximate Duration (months)	Maximum trucks (per day; one way trips)	Maximum Worker vehicles (per day; one way trips)
Pump Station Construction	24	64	10	24	64	10
Excavation	0.5	~~46~~ 4	--	0.5	~~232~~ 17	--
Pipeline Construction[a]	--	--	--	4	4 36	26

NOTE:
[a] Pipeline construction for Site A2 would occur in concurrence with the pump station construction, so the haul trucks and trips per day are included as part of the total estimate provided for the Site A2 pump station construction.

3.2.3 Appendix A – EBMUD Practices and Procedures Monitoring and Reporting Plan

The table under Appendix A EBMUD Practices and Procedure Monitoring and Reporting Plan is revised as follows:

REVISED APPENDIX A
EBMUD PRACTICES AND PROCEDURES MONITORING AND REPORTING PLAN

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Aesthetics						
Aesthetics b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** *Section 3.7, Protection of Native and Non-Native Protected Trees* A. Tree Protection 1. Locations of trees to be removed and protected are shown in the construction drawings. Pruning and trimming shall be completed by the Contractor and approved by the Engineer. Pruning shall adhere to the Tree Pruning Guidelines of the International Society of Arboriculture. 2. Erect exclusion fencing five feet outside of the drip lines of trees to be protected. Erect and maintain a temporary minimum 3-foot high orange plastic mesh exclusion fence at the locations as shown in the drawings. The fence posts shall be six-foot minimum length steel shapes, installed at 10-feet minimum on center, and be driven into the ground. The Contractor shall be prohibited from entering or disturbing the protected area within the fence except as directed by the Engineer. Exclusion fencing shall remain in place until construction is completed and the Engineer approves its removal. 3. No grading, construction, demolition, trenching for irrigation, planting or other work, except as specified herein, shall occur within the tree protection zone established by the exclusion fencing installed shown in the drawings. In addition, no excess soil, chemicals, debris, equipment or other materials shall be dumped or stored within the tree protection zone. 4. In areas that are within the tree drip line and outside the tree protection zone that are to be traveled over by vehicles and equipment, the areas shall be covered with a protective mat composed of a 12-inch thickness of wood chips or gravel and covered by a minimum ¾-inch-thick steel traffic plate. The protective mat shall remain in place until construction is completed and the Engineer approves its removal. 5. Tree roots exposed during trench excavation shall be pruned cleanly at the edge of the excavation and treated to the satisfaction of a certified arborist provided by the District. 6. Any tree injured during construction shall be evaluated as soon as possible by a certified arborist provided by the District, and replaced as deemed necessary by the certified arborist.	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	

REVISED APPENDIX A (CONT.)
EBMUD PRACTICES AND PROCEDURES MONITORING AND REPORTING PLAN

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Air Quality						
Air Quality a) Potential to conflict with or obstruct implementation of the applicable air quality plan.	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** *3.3 Section 3.3. Dust Control and Monitoring* A. Dust Control during Abrasive Blasting 1. Provide a containment system for the structure prior to beginning abrasive blasting operations. The system shall remain in place during the abrasive blasting operations and the painting of exterior surfaces. B. Dust Control 1. Contractor shall implement all necessary dust control measures, including but not limited to the following: a. All exposed surfaces with the potential of dust-generating shall be watered at least twice daily, or be covered with coarse rock, or as directed by the Engineer to reduce the potential for airborne dust from leaving the site. b. The simultaneous occurrence of more than two ground disturbing construction phases on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time, as appropriate. c. Cover all haul trucks entering/leaving the site and trim their loads as necessary. d. Using wet power vacuum street sweepers to: *Sweep all paved access road, parking areas and staging areas at the construction site daily or as often as necessary.* *Sweep public roads adjacent to the site at least twice daily or as often as necessary.* e. The use of dry power sweeping is prohibited. f. All trucks and equipment, including their tires, shall be washed off prior to leaving the site. g. Gravel or apply non-toxic soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites. h. Water and/or cover soil stockpiles daily. i. Site accesses to a distance of 100 feet from the paved road shall be treated with 12-inches layer of compacted coarse rock.	EBMUD and EBMUD's Contractors	EBMUD	During Construction	X	X

REVISED APPENDIX A (CONT.)
EBMUD PRACTICES AND PROCEDURES MONITORING AND REPORTING PLAN

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Air Quality (cont.)						
Air Quality a) Potential to conflict with or obstruct implementation of the applicable air quality plan. (cont.)	j. Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent. k. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. l. Building pads shall be laid as soon as possible after grading. m. Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established. n. Wind breaks (e.g., fences) shall be installed on the windward sides(s) of actively disturbed areas of construction. Wind breaks should have a maximum 50 percent air porosity. o. All vehicle speeds shall be limited to fifteen (15) mph or less on the construction site and any adjacent unpaved road C. Dust Monitoring During Demolition and Construction: 1. Provide air monitoring per the Dust Control and Monitoring Plan along the perimeter of the job site. A minimum of 4 stations, one on each side of the District property, shall be established, capable of continuous measurement of total particulate concentration when any dust generating activity is occurring. a. Ringelmann No. 1 Limitation: Contractor shall not emit from any source for a period or periods aggregating more than three minutes in any hour, a visible emission which is as dark or darker than No. 1 on the Ringelmann Chart, or of such opacity as to obscure an observer's view to an equivalent or greater degree. b. Opacity Limitation: Contractor shall not emit from any source for a period or periods aggregating more than three minutes in an hour an emission equal to or greater than 20% opacity as perceived by an opacity sensing device, where such device is required by Air Quality Management District regulations. c. All environmental and personal air sampling equipment shall be in conformance with the Association of Industrial Hygiene and National Institute of Safety and Health (NIOSH) standards. d. All analysis shall be completed by a California Department of Health Services certified laboratory for the specific parameters of interest. e. The Contractor shall provide to the Engineer, within 72 hours of sampling all test results.					

REVISED APPENDIX A (CONT.)
EBMUD PRACTICES AND PROCEDURES MONITORING AND REPORTING PLAN

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Air Quality (cont.)						
Air Quality a) Potential to conflict with or obstruct implementation of the applicable air quality plan. (cont.)	D. The dust control system shall comply with the Dust Control and Monitoring Plan, the requirements of this section, and any applicable laws and regulations. *Section 3.4. Emissions Control* A. Air Quality and Emissions Control 1. The Contractor shall ensure that line power is used instead of diesel generators at all construction sites where line power is available. 2. The Contractor shall ensure that for operation of any stationary, compression-ignition engines as part of construction, comply with Section 93115, Title 17, California Code of Regulations, Airborne Toxic Control Measure for Stationary Compression Ignition Engines, which specifies fuel and fuel additive requirements as well as emission standards. 3. Fixed temporary sources of air emissions (such as portable pumps, compressors, generators, etc.) shall be electrically powered unless the Contractor submits documentation and receives approval from the Engineer that the use of such equipment is not practical, feasible, or available. All portable engines and equipment units used as part of construction shall be properly registered with the California Air Resources Board or otherwise permitted by the appropriate local air district, as required. 4. Contractor shall implement standard air emissions controls such as: a. Minimize the use of diesel generators where possible. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes as required by the California Airborne Toxics Control Measure (ATCM) Title 13, Section 2485 of California Code of Regulations. Clear signage shall be provided for construction workers at all access points. b. Follow applicable regulations for fuel, fuel additives, and emission standards for stationary, diesel-fueled engines. c. Locate generators at least 100 feet away from adjacent homes and ball fields. d. Perform regular low-emission tune-ups on all construction equipment, particularly haul trucks and earthwork equipment. 5. Contractor shall implement the following measures to reduce greenhouse gas emissions from fuel combustion: a. On road and off-road vehicle tire pressures shall be maintained to manufacturer specifications. Tires shall be checked and re-inflated at regular intervals.					

REVISED APPENDIX A (CONT.)
EBMUD PRACTICES AND PROCEDURES MONITORING AND REPORTING PLAN

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Air Quality (cont.)						
Air Quality a) Potential to conflict with or obstruct implementation of the applicable air quality plan. (cont.)	b. Construction equipment engines shall be maintained to manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. c. All construction equipment, diesel trucks, and generators shall be equipped with Best Available Control Technology for emission reductions of Oxide of Nitrogen (NOx) and Particulate Matter (PM). d. Demolition debris shall be recycled for reuse to the extent feasible. See the Construction and Demolition Waste Disposal Plan paragraphs above for requirements on wood treated with preservatives. B. Architectural Coatings Architectural coatings used shall comply with appropriate Volatile Organic Compound limits as established in the Bay Area Air Quality Management District's Regulation 8, Rule 3 and/or the San Joaquin Valley Air Pollution Control District's Regulation IV, Rule 4601, and any amendments thereto.					
Air Quality b) Potential to violate any air quality standard or contribute substantially to an existing or projected air quality violation.	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** *Section 1.3.E Dust Control and Monitoring Plan* 1. Submit a plan detailing the means and methods for controlling and monitoring dust generated by demolition and other work on the site for the Engineer's acceptance prior to any work at the jobsite. The plan shall comply with all applicable regulations including but not limited to the Bay Area Air Quality Management District (BAAQMD) visible emissions regulation and Public Nuisance Rule. The plan shall include items such as mitigation measures to control fugitive dust emissions generated by construction activities. The Plan shall outline best management practices for preventing dust emissions, provide guidelines for training of employees, and procedures to be used during operations and maintenance activities. The plan shall also include measures for the control of paint overspray generated during the painting of exterior surfaces. The plan shall detail the equipment and methods used to monitor compliance with the plan. The handling and disposal of water used in compliance with the Dust Control Plan shall be addressed in the Water Control and Disposal Plan. 2. Containment, as described in Article 3.3, shall be utilized during any abrasive blasting of the exterior of structures**.**	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X

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EBMUD PRACTICES AND PROCEDURES MONITORING AND REPORTING PLAN

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Air Quality (cont.)						
Air Quality b) Potential to violate any air quality standard or contribute substantially to an existing or projected air quality violation. (cont.)	*Section 3.3.B Dust Control (Details as previously listed)* *Section 1.3.I Tuneup Logs* 1. The Contractor shall submit a log of required tune-ups for all construction equipment, particularly haul and delivery trucks, on a quarterly basis for review. *Section 3.4.A Air Quality and Emissions Control* (Details as previously listed)					
Air Quality d) Expose sensitive receptors to substantial pollutant concentrations.	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** Section 1.3.I Tune-up Logs, Section 3.3.B, Dust Control, and Section 3.4. Emissions Control (Details as previously listed)	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X
Air Quality e) Create objectionable odors affecting a substantial number of people.	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** Section 1.3.I Tune-up Logs and Section 3.4.A Air Quality and Emissions Control (Details as previously listed)	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X

REVISED APPENDIX A (CONT.)
EBMUD PRACTICES AND PROCEDURES MONITORING AND REPORTING PLAN

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Biological Resources						
Biological Resources 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.	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** *Section 3.8, Protection of Birds Protected under the Migratory Treaty Act and Roosting Bats* A. The District will conduct biological reconnaissance in advance of construction and will conduct biologic monitoring during construction as necessary. B. Protected Species 1. If protected species or suitable habitat for protected species is found during biological reconnaissance surveys: a. Before beginning construction, all Contractor construction personnel are required to attend an environmental training program provided by the District of up to one-day for site supervisors, foreman and project managers, and up to 30-minutes for non-supervisory contractor personnel. The training program will be completed in person or by watching a video at a District-designated location, conducted by a qualified biologist provided by the District. The program will discuss all sensitive habitats and sensitive species that may occur within the project work limits, including the responsibilities of Contractor's construction personnel, applicable mitigation measures, and notification requirements. The Contractor is responsible for ensuring that all workers requiring training are identified to the District. Prior to accessing or performing construction work, all Contractor personnel shall: 1) Sign a wallet card provided by the Engineer verifying that all Contractor construction personnel have attended the appropriate level of training relative to their position; have read and understood the contents of any applicable documentation and shall comply with all project environmental requirements. 2) Display an environmental training hard hat decal (provided by the District after completion of the training) at all times. b. Birds Protected under the Migratory Bird Treaty Act (MBTA): 1) It is unlawful to pursue, hunt, take, capture, or kill any migratory bird without a permit issued by the U.S. Department of the Interior. 2) If construction commences between February 1 and August 31, during the nesting season, the District will conduct a preconstruction survey for nesting birds within 7 days prior to construction to ensure that no nest will be disturbed during construction.	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X

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EBMUD PRACTICES AND PROCEDURES MONITORING AND REPORTING PLAN

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Biological Resources (cont.)						
Biological Resources 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. (cont.)	3) If active nests of migratory bird species (listed in the MBTA) are found within the project site, or in areas subject to disturbance from construction activities, an avoidance buffer to avoid nest disturbance shall be constructed. The buffer size will be determined by the District in consultation with California Department of Fish and Wildlife (CDFW) and is based on the nest location, topography, cover and species' tolerance to disturbance. 4) If an avoidance buffer is not achievable, a qualified biologist provided by the District will monitor the nest(s) to document that no take of the nest (nest failure) has occurred. Active nests shall not be taken or destroyed under the MBTA and, for raptors, under the CDFW Code. If it is determined that construction activity is resulting in nest disturbance, work should cease immediately and the Contractor shall notify the Engineer who will consult with the qualified biologist and appropriate regulatory agencies. 5) If preconstruction surveys indicate that nests are inactive or potential habitat is unoccupied during the construction period, no further action is required. Trees and shrubs within the construction footprint that have been determined to be unoccupied by special-status birds or that are located outside the avoidance buffer for active nests may be removed. Nests initiated during construction (while significant disturbance from construction activities persist) may be presumed to be unaffected, and only a minimal buffer, determined by District's biologist, would be necessary. c. Roosting Bats: 1) If construction commences between March 1 and July 31, during the bat maternity period, the District will conduct a preconstruction survey for roosting bats within two weeks prior to construction to ensure that no roosting bats will be disturbed during construction. 2) If roosting surveys indicate potential occupation by a special-status bat species, and/or identify a large day roosting population or maternity roost by any bat species within 200 feet of a construction work area, a qualified biologist provided by the District will conduct focused day- and/or night-emergence surveys, as appropriate. 3) If active maternity roosts or day roosts are found within the project site, or in areas subject to disturbance from construction activities, an avoidance buffers shall be constructed. The buffer size will be determined by the District in consultation with CDFW.					

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Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Biological Resources (cont.)						
Biological Resources 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. (cont.)	4) If a non-breeding bat roost is found in a structure scheduled for modification or removal, the bats shall be safety evicted, under the direction of a qualified biologist provided by the District in consultation with CDFW to ensure that the bats are not injured. 5) If preconstruction surveys indicate that no roosting is present, or potential roosting habitat is unoccupied during the construction period, no further action is required. Trees and shrubs within the construction footprint that have been determined to be unoccupied by roosting bats, or that are located outside the avoidance buffer for active roosting sites may be removed. Roosting initiated during construction is presumed to be unaffected, and no buffer would be necessary.					
Biological Resources e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** Section 3.7, Protection of Native and Non-Native Protected Trees (Details as previously listed under Aesthetics)	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	
Cultural Resources						
Cultural Resources b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** *Section 3.9, Protection of Cultural and Paleontological Resources* A. Confidentiality of Information on Cultural Resources Prior to, or during the course of the Contractor's performance under this contract, the Contractor may obtain information as to the location and/or nature of certain cultural resources, including Native American artifacts and remains. This information may be provided to the Contractor by the District or a third party, or may be discovered directly by the Contractor through its performance under the contract. All such information shall be considered "Confidential Information" for the purposes of this Article.	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X

REVISED APPENDIX A (CONT.)
EBMUD PRACTICES AND PROCEDURES MONITORING AND REPORTING PLAN

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Cultural Resources (cont.)						
Cultural Resources b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5. (cont.)	1. The Contractor agrees that the Contractor, its subcontractors of any tiers, and their respective agents and employees shall not publish or disclose any Confidential Information to any person, unless specifically authorized in advance, in writing by the Engineer. 2. The indemnity obligations of Document 00 72 00 - General Conditions Article 4.7.5 shall apply to any breach of this Article. B. Conform to the requirements of statutes as they relate to the protection and preservation of cultural and paleontological resources. Unauthorized collection of prehistoric or historic artifacts or fossils along the Work Area, or at Work facilities, is strictly prohibited. C. Before beginning construction, all Contractor construction personnel shall attend a cultural resources training course provided by the District of up to two hours for site supervisors, foreman, project managers, and non-supervisory contractor personnel. The training program will be completed in person or by watching a video, at a District designated location, conducted by a qualified archaeologist provided by the District, or by District staff. The program will discuss cultural resources awareness within the project work limits, including the responsibilities of Contractor's construction personnel, applicable mitigation measures, confidentiality, and notification requirements. The Contractor is responsible for ensuring that all workers requiring training are identified to the District. Prior to accessing the construction site, or performing site work, all Contractor personnel shall: 1. Sign an attendance sheet provided by the Engineer verifying that all Contractor construction personnel have attended the appropriate level of training; have read and understood the contents of the training; have read and understood the contents of the "Confidentiality of Information on Archaeological Resources" and shall comply with all project environmental requirements. D. In the event that potential cultural or paleontological resources are discovered at the site of construction, the following procedures shall be instituted: 1. Discovery of prehistoric or historic-era archaeological resources requires that all construction activities shall immediately cease at the location of discovery and within 100 feet of the discovery. a. The Contractor shall immediately notify the Engineer who will engage a qualified archaeologist provided by the District to evaluate the find. The Contractor is responsible for stopping work and notifying the Engineer, and shall not recommence work until authorized to do so by the Engineer.					

REVISED APPENDIX A (CONT.)
EBMUD PRACTICES AND PROCEDURES MONITORING AND REPORTING PLAN

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Cultural Resources (cont.)						
Cultural Resources b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5. (cont.)	b. The District will retain a qualified archaeologist to inspect the findings within 24 hours of discovery. If it is determined that the Project could damage a historical resource as defined by CEQA (or a historic property as defined by the National Historic Preservation Act of 1966, as amended), construction shall cease in an area determined by the archaeologist until a management plan has been prepared, approved by the District, and implemented to the satisfaction of the archaeologist (and Native American representative if the resource is prehistoric, who shall be identified by the Native American Heritage Commission [NAHC]). In consultation with the District, the archaeologist (and Native American representative) will determine when construction can resume. 2. Discovery of human remains requires that all construction activities immediately cease at, and within 100 feet of the location of discovery. c. The Contractor shall immediately notify the Engineer who will engage a qualified archaeologist provided by the District to evaluate the find. The Contractor is responsible for stopping work and notifying the Engineer, and shall not recommence work until authorized to do so by the Engineer. d. The District will contact the County Coroner to determine whether or not the remains are Native American. If the remains are determined to be Native American, the Coroner will contact the Native American Heritage Commission (NAHC). The NAHC will then identify the person or persons it believes to be the most likely descendant from the deceased Native American, who in turn would make recommendations to the District for the appropriate means of treating the human remains and any associated funerary objects. 3. Discovery of paleontological resources requires that all construction activities immediately cease at, and within 100 feet of the location of discovery. a. The Contractor shall immediately notify the Engineer who will engage a qualified paleontologist provided by the District to evaluate the find. The Contractor is responsible for stopping work and notifying the Engineer, and shall not recommence work until authorized to do so by the Engineer. b. The District will retain a qualified paleontologist to inspect the findings within 24 hours of discovery. The qualified paleontologist, in accordance with Society of Vertebrate Paleontology guidelines (Society of Vertebrate Paleontology 2010), will assess the nature and importance of the find and recommend appropriate salvage, treatment, and future monitoring and management. If it is determined that construction activities could damage a paleontological resource as defined by the Society of Vertebrate					

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EBMUD PRACTICES AND PROCEDURES MONITORING AND REPORTING PLAN

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Cultural Resources (cont.)						
Cultural Resources b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5. (cont.)	c. Paleontology guidelines (Society of Vertebrate Paleontology 2010), construction shall cease in an area determined by the paleontologist until a salvage, treatment, and future monitoring and management plan has been prepared, approved by the District, and implemented to the satisfaction of the paleontologist. In consultation with the paleontologist, the District will determine when construction can resume. E. If the District determines that the find requires further evaluation, at the direction of Engineer, the Contractor shall suspend all construction activities at the location of the find and within a larger radius, as required.					
Cultural Resources c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** Section 3.9, Protection of Cultural and Paleontological Resources (Details as previously listed)	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X
Cultural Resources d) Disturb any human remains, including those interred outside of formal cemeteries.	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** Section 3.9, Protection of Cultural and Paleontological Resources (Details as previously listed)	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X
Geology and Soils						
Geology and Soils a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: rupture of a known earthquake fault; strong seismic ground shaking; seismic-related ground failure; or landslides.	**EBMUD's Engineering Standard Practice 550.1, Seismic Design Requirements and 512.1, Water Main and Services Design Criteria** EBMUD uses two primary Engineering Standard Practices for the design of water pipelines in its distribution system to address geologic hazards. Engineering Standard Practice 512.1, Water Main and Services Design Criteria, establishes basic criteria for the design of water pipelines and establishes minimum requirements for pipeline construction materials. Engineering Standard Practice 550.1, Seismic Design Requirements, addresses seismic design of the pipelines to withstand seismic hazards, including fault rupture, ground shaking, liquefaction-related phenomena, landslides, seiches and tsunamis and requires that EBMUD establish project-specific seismic design criteria for pipelines with a diameter of greater than 12 inches.	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X

REVISED APPENDIX A (CONT.)
EBMUD PRACTICES AND PROCEDURES MONITORING AND REPORTING PLAN

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Geology and Soils (cont.)						
Geology and Soils b) Result in substantial soil erosion or the loss of topsoil.	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** *Section 1.1.B, Site Activities* 1. No debris including, but not limited to, demolition material, treated wood waste, stockpile leachate, soil, silt, sand, bark, slash, sawdust, asphalt, rubbish, paint, oil, cement, concrete or washings thereof, oil or petroleum products, or other organic or earthen materials from construction activities shall be allowed to enter into storm drains or surface waters or be placed where it may be washed by rainfall or runoff outside the construction limits. When operations are completed, excess materials or debris shall be removed from the work area as specified in the Construction and Demolition Waste Disposal Plan. 2. Excess material shall be disposed of in locations approved by the Engineer consistent with all applicable legal requirements and disposal facility permits. 3. Do not create a nuisance or pollution as defined in the California Water Code. Do not cause a violation of any applicable water quality standards for receiving waters adopted by the Regional Board or the State Water Resources Control Board, as required by the Clean Water Act. 4. Clean up all spills and immediately notify the Engineer in the event of a spill. 5. Stationary equipment such as motors, pumps, and generators, shall be equipped with drip pans. 6. Divert or otherwise control surface water and waters flowing from existing projects, structures, or surrounding areas from coming onto the work and staging areas. The method of diversions or control shall be adequate to ensure the safety of stored materials and of personnel using these areas. Following completion of Work, ditches, dikes, or other ground alterations made by the Contractor shall be removed and the ground surfaces shall be returned to their former condition, or as near as practicable, in the Engineer's opinion. 7. Maintain construction sites to ensure that drainage from these sites will minimize erosion of stockpiled or stored materials and the adjacent native soil material. 8. Furnish all labor, equipment, and means required and shall carry out effective measures wherever, and as often as necessary, to prevent Contractor's operations from causing visible dust emissions to leave the work areas. These measures shall include, but are not limited to, providing additional watering equipment, reducing vehicle speeds on haul roads, restricting traffic on haul roads, covering haul vehicles, and applying a dust palliative to well-traveled haul roads. The Contractor shall provide the specifications of the dust palliative for Engineer approval prior to use. The Contractor shall be responsible for damage	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X

REVISED APPENDIX A (CONT.)
EBMUD PRACTICES AND PROCEDURES MONITORING AND REPORTING PLAN

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Geology and Soils (cont.)						
Geology and Soils b) Result in substantial soil erosion or the loss of topsoil. (cont.)	resulting from dust originating from its operations. The dust abatement measures shall be continued for the duration of the Contract. Water the site in the morning and evening, and as often as necessary, and clean vehicles leaving the site as necessary to prevent the transportation of dust and dirt onto public roads. Dust control involving water shall be done in such a manner as to minimize waste and runoff from the site. 9. Construction staging areas shall be graded, or otherwise protected with Best Management Practices (BMPs), to contain surface runoff so that contaminants such as oil, grease, and fuel products do not drain towards receiving waters including wetlands, drainages, and creeks. 10. All construction equipment shall be properly serviced and maintained in good operating condition to reduce emissions. Contractor shall make copies of equipment service logs available upon request. 11. Any chemical or hazardous material used in the performance of the Work shall be handled, stored, applied, and disposed of in a manner consistent with all applicable federal, state, and local laws and regulations. 12. Contaminated materials excavated and/or removed from the construction area shall be disposed of in a manner consistent with all applicable local, state, and federal laws and regulations. *Section 1.3.A, Storm Water Management* 1. Construction General Permit a. The Contractor shall create a user account on the SWRCB's Storm Water Multi-Application & Report Tracking System (SMARTS). The Engineer will link the Contractor to the District's account as a Data Submitter. The Contractor shall prepare and upload to SMARTS Permit Registration Documents (PRDs), including, but not limited to, a Notice of Intent, a Site Specific Risk Assessment, a Site Map, and a Storm Water Pollution Prevention Plan (SWPPP) for the Engineer's review which meets the requirements of the SWRCB, for coverage under the General Construction Stormwater Permit (Order No. 2009-0009-DWQ) and amendments thereto. Upon acceptance by the Engineer, the Engineer will electronically certify and file the PRDs to gain permit coverage and the Contractor shall submit the registration and the subsequent annual fees as required by the SWRCB. b. The Contractor shall be responsible for complying with the requirements of the Construction General Permit. The Contractor's responsibilities include, but are not limited to, providing qualified professionals as described in the permit to prepare and certify all permit-required documents/submittals and to implement effective stormwater/non-stormwater management practices, and					

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EBMUD PRACTICES AND PROCEDURES MONITORING AND REPORTING PLAN

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Geology and Soils (cont.)						
Geology and Soils b) Result in substantial soil erosion or the loss of topsoil. (cont.)	conducting inspections and monitoring as required by the permit. The Contractor shall, in compliance with the permit, prepare and upload to SMARTS all required documents, photos, data, and/or reports (including the Annual Reports) and ensure permit coverage termination upon construction completion by preparing a Notice of Termination on SMARTS. The Contractor shall inform the Engineer when documents/reports are available on SMARTS for Engineer certification and submittal. 2. Storm Water Pollution Prevention Plan a. Submit a Stormwater Pollution Prevention Plan that describes measures that shall be implemented to prevent the discharge of contaminated storm water runoff from the jobsite. Contaminants to be addressed include, but are not limited to, soil, sediment, concrete residue, pH less than 6.5 or greater than 8.5, and chlorine residual and all other contaminants known to exist at the jobsite location as described in Document 00 31 24 - Material Assessment Information.					
Geology and Soils c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.	**EBMUD Pumping Plant Design Guide** The EBMUD Pumping Plant Design Guide details design guidelines that apply to the design and construction of pumping plants. Section 2.4.9, Geotechnical Investigations and Surveys, of the Pumping Plant Design Guide lists the services to be provided for geotechnical investigations including a detailed report summarizing criteria for design and construction of all project elements to ensure compliance with current engineering practice and standards. **EBMUD Engineering Standard Practice 550.1, Seismic Design Requirements** Steel pipe having restrained joints shall be used. Other pipe materials and joints may be used provided it is demonstrated by tests and/or calculations that the pipe can accommodate the ground movements without rupture. Isolation valves shall be provided at points where the pipeline enters a slide area. By-pass connections or hydrants may be used to permit post-earthquake connection of temporary hoses across the slide area." Other measures specified in EBMUD Engineering Standard Practice 550.1 include: a. Setting the line back far enough from the up slope side of unstable slopes as to avoid being included in the probable zone of slippage; b. Setting lines back far enough from or low enough below the toe of unstable slopes as to avoid being included in the probable zone of slippage; and c. Providing buttress or retention structures or other measures to stabilize the slope.	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X

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EBMUD PRACTICES AND PROCEDURES MONITORING AND REPORTING PLAN

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Geology and Soils (cont.)						
Geology and Soils d) Be located on expansive soil, as defined in Section 1803.5.3 of the Building Code, creating substantial risks to life or property?	**EBMUD Pumping Plant Design Guide** The EBMUD Pumping Plant Design Guide details design guidelines that apply to the design and construction of pumping plants. Section 2.4.9, Geotechnical Investigations and Surveys, of the Pumping Plant Design Guide lists the services to be provided for geotechnical investigations including a detailed report summarizing criteria for design and construction of all project elements to ensure compliance with current engineering practice and standards.	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X
Greenhouse Gas Emissions						
Greenhouse Gas Emissions a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** Section 3.4.A Air Quality and Emissions Control (Details as previously listed under Air Quality)	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X
Hazards and Hazardous Materials						
Hazards and Hazardous Materials a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Hazards and 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.	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** Section 1.1.B, Site Activities (Details as previously listed under Geology and Soils) *Section 1.3.D, Spill Prevention and Response Plan* 1. Submit plan detailing the means and methods for preventing and controlling the spilling of known hazardous substances used on the jobsite or staging areas. The plan shall include a list of the hazardous substances proposed for use or generated by the Contractor on site, including petroleum products, and measures that will be taken to prevent spills, monitor hazardous substances, and provide immediate response to spills. Spill response measures shall address notification of the Engineer and appropriate agencies including phone numbers; spill-related worker, public health, and safety issues; spill control, and spill cleanup. 2. Submit a Safety Data Sheet (SDS) for each hazardous substance proposed to be used prior to delivery of the material to the jobsite.	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X

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EBMUD PRACTICES AND PROCEDURES MONITORING AND REPORTING PLAN

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Hazards and Hazardous Materials (cont.)						
Hazards and Hazardous Materials g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	**EBMUD's Standard Construction Specification 01 55 26, Traffic Regulation** (Details listed under Transportation and Traffic)	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X
Hazards and Hazardous Materials h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.	**EBMUD's Standard Construction Specifications 01 35 24, Project Safety Requirements** *Section 1.6, Fire Prevention and Protection* A. Perform all Work in a fire-safe manner and supply and maintain on the site adequate fire-fighting equipment capable of extinguishing incipient fires. Comply with applicable federal, local, and state fire-prevention regulations. Where these regulations do not apply, applicable parts of the National Fire Prevention Standards for Safeguarding Building Construction Operations (NFPA No. 241) shall be followed. B. A long-handled, round-point shovel, or a fire extinguisher shall be kept at an accessible (unlocked) location on the construction site at all times. C. Earthmoving and portable equipment with internal combustion engines shall be equipped with a spark arrestor to reduce the potential for igniting a wildfire. Such equipment shall be maintained to ensure proper functioning of spark arrestor. D. For all work occurring between April 1 and December 1, or any other periods during which a high fire danger has been identified: 1. Equipment that could produce a spark, fire, or flame shall not be used within 10 feet of any flammable materials. 2. Portable tools powered by gasoline-fueled internal combustion engines shall not be used within 25 feet of any flammable materials. E. Vegetation management for fire prevention and protection: 1. Prior to and during construction: a. Create and maintain a defensible space (100 feet or to the District property boundary, whichever is shorter) around construction site, construction ingress and egress sites through landscaping, mowing, disking, and/or spraying dry brush or native grasses to a height of 4-inches or less. b. Remove dead trees within 100-feet of construction site.	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X

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EBMUD PRACTICES AND PROCEDURES MONITORING AND REPORTING PLAN

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Hazards and Hazardous Materials (cont.)						
Hazards and Hazardous Materials h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands. (cont.)	c. Limb up trees within 100 feet of construction site so that no leafy foliage, twigs or branches are within 5-feet of the ground. To maintain tree health, tree limbing shall not remove more than 25 percent of a tree canopy within one growing season. d. Ensure and maintain a 5-feet of vertical clearance between roof surfaces and portions of trees overhanging all structures within construction site, and keep roofs free of leaves, needles, twigs, and other combustible matter. To maintain tree health, tree limbing shall not remove more than 25 percent of a tree canopy within one growing season. e. Keep all overhanging trees, shrubs, and other vegetation, or portions thereof, free of dead limbs, branches, and other combustible matter. 2. Neatly stack all combustible materials away from structures within construction site and have all combustible growth cleared 15-feet around the stack. F. During construction, maintain an unobstructed horizontal clearance at access drives of not less than the required width of the access drives, and an unobstructed vertical clearance of not less than 13 feet 6 inches above all roadways. G. The site address shall be clearly visible from the street. H. Any electronically-controlled gates shall have a KNOX key switch (or similar access per applicable local fire department regulations) allowing emergency access to the property.					

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EBMUD PRACTICES AND PROCEDURES MONITORING AND REPORTING PLAN

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Hydrology and Water Quality						
Hydrology and Water Quality a) Violate any water quality standards or waste discharge requirements. Hydrology and Water Quality c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site. Hydrology and Water Quality d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site. Hydrology and Water Quality e) Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Hydrology and Water Quality f) Otherwise substantially degrade water quality. Hydrology and Water Quality i) Expose people or structures to a significant risk	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** Section 1.1.B, Site Activities (Details as previously listed under Geology and Soils) Section 1.3.A, Storm Water Management (Details as previously listed under Geology and Soils) Section 1.3.D, Spill Prevention and Response Plan (Details as previously listed under Hazards and Hazardous Materials)	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X

REVISED APPENDIX A (CONT.)
EBMUD PRACTICES AND PROCEDURES MONITORING AND REPORTING PLAN

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Hydrology and Water Quality (cont.)						
of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.	**Engineering Standard Practice 550.1, Seismic Design Requirements** (Details as previously listed under Geology and Soils)	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X
Noise						
Noise a) Exposure of persons to or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. Noise c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. Noise d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.	**EBMUD's Standard Construction Specification 01 14 00, Work Restrictions** *Section 1.4, Work Hours* A. Work or activity of any kind shall be limited to the hours from 7:00 a.m. to 6:00 p.m. Monday through Friday with the exception of required outages, as described in Section 01 35 13. B. Work in excess of eight hours per day, work on Saturdays, work on Sundays, or work on District holidays requires prior consent of the Engineer and is subject to Cost of Overtime Construction Inspection. Contractor shall notify the Engineer no less than 96 hours prior to beginning scheduled work at night or on a Saturday, Sunday or District holidays. C. District holidays 1. Holidays are: New Years Day Martin Luther King Day (3rd Monday in January) Lincoln's Birthday Washington's Birthday (3rd Monday in February) Chavez's Birthday Memorial Day (last Monday in May) Independence Day Labor Day (1st Monday in September) Admission Day Columbus Day (2nd Monday in October) Veteran's Day Thanksgiving Day and following Friday Christmas Day 2. When a holiday falls on Sunday, the following Monday shall be observed as the holiday. When a holiday falls on Saturday, the preceding Friday shall be observed as the holiday. D. Truck operations (haul trucks and concrete delivery trucks) shall be limited to the daytime hours 9:00a.m. and 4:00 p.m.	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction		X

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EBMUD PRACTICES AND PROCEDURES MONITORING AND REPORTING PLAN

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Noise (cont.)						
Noise a) Exposure of persons to or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. Noise c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. Noise d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. (cont.)	*Section 1.8, Construction Noise* A. Noise-generating activities greater than 90 dBA (impact construction such as concrete breaking, concrete crushing, tree grinding, etc.) shall be limited to the hours of 8:00 a.m. and 4:00 p.m., Monday through Friday. **EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** *Section 3.6, Noise Control* A. Comply with sound control and noise level rules, regulations and ordinances as required herein and in the CEQA documents which apply to any work performed pursuant to the contract. B. Contractor is responsible for taking appropriate measures, including muffling of equipment, selecting quieter equipment, erecting noise barriers, modifying work operations, and other measures as needed to bring construction noise into compliance. C. Each internal combustion engine, used for any purpose on the job or related to the job, shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated on the project without said muffler. D. Best available noise control techniques (including mufflers, intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds) shall be used for all equipment and trucks, as necessary. E. Truck operations (haul trucks and concrete delivery trucks) will be limited to the daytime hours specified in Section 01 14 00. F. Stationary noise sources (e.g. chippers, grinders, compressors) shall be located as far from sensitive receptors as possible. If they must be located near receptors, adequate muffling (with enclosures) shall be used. Enclosure opening or venting shall face away from sensitive receptors. Enclosures shall be designed by a registered engineer regularly involved in noise control analysis and design. G. Material stockpiles as well as maintenance/equipment staging and parking areas (all on-site) shall be located as far as practicable from residential receptors. H. If impact equipment (e.g., jack hammers, pavement breakers, rock drills etc.) is used during project construction, Contractor is responsible for taking appropriate measures, including but not limited to the following:					

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EBMUD PRACTICES AND PROCEDURES MONITORING AND REPORTING PLAN

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Noise (cont.)						
Noise a) Exposure of persons to or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. Noise c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. Noise d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. (cont.)	1. Hydraulically or electric-powered equipment shall be used wherever feasible to avoid the noise associated with compressed-air exhaust from pneumatically powered tools. However, where use of pneumatically powered tools is unavoidable, an exhaust muffler on the compressed-air exhaust shall be used (a muffler can lower noise levels from the exhaust by up to about 10 dB). External jackets on the tools themselves shall be used, where feasible, which could achieve a reduction of 5 dB. Quieter procedures, such as drilling rather than impact equipment, will be used whenever feasible. It is the Contractor's responsibility to implement any measures necessary to meet applicable noise requirements. 2. Impact construction including jackhammers, hydraulic backhoe, concrete crushing/recycling activities, vibratory pile drivers etc. shall be limited to the day time hours specified in Section 01 14 00. 3. Erect temporary noise barriers or noise control blankets around the construction site, particularly along areas adjacent to residential buildings. 4. Utilize noise control blankets around the major noise sources to reduce noise emission from the site. 5. Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings by the use of sound blankets for example. 6. Limit the noisiest phases of construction to 10 work days at a time, where feasible. 7. Notify neighbors/occupants within 300 feet of project construction at least thirty days in advance of extreme noise generating activities about the estimated duration of the activity. 8. Noise Monitoring shall be conducted periodically during noise generating activities. Monitoring shall be conducted using a precision sound-level meter that is in conformance with the American National Standards Institute (ANSI) Standard S1.4, Specification for Sound Level Meters. Monitoring results shall be submitted weekly to the Engineer.					
Noise b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** Section 3.6, Noise Control (Details as previously listed) *Section 3.5, Vibration Control* A. Limit surface vibration to no more than 0.5 in/sec PPV, measured at the nearest residence or other sensitive structure. See Section 01 14 00.	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X

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EBMUD PRACTICES AND PROCEDURES MONITORING AND REPORTING PLAN

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Noise (cont.)						
Noise b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels. (cont.)	B. Upon homeowner request, and with homeowner permission, the District will conduct preconstruction surveys of homes, sensitive structures and other areas of concern within 15 feet of continuous vibration-generating activities (i.e., vibratory compaction). Any new cracks or other changes in structures will be compared to preconstruction conditions and a determination made as to whether the proposed project could have caused such damage. In the event that the project is demonstrated to have caused the damage, the District will have the damage repaired to the pre-existing condition. **EBMUD's Standard Construction Specification 01 14 00, Work Restrictions** Section 1.4, Work Hours (Details as previously listed) Section 1.8, Construction Noise (Details as previously listed)					
Transportation and Traffic						
Transportation and Traffic a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit. Transportation and Traffic b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.	**Standard Construction Specification 01 14 00, Work Restrictions** Section 1.4, Work Hours (Details as previously listed in Noise) **Standard Construction Specification 01 55 26, Traffic Regulation** 1.2 SUBMITTALS A. Submit at least 15 calendar days prior to work a detailed traffic control plan, that is approved by all agencies having jurisdiction and that conforms to all requirements of these specifications and the most recently adopted edition of the California Manual on Uniform Control Devices. Traffic Control Plan shall include: 1. Circulation and detour plans to minimize impacts to local street circulation. Use haul routes minimizing truck traffic on local roadways to the extent possible. 2. A description of emergency response vehicle access. If the road or area is completely blocked, preventing access by an emergency responder, a contingency plan must be included. 3. Procedures, to the extent feasible, to schedule construction of project elements to minimize overlapping construction phases that require truck hauling. 4. Designated Contractor staging areas for storage of all equipment and materials, in such a manner to minimize obstruction to traffic. 5. Locations for parking by construction workers.	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X

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EBMUD PRACTICES AND PROCEDURES MONITORING AND REPORTING PLAN

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Transportation and Traffic (cont.)						
Transportation and Traffic d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).	**EBMUD's Standard Construction Specification 01 55.26, Traffic Regulation** *Section 3.4, Temporary Traffic Control* A. All traffic control devices shall conform to the latest edition of the Manual of Uniform Traffic Control Devices (MUTCD), and as amended by the latest edition of the MUTCD California supplement. Electronic signage board with changeable message shall be placed on a street in both direction 2 weeks in advance. B. The Contractor shall replace within 72 hours, all traffic signal loop detectors damaged during construction. Any work that disturbs normal traffic signal operations and ensure proper temporary traffic control (lane shifts, lane closures, detours etc.) shall be coordinated with the agency having jurisdiction, at least 72 hours prior to commencing construction. C. A minimum of twelve (12) foot travel lanes must be maintained unless otherwise approved. D. Access to driveways will be maintained at all times unless other arrangements are made. E. All traffic control devices shall be removed from view when not in use. F. Before leaving a work area, ensure the area is left orderly. Trenches must be backfilled or plated during non-working hours. G. Sidewalks for pedestrians will remain open if safe for pedestrians. Alternate routes and signing will be provided if pedestrian routes are to be closed *Section 3.1, General* A. Except where public roads have been approved for closure, traffic shall be permitted to pass through designated traffic lanes with as little inconvenience and delay as possible. B. Install temporary traffic markings where required to direct the flow of traffic. Maintain the traffic markings for the duration of need and remove by abrasive blasting when no longer required. C. Convenient access to driveways and buildings in the vicinity of work shall be maintained as much as possible. Temporary approaches to, and crossing of, intersecting traffic lanes shall be provided and kept in good condition. D. When leaving a work area and entering a roadway carrying public traffic, the Contractor's equipment, whether empty or loaded, shall in all cases yield to public traffic. E. Provide temporary signs as required by the traffic control plan and remove signs when no longer required.	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X

REVISED APPENDIX A (CONT.)
EBMUD PRACTICES AND PROCEDURES MONITORING AND REPORTING PLAN

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Transportation and Traffic (cont.)						
Transportation and Traffic d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). (cont.)	F. Haul routes for each construction phase shall be provided to all trucks serving the site during the construction period. G. For complete road closures, immediate emergency access to be provided if needed to emergency response vehicles. A minimum of twelve (12) foot travel lanes must be maintained unless otherwise approved.					
Transportation and Traffic e) Result in inadequate emergency access.	**EBMUD's Standard Construction Specification 01 55 26, Traffic Regulation** Section 1.2, Submittals (Details as previously listed) Section 3.1, General (Details as previously listed)	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X
Transportation and Traffic f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.	**EBMUD's Standard Construction Specification 01 55 26, Traffic Regulation** Section 1.2, Submittals (Details as previously listed)	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X

REVISED APPENDIX A (CONT.)
EBMUD PRACTICES AND PROCEDURES MONITORING AND REPORTING PLAN

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Tribal Cultural Resources						
Tribal Cultural Resources: Project cause a substantial adverse change in the significance of a tribal cultural resource a) Listed or eligible for listing in the California Register of Historic Resources, or in a local register of historic resources as defined in Public Resources Code section 5020.1(k). A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** Section 3.9, Protection of Cultural and Paleontological Resources (Details as previously listed under Cultural Resources)	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X
Utilities and Service Systems						
Utilities and Service Systems f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs.	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** Section 1.3.C, Construction and Demolition Waste Disposal Plan C. Construction and Demolition Waste Disposal Plan: 1. Prepare a Construction and Demolition Waste Disposal Plan and submit a copy of the plan for the Engineer's acceptance prior to disposing of any material (except for water wastes which shall be addressed in the Water Control and Disposal Plan).	EBMUD and EBMUD's Contractors	EBMUD	Prior to and During Construction	X	X

REVISED APPENDIX A (CONT.)
EBMUD PRACTICES AND PROCEDURES MONITORING AND REPORTING PLAN

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Utilities and Service Systems (cont.)						
Utilities and Service Systems f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs. (cont.)	a. The plan shall identify how the Contractor will remove, handle, transport, and dispose of all materials required to be removed under this contract in a safe, appropriate, and lawful manner in compliance with all applicable regulations of local, state, and federal agencies having jurisdiction over the disposal of removed materials. b. The Contractor shall procure the necessary permits required by the local, state, and federal agencies having jurisdiction over the handling, transportation, and disposal of construction and demolition waste. c. Include a list of reuse facilities, recycling facilities and processing facilities that will be receiving recovered materials. d. Identify materials that are not recyclable or not recovered which will be disposed of in a landfill (or other means acceptable by the State of California and local ordinance and regulations). e. Identify how the Contractor will comply with The California Department of Toxic Substances Control's (DTSC) Alternative Management Strategies (AMS) when handling and disposing of treated wood waste (TWW) in compliance with 22 CCR 66261.9.5. f. TWW records including but not limited to manifests, bills of lading should be submitted to the Engineer within 5 working days of off-haul. Records should include: (1) name and address of the TWW facility to which the TWW was sent; (2) estimated weight of TWW, or the weight of the TWW as measured by the receiving TWW facility; and (3) date of the shipment of TWW. (Cal. Code Regs., tit. 22, §§ 67386.8(a) and (e)(1)). g. List the permitted landfill, or other permitted disposal facilities, that will be accepting the disposed waste materials. h. Identify each type of waste material to be reused, recycled or disposed of and estimate the amount, by weight. i. Plan shall include the sampling and analytical program for characterization of any waste material, as needed, prior to reuse, recycle or disposal. 2. Materials or wastes shall only be recycled, reused, reclaimed, or disposed of at facilities approved of by the District. 3. Submit permission to reuse, recycle, reclaim, or dispose of material from reuse, recycling, reclamation, or disposal site owner along with any other information needed by the District to evaluate the acceptability of the proposed reuse, recycling, or disposal site and obtain acceptance of the Engineer prior to removing any material from the project site.					

REVISED APPENDIX A (CONT.)
EBMUD PRACTICES AND PROCEDURES MONITORING AND REPORTING PLAN

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation	Applicable Sites and Staging Areas	
					Site A2	Site A4
Utilities and Service Systems (cont.)						
Utilities and Service Systems f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs. (cont.)	4. All information pertinent to the characterization of the material or waste shall be disclosed to the District and the reuse, recycling, reclamation, or disposal facility. Submit copies of any profile forms and/or correspondence between the Contractor and the reuse, recycling, reclamation, or disposal facility. 5. Submit name and Environmental Laboratory Accreditation Program Certificate number of laboratory that will analyze samples for suspected hazardous substances. Include statement of laboratory's certified testing areas and analyses that laboratory is qualified to perform. Submit prior to any laboratory testing.					

NOTES:

[1] In EBMUD Standard Specifications, "District" = EBMUD; "Engineer" = EBMUD Engineer; "Contractor" = EBMUD Contractor; "Work" = Scope of Work for the Project

Underwood, Amy

From: Shaheen Zaheer Abbas
Sent: Tuesday, November 13, 2018 8:32 PM
To: Glickstein, Ben
Subject: R3000 - No to A4

Mr. Glickstein,

I am writing to you regarding the proposed Recycled Water Pump Station planned for installation in San Ramon, specifically regarding A4, the alternate site located behind Capella at Gale Ranch community. 1

My family lives in the community adjacent to A4 and I would like to bring the following disruptions to your attention and request that you remove A4 location for project consideration.

- Noise
  - A4 area is next to a quiet residential area with no natural sound barriers, such as trees, which would make the pump turbine noise more audible to nearby homes, especially at night. 2
- Cost of Project
  - A4 would require road trenching, repaving and leveling of the hillside, rendering this an expensive and long drawn process. 3
- Aesthetic Impact
  - A4 is visible from many homes due to its higher elevation. It severely impacts the homes on Laurelspur Loop and the homes on Cattleya Dr and Lantana Way. 4
- Construction Disruption
  - Due to A4's proximity to Coyote Creek Elementary School, the construction can be disruptive especially during the drop off and pick up, as the school relies only on street parking. 5

- Fire Hazard
    - There is a remote possibility that A4 can become a fire risk to the community. Any structure with heavy electrical equipment has a potential to start a fire as it is surrounded by dry brush. There have been a few fires in the dry brush in the surrounding areas over the past two years.

      The safety of the residents should be a top priority.

6

Sincerely,

Shaheen Babul

Underwood, Amy

From: Zaheer Babul
Sent: Wednesday, November 07, 2018 8:59 AM
To: Glickstein, Ben
Subject: R3000 - No to A4

Importance: High

Mr. Glickstein,

I am writing to you regarding the proposed Recycled Water Pump Station planned for installation in San Ramon, specifically regarding A4, the alternate site located behind Capella at Gale Ranch community. 1

My family lives in the community adjacent to A4 and I would like to bring the following disruptions to your attention and request that you remove A4 location for project consideration.

- Noise
  - A4 area is next to a quiet residential area with no natural sound barriers, such as trees, which would make the pump turbine noise more audible to nearby homes, especially at night. 2
- Cost of Project
  - A4 would require road trenching, repaving and leveling of the hillside, rendering this an expensive and long drawn process. 3
- Aesthetic Impact
  - A4 is visible from many homes due to its higher elevation. It severely impacts the homes on Laurelspur Loop and the homes on Cattleya Dr and Lantana Way. 4
- Construction Disruption
  - Due to A4's proximity to Coyote Creek Elementary School, the construction can be disruptive especially during the drop off and pick up, as the school relies only on street parking. 5
- Fire Hazard
  - There is a remote possibility that A4 can become a fire risk to the community.
    Any structure with heavy electrical equipment has a potential to start a fire as it is surrounded by dry brush. There have been a few fires in the dry brush in the surrounding areas over the past two years.
    The safety of the residents should be a top priority. 6

Sincerely,

Zaheer Babul

Underwood, Amy

From: Anand Cheriyathmadam
Sent: Tuesday, November 13, 2018 10:41 AM
To: Glickstein, Ben
Subject: Regarding proposed Recycled Water Pump Station in San Ramon

Mr. Glickstein,

I am writing to you regarding the proposed Recycled Water Pump Station planned for installation in San Ramon, specifically regarding A4, the alternate site located behind Capella at Gale Ranch community. 1

My family lives in the community adjacent to A4 and I would like to bring the following disruptions to your attention and request that you remove A4 location for project consideration.

- **Noise:** A4 area is next to a quiet residential area with no natural sound barriers, such as trees, which would make the pump turbine noise more audible to nearby homes, especially at night. 2
- **Cost of Project:** A4 would require road trenching, repaving and leveling of the hillside, rendering this an expensive and long drawn process. 3
- **Aesthetic Impact**: A4 is visible from many homes due to its higher elevation. It severely impacts the homes on Laurelspur Loop and the homes on Cattleya Dr and Lantana Way. 4
- **Construction Disruption**: Due to A4's proximity to Coyote Creek Elementary School, the construction can be disruptive especially during the drop off and pick up, as the school relies only on street parking. 5
- **Fire Hazard**:There is a remote possibility that A4 can become a fire risk to the community.

Any structure with heavy electrical equipment has a potential to start a fire as it is surrounded by dry brush. There have been a few fires in the dry brush in the surrounding areas over the past two years. The safety of the residents should be a top priority. 6

Sincerely,

Anand Cheriyathmadam

Underwood, Amy

From: Xiaodong Fu
Sent: Sunday, November 18, 2018 9:13 PM
To: Glickstein, Ben
Subject: Against Recycled Water Pump Station Proposal San Ramon A4

18th November 2018

Ben Glickstein
375 11th Street, MS 407
Oakland, CA 94607

Dear Mr. Glickstein,

I am writing to you regarding the proposed Recycled Water Pump Station planned for installation in San Ramon, specifically regarding A4, the alternate site located behind Capella at Gale Ranch community. 1

My family lives in the community adjacent to A4 and I would like to bring the following disruptions to your attention and request that you remove A4 location for project consideration.

- Noise
  - A4 area is next to a quiet residential area with no natural sound barriers, such as trees, which would make the pump turbine noise more audible to nearby homes, especially at night. 2
- Cost of Project
  - A4 would require road trenching, repaving and leveling of the hillside, rendering this an expensive and long drawn process. 3
- Aesthetic Impact
  - A4 is visible from many homes due to its higher elevation. It severely impacts the homes on Laurelspur Loop and the homes on Cattleya Dr and Lantana Way. 4
- Construction Disruption
  - Due to A4's proximity to Coyote Creek Elementary School, the construction can be disruptive especially during the drop off and pick up, as the school relies only on street parking. 5
- Fire Hazard
  - There is a remote possibility that A4 can become a fire risk to the community.

Any structure with heavy electrical equipment has a potential to start a fire as it is surrounded by dry brush. There have been a few fires in the dry brush in the surrounding areas over the past two years. The safety of the residents should be a top priority. 6

Sincerely,

Xiaodong Fu

Underwood, Amy

From: Shashi P <[redacted]>
Sent: Tuesday, November 13, 2018 11:14 AM
To: Glickstein, Ben
Cc: Shashi S
Subject: EDMUD Recycled Water Pump Station - Please Stop this

11/13/2018

Ben Glickstein
375 11th Street, MS 407
Oakland, CA 94607

Dear Mr. Glickstein,

I am writing to you regarding the proposed Recycled Water Pump Station planned for installation in San Ramon, specifically regarding A4, the alternate site located behind Capella at Gale Ranch community. 1

My family lives in the community adjacent to A4 and I would like to bring the following disruptions to your attention and request that you remove A4 location for project consideration.

- **Noise** 2
  - A4 area is next to a quiet residential area with no natural sound barriers, such as trees, which would make the pump turbine noise more audible to nearby homes, especially at night.
- **Cost of Project** 3
  - A4 would require road trenching, repaving and leveling of the hillside, rendering this an expensive and long drawn process.
- **Aesthetic Impact** 4
  - A4 is visible from many homes due to its higher elevation. It severely impacts the homes on Laurelspur Loop and the homes on Cattleya Dr and Lantana Way.
- **Construction Disruption** 5
  - Due to A4's proximity to Coyote Creek Elementary School, the construction can be disruptive especially during the drop off and pick up, as the school relies only on street parking.
- **Fire Hazard** 6
  - There is a remote possibility that A4 can become a fire risk to the community.

Any structure with heavy electrical equipment has a potential to start a fire as it is surrounded by dry brush. There have been a few fires in the dry brush in the surrounding areas over the past two years. The safety of the residents should be a top priority.

Sincerely,
Sasikanth Potti (Shashi)

Underwood, Amy

From: Dr Madhavi S <
Sent: Tuesday, November 13, 2018 11:19 AM
To: Glickstein, Ben
Cc: Dr Madhavi S
Subject: EDMUD Recycled Water Pump Station - Please Stop this

11/13/2018

Ben Glickstein
375 11th Street, MS 407
Oakland, CA 94607

Dear Mr. Glickstein,

I am writing to you regarding the proposed Recycled Water Pump Station planned for installation in San Ramon, specifically regarding A4, the alternate site located behind Capella at Gale Ranch community. 1

My family lives in the community adjacent to A4 and I would like to bring the following disruptions to your attention and request that you remove A4 location for project consideration.

- **Noise**
  - A4 area is next to a quiet residential area with no natural sound barriers, such as trees, which would make the pump turbine noise more audible to nearby homes, especially at night. 2
- **Cost of Project**
  - A4 would require road trenching, repaving and leveling of the hillside, rendering this an expensive and long drawn process. 3
- **Aesthetic Impact**
  - A4 is visible from many homes due to its higher elevation. It severely impacts the homes on Laurelspur Loop and the homes on Cattleya Dr and Lantana Way. 4
- **Construction Disruption**
  - Due to A4's proximity to Coyote Creek Elementary School, the construction can be disruptive especially during the drop off and pick up, as the school relies only on street parking. 5
- **Fire Hazard**
  - There is a remote possibility that A4 can become a fire risk to the community.

Any structure with heavy electrical equipment has a potential to start a fire as it is surrounded by dry brush. There have been a few fires in the dry brush in the surrounding areas over the past two years. The safety of the residents should be a top priority. 6

Sincerely,
Dr. Madhavi Setty DDS MSD

Underwood, Amy

From: HJ JS <
Sent: Tuesday, November 13, 2018 3:30 PM
To: Glickstein, Ben
Subject: Recycled Water Pump Station A4 Location Removal Request

---

Ben Glickstein
375 11th Street, MS 407
Oakland, CA 94607

Mr. Glickstein,

I am writing to you regarding the proposed Recycled Water Pump Station planned for installation in San Ramon, specifically regarding A4, the alternate site located behind Capella at Gale Ranch community. 1

My family lives in the community adjacent to A4 and I would like to bring the following serious concerns to your attention and request that A4 location is to be removed for project consideration.

- Noise 2
  - A4 area is next to a quiet residential area with no natural sound barriers, such as trees, which would make the pump turbine noise more audible to nearby homes, especially at night.
- Cost of Project 3
  - A4 would require road trenching, repaving and leveling of the hillside, rendering this an expensive and long drawn process.
- Aesthetic Impact 4
  - A4 is visible from many homes due to its higher elevation. It severely impacts the homes on Laurelspur Loop and the homes on Cattleya Dr and Lantana Way.
- Construction Disruption 5
  - Due to A4's proximity to Coyote Creek Elementary School, the construction can be disruptive especially during the drop off and pick up, as the school relies only on street parking.
- Fire Hazard 6
  - There is possibility that A4 can become a fire risk to the community.

  Any structure with heavy electrical equipment has a potential to start a fire as it is surrounded by dry brush. There have been a few fires in the dry brush in the surrounding areas over the past two years. The safety of the residents should be a top priority.

Sincerely,

James Shen

Underwood, Amy

From: Prasanth Veerapareddy
Sent: Tuesday, November 13, 2018 8:12 PM
To: Coleman, John; Glickstein, Ben
Subject: Regarding A4 Site

13th November 2018

Ben Glickstein

375 11th Street, MS 407

Oakland, CA 94607

Mr. Glickstein,

I am writing to you regarding the proposed Recycled Water Pump Station planned for installation in Sa specifically regarding A4, the alternate site located behind Capella at Gale Ranch community. 1

My family lives in the community adjacent to A4 and I would like to bring the following disruptions to yc request that you remove A4 location for project consideration.

- Noise 2
  - A4 area is next to a quiet residential area with no natural sound barriers, such as trees, v make the pump turbine noise more audible to nearby homes, especially at night.
- Cost of Project 3
  - A4 would require road trenching, repaving and leveling of the hillside, rendering this an e long drawn process.
- Aesthetic Impact 4

- A4 is visible from many homes due to its higher elevation. It severely impacts the homes Loop and the homes on Cattleya Dr and Lantana Way.

4 cont.

- Construction Disruption
  - Due to A4's proximity to Coyote Creek Elementary School, the construction can be disru during the drop off and pick up, as the school relies only on street parking.

5

- Fire Hazard
  - There is a remote possibility that A4 can become a fire risk to the community. Any structure with heavy electrical equipment has a potential to start a fire as it is surrou brush. There have been a few fires in the dry brush in the surrounding areas over the pa The safety of the residents should be a top priority.

6

Sincerely,

Prasanth Veerapareddy

Underwood, Amy

From: Seshagiri Bommadevara
Sent: Thursday, October 11, 2018 10:27 PM
To: CEQA R3000
Subject: feedback on R3000 by ebmud

October 11, 2018

Ben Glickstein
375 11th Street, MS 407
Oakland, CA 94607

Mr. Glickstein,

I am writing to you regarding the proposed Recycled Water Pump Station planned for installation on Dougherty Road in San Ramon, specifically regarding the Alternate site behind the Capella at Gale Ranch community. 1

My family lives at in Gale Ranch. My family and I are opposed to this project for the following reasons:

1. Increased noise and debris generation in our neighborhood for 2+ years during the construction of the station, likely resulting in heightened rodent activity. 2
2. Traffic delays for 2+ years during the construction of the station. 3
3. The proposed alternate site of the Pump Station is particularly ill-considered: it is on a site used by many for recreation and walking dogs, and building here would diminish the striking view. 4
4. Increased noise can definitely be felt and bad odor from this station. 5
5. All the above will decrease the home value of our community and other communities in gale ranch. 6

I & my Family are personally against this activity by EBMUD. Please consider a less residential area to install the Recycled Water Pump Station. Thank you for taking the time to read my concerns. 7

Respectfully,

__*Seshagiri Bommadevara*__
Signed,
A Fretful Capella at Gale Ranch Homeowner

October 11, 2018

Ben Glickstein
375 11th Street, MS 407
Oakland, CA 94607

Mr. Glickstein,

I am writing to you regarding the proposed Recycled Water Pump Station planned for installation on Dougherty Road in San Ramon, specifically regarding the Alternate site behind the Capella at Gale Ranch community. 1

My family lives at [redacted] Capella at Gale Ranch. My family and I are opposed to this project for the following reasons: 1

1. Increased noise and debris generation in our neighborhood for 2+ years during the construction of the station, likely resulting in heightened rodent activity. 2
2. Traffic delays for 2+ years during the construction of the station. 3
3. The proposed alternate site of the Pump Station is particularly ill-considered: it is on a site used by many for recreation and walking dogs and building here would diminish the striking view. 4
4. The traffic congestion on Lilac road with the Coyote Creek School traffic will horrendous during school days. This is a headache now with no construction. 5

Please consider a less residential area to install the Recycled Water Pump Station. Thank you for taking the time to read my concerns. 6

Respectfully,

Goundar

Respectfully,

Nal Raj Goundar
A Capella at Gale Ranch Homeowner

10/11/2018

Ben Glickstein
375 11th Street, MS 407
Oakland, CA 94607

Mr. Glickstein,

I am writing to you regarding the proposed Recycled Water Pump Station planned for installation on Dougherty Road in San Ramon, specifically regarding the Alternate site behind the Capella at Gale Ranch community. 1

My family lives at _____ in Gale Ranch. My family and I are opposed to this project for the following reasons:

1. Increased noise and debris generation in our neighborhood for 2+ years during the construction of the station, likely resulting in heightened rodent activity. 2
2. Traffic delays for 2+ years during the construction of the station. 3
3. The proposed alternate site of the Pump Station is particularly ill-considered: it is on a site used by many for recreation and walking dogs, and building here would diminish the striking view. 4

Please consider a less residential area to install the Recycled Water Pump Station. Thank you for taking the time to read my concerns. 5

Respectfully,

_____

Signed,
A Fretful Capella at Gale Ranch Homeowner

October 11, 2018

Ben Glickstein
375 11th Street, MS 407
Oakland, CA 94607

Mr. Glickstein,

I am writing to you regarding the proposed Recycled Water Pump Station planned for installation on Dougherty Road in San Ramon, specifically regarding the Alternate site behind the Capella at Gale Ranch community. 1

My family lives at Loop [redacted] in Gale Ranch. My family and I are opposed to this project for the following reasons:

1. Increased noise and debris generation in our neighborhood for 2+ years during the construction of the station, likely resulting in heightened rodent activity. 2
2. Traffic delays for 2+ years during the construction of the station. 3
3. The proposed alternate site of the Pump Station is particularly ill-considered: it is on a site used by many for recreation and walking dogs, and building here would diminish the striking view. 4

Please consider a less residential area to install the Recycled Water Pump Station. Thank you for taking the time to read my concerns. 5

Respectfully,

Michael Louie MD.

Signed,
A Fretful Capella at Gale Ranch Homeowner

Underwood, Amy

From: Angela Zhao
Sent: Friday, October 12, 2018 2:11 PM
To: CEQA R3000
Subject: Recycled water pump station - Capella at Gale ranch

Dear Mr. Glickstein,

I am writing to you regarding the proposed Recycled Water Pump Station planned for installation on Dougherty Road in San Ramon, specifically regarding the Alternate site behind the Capella at Gale Ranch community. 1

My family lives at in Gale Ranch. My family and I are opposed to this project for the following reasons:

1. Increased noise and debris generation in our neighborhood for 2+ years during the construction of the station, likely resulting in heightened rodent activity. 2
2. Traffic delays for 2+ years during the construction of the station. 3
3. The proposed alternate site of the Pump Station is particularly ill-considered: it is on a site used by many for recreation and walking dogs, and building here would diminish the striking view. 4

Please consider a less residential area to install the Recycled Water Pump Station. Thank you for taking the time to read my concerns. 5

Joe Osborn and Angela Zhao

Form Letter 3-Balaka, J

15th November 2018

Ben Glickstein
375 11th Street, MS 407
Oakland, CA 94607

Mr. Glickstein,

I am writing to you regarding the proposed Recycled Water Pump Station planned for installation in San Ramon, specifically regarding A4, the alternate site located behind Capella at Gale Ranch community. 1

My family lives in the community adjacent to A4 and I would like to bring the following concerns to your attention and request that you remove A4 location for project consideration.

- Aesthetic Impact
  - A4 is visible from many homes due to its higher elevation and lack of tall trees in the area. It severely impacts the homes on Laurelspur Loop and the homes on Cattleya Dr and Lantana Way. 2
- Proximity to Nearby Homes
  - Our measurements show that the nearest homes on Laurelspur Loop are less than 170 feet away. This close distance means that the pumps can be audible during quiet times at night. 3
- Fire Hazard
  - There is a remote possibility that A4 can become a fire risk to the community. Any structure with heavy electrical equipment has a potential to start a fire, and this structure is surrounded by dry brush. There have been a few fires in the dry brush in the surrounding areas over the past two years. The safety of the residents should be a top priority. 4
- Cost of Project
  - A4 would require road trenching, repaving and leveling of the hillside, rendering this an expensive and long drawn process. 5
- Construction Disruption
  - Though trenching of roads for A4 would be done during school off season, it still presents a risk to the many children who use Coyote Creek Elementary School grounds during the summer and winter months. Many of these kids walk from their homes to the school unattended by adults. 6

Sincerely,

B Jyoti Balaka

15th November 2018

Ben Glickstein
375 11th Street, MS 407
Oakland, CA 94607

Mr. Glickstein,

I am writing to you regarding the proposed Recycled Water Pump Station planned for installation in San Ramon, specifically regarding A4, the alternate site located behind Capella at Gale Ranch community.

My family lives in the community adjacent to A4 and I would like to bring the following concerns to your attention and request that you remove A4 location for project consideration. 1

- Aesthetic Impact
  - A4 is visible from many homes due to its higher elevation and lack of tall trees in the area. It severely impacts the homes on Laurelspur Loop and the homes on Cattleya Dr and Lantana Way. 2
- Proximity to Nearby Homes
  - Our measurements show that the nearest homes on Laurelspur Loop are less than 170 feet away. This close distance means that the pumps can be audible during quiet times at night. 3
- Fire Hazard
  - There is a remote possibility that A4 can become a fire risk to the community. Any structure with heavy electrical equipment has a potential to start a fire, and this structure is surrounded by dry brush. There have been a few fires in the dry brush in the surrounding areas over the past two years. The safety of the residents should be a top priority. 4
- Cost of Project
  - A4 would require road trenching, repaving and leveling of the hillside, rendering this an expensive and long drawn process. 5
- Construction Disruption
  - Though trenching of roads for A4 would be done during school off season, it still presents a risk to the many children who use Coyote Creek Elementary School grounds during the summer and winter months. Many of these kids walk from their homes to the school unattended by adults. 6

Sincerely,

M. Janbakhsh

15th November 2018

Ben Glickstein
375 11th Street, MS 407
Oakland, CA 94607

Mr. Glickstein,

I am writing to you regarding the proposed Recycled Water Pump Station planned for installation in San Ramon, specifically regarding A4, the alternate site located behind Capella at Gale Ranch community.

My family lives in the community adjacent to A4 and I would like to bring the following concerns to your attention and request that you remove A4 location for project consideration. 1

- Aesthetic Impact
  - A4 is visible from many homes due to its higher elevation and lack of tall trees in the area. It severely impacts the homes on Laurelspur Loop and the homes on Cattleya Dr and Lantana Way. 2
- Proximity to Nearby Homes
  - Our measurements show that the nearest homes on Laurelspur Loop are less than 170 feet away. This close distance means that the pumps can be audible during quiet times at night. 3
- Fire Hazard
  - There is a remote possibility that A4 can become a fire risk to the community. Any structure with heavy electrical equipment has a potential to start a fire, and this structure is surrounded by dry brush. There have been a few fires in the dry brush in the surrounding areas over the past two years. The safety of the residents should be a top priority. 4
- Cost of Project
  - A4 would require road trenching, repaving and leveling of the hillside, rendering this an expensive and long drawn process. 5
- Construction Disruption
  - Though trenching of roads for A4 would be done during school off season, it still presents a risk to the many children who use Coyote Creek Elementary School grounds during the summer and winter months. Many of these kids walk from their homes to the school unattended by adults. 6

Sincerely,

M. Lalas

Underwood, Amy

From: Kiran Puppala <
Sent: Friday, November 30, 2018 9:00 AM
To: Coleman, John; Glickstein, Ben
Subject: Recycled Water Pump Location

15th November 2018

Ben Glickstein
375 11th Street, MS 407
Oakland, CA 94607

Mr. Glickstein,

I am writing to you regarding the proposed Recycled Water Pump Station planned for installation in San Ramon, specifically regarding A4, the alternate site located behind Capella at Gale Ranch community. 1

My family lives in the community adjacent to A4 and I would like to bring the following concerns to your attention and request that you remove A4 location for project consideration.

- Aesthetic Impact 2
  - A4 is visible from many homes due to its higher elevation and lack of tall trees in the area. It severely impacts the homes on Laurelspur Loop and the homes on Cattleya Dr and Lantana Way.
- Proximity to Nearby Homes 3
  - Our measurements show that the nearest homes on Laurelspur Loop are less than 170 feet away. This close distance means that the pumps can be audible during quiet times at night.
- Fire Hazard 4
  - There is a remote possibility that A4 can become a fire risk to the community.

Any structure with heavy electrical equipment has a potential to start a fire, and this structure is surrounded by dry brush. There have been a few fires in the dry brush in the surrounding areas over the past two years. The safety of the residents should be a top priority.

- Cost of Project 5
  - A4 would require road trenching, repaving and leveling of the hillside, rendering this an expensive and long drawn process.
- Construction Disruption 6

- Though trenching of roads for A4 would be done during school off season, it still presents a risk to the many children who use Coyote Creek Elementary School grounds during the summer and winter months. Many of these kids walk from their homes to the school unattended by adults. 6 cont.

Sincerely,
Kiran Puppala
Shilpa Puppala

15th November 2018

Ben Glickstein
375 11th Street, MS 407
Oakland, CA 94607

Mr. Glickstein,

I am writing to you regarding the proposed Recycled Water Pump Station planned for installation in San Ramon, specifically regarding A4, the alternate site located behind Capella at Gale Ranch community. 1

My family lives in the community adjacent to A4 and I would like to bring the following concerns to your attention and request that you remove A4 location for project consideration.

- Aesthetic Impact
  - A4 is visible from many homes due to its higher elevation and lack of tall trees in the area. It severely impacts the homes on Laurelspur Loop and the homes on Cattleya Dr and Lantana Way. 2
- Proximity to Nearby Homes
  - Our measurements show that the nearest homes on Laurelspur Loop are less than 170 feet away. This close distance means that the pumps can be audible during quiet times at night. 3
- Fire Hazard
  - There is a remote possibility that A4 can become a fire risk to the community. Any structure with heavy electrical equipment has a potential to start a fire, and this structure is surrounded by dry brush. There have been a few fires in the dry brush in the surrounding areas over the past two years. The safety of the residents should be a top priority. 4
- Cost of Project
  - A4 would require road trenching, repaving and leveling of the hillside, rendering this an expensive and long drawn process. 5
- Construction Disruption
  - Though trenching of roads for A4 would be done during school off season, it still presents a risk to the many children who use Coyote Creek Elementary School grounds during the summer and winter months. Many of these kids walk from their homes to the school unattended by adults. 6

Sincerely,

Yue Lin

Underwood, Amy

From: Marie Louie <
Sent: Sunday, October 21, 2018 2:03 PM
To: Coleman, John; Thomas, Reena; Glickstein, Ben
Subject: Opposing A4 recycled water pump station

Dear Glickstein, Colman and Thomas,

I am writing to you regarding your proposed Recycled Water Pump Station behind the Capella community in San Ramon, referred to as A4 location. 1

When we purchased our new homes and specifically the land use for A4 purpose and were advised that there will be no building in A4 location. Now your company proposed as an alternate site to build your recycled water pump. This fact really arose our concern as it is way too close to our home. We are opposing this project for the following reasons:

1) Your construction could pose a health threat to our elder parents who have asthma as it is now their habits to walk around your site. Any extra measure of dirt/pollution from construction could pose threat as they already have a current existing health issue. 2

2) It will endanger our school age children as they walk to school every day from community to school. Your construction vehicles could be too tall and miss the playful child who has to walk to school every day. Your dust from construction could also post threat to our severe allergies children. Industrial construction is dangerous for the Coyote Creek elementary children. 3

3) The traffic delays caused by your 2+ year of construction time is not acceptable. 4

Please consider another location to build your Recycled water pump. 5

Respectfully,

Marie

October 21, 2018

Ben Glickstein, John Colman and Reena Thomas,
375 11th Street, MS 407
Oakland, CA 94607

Mr. Glickstein, Colman and Thomas,

I am writing to you regarding the proposed Recycled Water Pump Station behind the Capella community in San Ramon, referred to as A4 location. When we purchased our new homes and specifically the land use for A4 purpose and were advised that there will be no building in A4 location. Now your company proposed as an alternate site to build your recycled water pump. This fact really arose our concern as it is way too close to our home. We are opposing this project for the following reasons: 1

1. Your construction could pose a health threat to our elder parents who have asthma as it is now their habits to walk around your site. Any extra measure of dirt/pollution from construction could pose threat as they already have a current existing health issue. 2
2. It will endanger our school age children as they walk to school every day from community to school. Your construction vehicles could be too tall and miss the playful child who has to walk to school every day. Your dust from construction could also post threat to our svere allergies children. Industrial construction is dangerous for the Coyote Creek Elementary children. 3
3. The traffic delays caused by your 2+ year of construction time is not acceptable. 4

Please consider another location to build your Recycled Water Pump Station. Thank you for taking the time to read my concerns. 5

Respectfully,

Yuwen

Capella Homeowner at San Ramon

DEPARTMENT OF TRANSPORTATION
DISTRICT 4
OFFICE OF TRANSIT AND COMMUNITY PLANNING
P.O. BOX 23660, MS-10D
OAKLAND, CA 94623-0660
PHONE (510) 286-5528
FAX (510) 286-5559
TTY 711
www.dot.ca.gov

Making Conservation a California Way of Life

December 3, 2018

SCH # 2018102021
GTS # 04-ALA-2016-00363
GTS I.D. 601
CC - 680 - 4.168

Reena Thomas
East Bay Municipal Utility District
375 Eleventh Street MS407
Oakland, CA 95814

San Ramon Valley Recycled Water Pump Station – Mitigated Negative Declaration

Dear Reena Thomas:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above referenced project. In tandem with the Metropolitan Transportation Commission's (MTC) Sustainable Communities Strategy (SCS), Caltrans' mission signals a modernization of our approach to evaluate and mitigate impacts to the State Transportation Network (STN). Caltrans' Strategic Management Plan 2015-2020 aims to reduce Vehicle Miles Traveled (VMT) by tripling bicycle and doubling both pedestrian and transit travel by 2020. Our comments are based on the review of the Mitigated Negative Declaration (MND). 1

Project Understanding

The San Ramon Valley Recycled Water Program (SRVRWP) supplies recycled water to portions of the Dublin San Ramon Services District (DSRSD), Pleasanton, and East Bay Municipal Utility District (EBMUD) water service area in the San Ramon and Dougherty valleys. The SRVRWP Pump Station R3000 Project (Pump Station R3000 or Project) is part of Phase 3 of the SRVRWP and would allow the provision of recycled water to areas served only by EBMUD within the DSRSD/EBMUD Recycled Water Authority (DERWA) system through construction of a new pump station which was included in the SRVRWP Program EIR. Two candidate sites for Pump Station R3000 have been identified: 2

- Site A2 - located within the City of San Ramon, roughly 3 miles east of Interstate 680 (I-680) on the west side of Dougherty Road between Crow Canyon Road and North Gale Ridge Road;
- Site A4 - located within the City of San Ramon, roughly 2.5 miles east of I-680, off of Lilac Ridge Road near Lantana Way.

Pump station and pipeline construction will be completed simultaneously and are expected to occur over a period of 24 months, any time before 2020 and 2024.

Encroachment Permit

Please be advised that any work or traffic control that encroaches onto the State Right of Way (ROW) requires an encroachment permit that is issued by the Caltrans. To obtain an encroachment permit, a completed encroachment permit application, environmental documentation, and six (6) sets of plans clearly indicating the State ROW must be submitted to: Office of Encroachment Permits, California DOT, District 4, P.O. Box 23660, Oakland, CA 94623-0660. To download the permit application and obtain more information, visit: http://www.dot.ca.gov/hq/traffops/developserv/permits/. 3

Lead Agency

As the Lead Agency, the EBMUD is responsible for all project mitigation, including any needed improvements to the STN. The project's fair share contribution, financing, scheduling, implementation responsibilities and lead agency monitoring should be fully discussed for all proposed mitigation measures. 4

Thank you again for including Caltrans in the environmental review process. Should you have any questions regarding this letter, please contact Jannette Ramirez at (510) 286-5535 or jannette.ramirez@dot.ca.gov. 5

Sincerely,

PATRICIA MAURICE
District Branch Chief
Local Development - Intergovernmental Review

c: State Clearinghouse

Underwood, Amy

From: Zaheer Babul
Sent: Thursday, October 18, 2018 11:03 AM
To: Glickstein, Ben
Subject: R3000

Hi Ben,

Thanks for the informative presentation yesterday.
As discussed, please send me the presentation from yesterday's meeting .
Also, please send me the list of current pumping stations in the EBMUD area that I can visit to assess the noise and aesthetics. 1

Thanks,

Zaheer Babul

Comments re EBMUD's Mitigated Negative Declaration for Recycled Water Pump Station R3000

Leo T Bauer

October 23, 2018

I have several comments to make regarding your proposed recycled water pump station.

The pump station, in and of itself, isn't an issue to me. It is the construction of the same – particularly if site "A4" is chosen. The neighborhood around Tank 200 has put up with practically non-stop construction since our homes were built in 2000. Eg – the build out by Toll Brothers on Lilac Ridge Drive, Cattleya, Tigerside, Heatherland; the removal of the hill east of Lilac Ridge / north of N. Gale Ridge for use as fill for the improvements of Dougherty Road south of Crow Canyon Road; grading of the aforementioned site as a possible corporation yard for the City of San Ramon; construction of Coyote Creek School; excavation of the site of Tank 200 and dumping of the material just to the east of Lilac Ridge (yes, the same site just mentioned twice above); the construction of Tank 200 and the pipelines leading in and out of it; removal of the material dumped prior to the tank construction to be used as fill to bury Tank 200; build out of the Capella Subdivision on that site by Toll Brothers. Those are just the projects I remember off of the top of my head. 1

In every instance, there was complete disregard for the neighbors by all the contractors / developers re noise, working hours, dust control, traffic control, erosion control, etc. Most of those projects were overseen by the County - which was, except for Kevin Emigh, totally negligent regarding looking out for the interests of the neighborhood. The sponsoring agencies and the contractors were pretty much allowed to do whatever they wanted whenever they wanted. The City was pretty good at keeping Toll Brothers and their Capella subdivision somewhat in check – often at my prodding. It was a constant four (?) year battle. 2

Why do we have to be subjected to this again?

Were sites A2 and A4 the only two sites considered? Why not utilize EBMUD's Castenada Yard at 5050 Crow Canyon Road? EBMUD owns the site, they have facilities and security already there, there are no nearby residences, no local residential streets would be impacted? Or why not either the southwest or southeast or northwest corner of Bollinger Canyon Road and Dougherty Road? There are no nearby residences, no local residential streets would be impacted, I imagine the land is publicly owned. 3

What is East Bay Municipal Utility District's preferred alternative if you had your druthers? 4

I assume it is EBMUD's Mr. Glickstein that states in a posting to ***Nextdoor*** on or about October 17th:

> EBMUD analyzed the proposed pump station's potential impacts and determined that all environmental impacts—including construction-related impacts-- can be mitigated to less-than-significant levels.

I beg to differ Mr. Glickstein. If you live in Capella, on Lantana Way, on Lilac Ridge or Gale Ridge, or have anything to do with / at Coyote Creek School, the construction-related impacts **cannot** be mitigated to less-than-significant levels. I speak from experience. 5

And EMBUD / Dublin San Ramon Services District's track record of complying with many of the permitting conditions during the construction of Tank 200 and its appurtenances was totally abysmal. Why should I have any reason to believe that things will be any better during the construction of the subject pump station. 6

Some specific comments to your Initial Study.

I assume the pump station, pumps, lights, etc will all be electrically powered by energy provided by PG&E or whomever. What, if any provisions, will there be for back-up power in case of an outage eg generator(s)? If there is a generator(s), where will it be located? Inside or outside? Noise level? How often tested to ensure it is workable? 7

Page 1-3. Section 1.3. Paragraph 2 as well as in other sections. I beg to differ. The closest home in the Bridges (5901 Lantana Way) is a lot closer than the 350' you cite. Maybe it is 350' to the tank; but not to the closest point where I think you are putting the pump station site. Likewise, it seems it is less than the 170' you state it is to the backyard of the nearest home in Capella. Where did you folks measure from – the northwestern most corner fence post? What is the distance from the southeastern most corner fence post? I see no survey markers or anything else in the vicinity of the site to show me where the proposed layout of the site is. So how can you state from which point you are measuring from? In fact, the only marker I saw was a pipeline location marker. Are you putting the pump station right on top of the existing pipeline? 8

Page 1-7. Section 1.4. Were there any other sites considered besides A2 and A4. Why not? Why not Castenada Yard or at Bollinger Canyon and Dougherty? Or any other locations? 9

Page 1-9. Section 1.4.3. Site A2 Pipelines. Proposed pipelines would be 150' long? That number seems on the high side – especially if the transmission line they tie into is in the southerly lanes of Dougherty Road. 10

Page 1-10. Section 1.4.3. Site A4 Pipelines. Why can't the tie-in pipe from Site A4 just head directly east from Site A4 to Dougherty Road and avoid disrupting Lilac Ridge, Gale Ridge and Coyote Creek School? 11

Page 1-10 et al. Section 1.5. Construction Schedule. In general, it seems your schedules are very fat and could be tightened up considerably and some of the sequencing is goofy. Many of the tasks can be concurrent and don't have to be strictly sequential. For example. Three months for mobilization? Get serious. Where will the "offices" be set up. On site or in the street? How can the office be set up on site if the site hasn't been cleared, grubbed and graded? Six months for site restoration and demobilization? Two months seems more than adequate and reasonable.
All the pipeline work, less the tie-in with the pump station, can be independent of and concurrent with the pump station work. 12

Page 1-10. Section 1.5.1. Just ten one-way worker trips a day? Get serious. Is that an average day - including weekends and holidays? What would be the **MAXIMUM** number of one-way worker trips on any given day? You will have a lot more than five workers on-site most days – laborers, operating engineer(s), carpenter(s), foremen, superintendent, plumber(s), electrician(s), machinists, drillers, manufacturer representative(s), inspector(s), surveyors. And there will be many others, won't there? Try looking at your own Table 2.

And then add to that the crews working on the pipeline concurrently. Your ten trips number is bogus.

And how do you arrive at eight truck trips a day? Once again, an average number? What will the **MAXIMUM** be? Does this include "haul" trucks and readymix trucks? 13

Page 1-10.Section 1.5.1. Pump Station Construction Hours. How often will there be work on Saturdays? Toll Brothers when building Capella promised there would be, at the most, only six Saturdays of work. In reality, they seemingly worked all but six Saturdays. Half the Saturdays they didn't work was because the site was red-tagged by the city because of permit violations. And they were often at it well before 9:00 am on those Saturdays. On holidays? What days do you consider to be holidays? Toll Brothers didn't seem to recognize any holidays other than Thanksgiving, Christmas and New Years. What about on Sundays? And no work will start on weekends before 9:00 nor after 6:00? And you folks will closely monitor adherence to these hours? 14

And no work before 7:30 nor after 7:00 on weekdays? How do you define "work"?

If the past there has been considerable pre-work and after-work hours "activities – at all hours and any day of the week. Including equipment deliveries at 2:00 am on a Sunday. And material and readymix deliveries very often showing up well before work hours with the drivers parking on the street with engines idling the whole time; heavy equipment being fueled and serviced; chains being undone or tightened up and thrown around; horns; yelling, etc. Not to mention workers showing up as early as 90 minutes before work officially starts getting a headstart on their activities. Will all of this be policed and controlled?

You say work hours for haul trucks will limited to between 9:00 and 4:00 to prohibit trucks during commute hours. At Site A4, school traffic at Coyote Creek School on Lilac Ridge, Gale Ridge and Lantana is a nightmare three times a day. Total gridlock. You need to address that more than "commute" hours. School drop-offs and pick-ups and special events are a much greater traffic issue in this area than "commute hour" traffic is. 15

Page 1-13. Section 1.5.1. Staging Area 2. Are you serious about the site of Reservoir 2 as a staging area? There is barely enough room up there to turn around a pickup.
In fact, you state "The second potential staging area is the paved area approximately 170 feet north of Reservoir R200." There is no road, nor paved area **NORTH** of the reservoir. Everything ends on the south side of the reservoir. Real sloppy on your fact checking; *is such loose fact checking (also as demonstrated by the distances to nearest the nearest residences) typical throughout the whole report?* 16

Page 2-5. Figure 5. Why not also show a view looking north from on Lantana Drive? Photo 2 gives one no perspective of anything as it is framed. Do you not show 5901 Lantana Way on purpose? 17

Page 2-6. Site A-4. Second paragraph. In my opinion, as someone who walks along the West Alamo Creek Trail several times a week, you grossly downplay how visible the pump station will be. 18

Page 2-6. Site A-4.a. Second paragraph. Site A4 is also very visible looking north on Lantana Way. Here is a picture of the site from ground level in my back yard. And it is very much more visible from the upstairs bedrooms. 19

Bauer, L

19 cont.

Page 2-9.c. Second paragraph. Last sentence. "visual impacts will be temporary and less than significant." That is, unless you live here. 20

Page 2-18. Third bullet of Section 3.3.B. Regarding wet power sweeping, it is worded that roads, etc are to be swept "daily or as often as necessary". To me, that could be interpreted as ***not*** swept at all if deemed not necessary. The words "or as often" should be changed to "or ***more*** often" as necessary. 21

Page 2-19. I will be watching to see if those bullets – especially #1 and 3 – are complied with and proper measures are in place to keep wash waters from discharging into the storm sewers. 22

Page 2-96. G. I would like to see Bullet expanded from 350 feet of the construction to at least 750 feet on the construction and include all residents of Lilac Ridge Drive east of the 8th tee of The Bridges Golf Course, all residents of the Capella subdivision, all residents on Lantana Way as well as Coyote Creek School. 23

Along those lines, how about making available to all those mentioned above in the preceding paragraph a weekly or biweekly report? Such a report, sent by email to those interested, would include a summary of project activities completed the previous week or two week period, a look ahead schedule of project activities for the upcoming week or two weeks as well as a summary of total project progress to date and an updated projected project completion date.

Such a report would be relatively easy. All the information / data will already be readily available in-house by EBMUD as well as the contractor.

24

Leo T Bauer PE
[redacted]

cc: Ms. Maria Fierner, Director, Public Works, City of San Ramon

Underwood, Amy

From:
Sent: Monday, October 22, 2018 4:11 PM
To: CEQA R3000
Cc: achakrab12@aol.com
Subject: Recycled Water Oump project

Hello,

I am a resident of the Gale Ranch area and am concerned about the proposed sites for the water pump. Why is the MND impact investigation document not made available online? It seems that would be more accessible to everyone who is impacted with this project. Can that be made available on the website so we can peruse it when we have time available? 1

Thank you,
Rita Chakrabarti

Emany, M

Underwood, Amy

From: Maruthi Emany
Sent: Friday, October 12, 2018 9:35 AM
To: CEQA R3000
Subject: New pump stations in San Ramon

CAUTION – This email came from outside of EBMUD. Do not open attachments or click on links in suspicious emails.

Hi
Who or which area will these pump stations serve? Or pump up the recycled water 1

Flicek, D

Comment Card

Pump Station R3000
Mitigated Negative Declaration Public Meeting
October 17, 2018

1) 30 ft tall radio antenna? - too tall! → Do you have to have antenna? Isn't there a way to ~~the~~ work it so you don't have antenna? 1

2) Will fill up trucks, personal trucks get water fill up there 2

3) Building should be brown - white doesn't fit in with surroundings 3

4) Transformer noise? humming 4

5) Fence - looks like a prison - Valley View park site doesn't have all the fencing. 5

6) Why can't it be put in hills? ~~site~~ site 44 would be better. 6

Contact information

Flicek, D

Comment Card

Pump Station R3000
Mitigated Negative Declaration Public Meeting
October 17, 2018

1) A4 site to A2 site - can the pipe go through hills to decrease pipe laid so A4 site could be primary. So the building is father away from homes. 7

2) Seeing the rendering - retaining wall is ok but more the fencing down near building. It looks like a prison! 8

Contact information

4) Could station be built partially underground so not so visible? 9

EBMUD

Comment Card

Pump Station R3000
Mitigated Negative Declaration Public Meeting
October 17, 2018

1) Move the pump station to back of A4 site behind water ~~tank~~ tank, or somewhere else on A4 site. 10

2) Picture is not accurate - render drawing. - doesn't show antenna. 11

3) Lighting - Is it only motion controlled or will it be on all night? 12

Contact information

Comment Card

Pump Station R3000
Mitigated Negative Declaration Public Meeting
October 17, 2018

1) How can you possibly make a 21 foot tall + 30-40 ft. wide structure + an electric pole + parking lot aesthetically pleasing? PUBLIC NUISANCE 1

2) The only other station is at Valley View which is a park; NOT a new structure by residences. 2

3) Why not stick to the land you already own? (Orra owned) 3

4) Why not revisit parks (like Red Willow) as location? 4

EBMUD

Comment Card

Pump Station R3000
Mitigated Negative Declaration Public Meeting
October 17, 2018

1) Why were other San Ramon locations not considered? Golf Courses? Other parks? 5

2) There needs to be a more accurate photo description, it's completely misleading. Doesn't show real building size, fence isn't all the way around, electric pole is hidden by trees and fog. So innaccurate, and therefore unfair. 6

EBMUD

Comment Card

Pump Station R3000
Mitigated Negative Declaration Public Meeting
October 17, 2018

1) How come your own employees couldn't answer a single question at the meeting? 7

2) We NEED another opportunity to speak before December 11th vote, and Oakland meetings don't count because employees can't respond there. 8

3) Why does Valley View station not have the same ugly fence around it? 9

4) There is NO benefit to us at all so put it on golf courses who use the most water. 10

Underwood, Amy

From: Yara Karmalawy
Sent: Wednesday, October 17, 2018 8:38 PM
To: Glickstein, Ben
Subject: Recycles water pump station R300

CAUTION ? This email came from outside of EBMUD. Do not open attachments or click on links in suspicious emails.

Hello Ben,

I was at the informational meeting tonight and spoke with you about receiving a copy of the PowerPoint as well as photos of the map and the generated image of the proposed station that were on posters in the room. I would appreciate if you could send those to me ASAP. 1

Additionally, my most immediate concern is having an accurate depiction of the proposed pump station generated. I mentioned this at the meeting and the engineer stated that I could speak to someone to have that created right away. If you could please direct me to who I can speak with about that, I would appreciate that as well. It is of the upmost importance that this image is created with urgency so that the public has access to an honest and accurate display of the proposed pump station, rather than the misleading drawing we were shown tonight or the Valley View image that portrays a much smaller structure, is a different pump all together, and has no fence. 2

I look forward to hearing from you.

Thank you,

Yara Karmalawy

Sent from my iPhone

Underwood, Amy

From: Yara Karmalawy
Sent: Thursday, October 18, 2018 9:35 PM
To: Glickstein, Ben
Subject: Re: Recycles water pump station R300

CAUTION – This email came from outside of EBMUD. Do not open attachments or click on links in suspicious emails.

Hello Ben,

I was expecting to hear from you today since at the meeting you all had said that you are very big on responding within 24 hours. As I stated in my previous email, time is of the essence right now with the deadline for comments fast approaching, as well as to have adequate time to schedule another night for dialogue. 1

If there is someone else that you would like me to direct my questions and concerns to who can provide me with more timely responses, please let me know. I'm happy to reach out to them instead. I really need copies of all the materials used at the informational meeting, as well as the updated diagram of the proposed pump station. 2

Best,

Yara

Sent from my iPhone

> On Oct 17, 2018, at 8:38 PM, Yara Karmalawy wrote:
>
> Hello Ben,
>
> I was at the informational meeting tonight and spoke with you about receiving a copy of the PowerPoint as well as photos of the map and the generated image of the proposed station that were on posters in the room. I would appreciate if you could send those to me ASAP.
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>
> I look forward to hearing from you.
>
> Thank you,
>
> Yara Karmalawy
>

Underwood, Amy

From: Yara Karmalawy
Sent: Friday, October 19, 2018 1:48 PM
To: Glickstein, Ben
Subject: Re: Presentation from 10-17-18 Public Meeting

And in regards to the drawing/image of the proposed pump, who can I speak to to get an updated image ASAP? 1

Sent from my iPhone

On Oct 19, 2018, at 1:42 PM, Glickstein, Ben <ben.glickstein@ebmud.com> wrote:

> Hello,
>
> Thank you for participating in our public meeting this Wednesday.
>
> The PowerPoint presentation that was given at the meeting is now available in the "Documents" section of the project webpage: http://www.ebmud.com/r3000.
>
> We plan to hold another public meeting prior to the approval of the project and will provide details once the meeting is scheduled.
>
> Best,
>
> Ben
>
> **Ben Glickstein**
> Community Affairs Representative
> East Bay Municipal Utility District
> Desk: 510-287-1631
> Mobile: 510-671-0571
> ben.glickstein@ebmud.com

EBMUD

Comment Card

Pump Station R3000
Mitigated Negative Declaration Public Meeting
November 13, 2018

1) Build it between Red Willow and Diablo Park in the back where there's already an electrical plant of some sort. Why not there? [1]

2) Move down dougherty why not move A2 further from homes that way? [2]

3) Find out the risk from OSRSD of people breaking in. Why a need for fence if no major security concern? [3]

4) Why take out any old beautiful trees? [4]

EBMUD

Comment Card

Pump Station R3000
Mitigated Negative Declaration Public Meeting
November 13, 2018

1) Are the decibals calculated based on an average or peak levels? 5

2) Where were decibal numbers gotten from? 6

3) Can the public comment period be changed from 2pm so that people who work can attend? 7

EBMUD

Comment Card

Pump Station R3000
Mitigated Negative Declaration Public Meeting
November 13, 2018

1) Make sure that presentation to board will include the fact that this pump provides ZERO benefit to the owners of neighboring homes. 8

2) The proposed image drawn up must be changed to accurately depict fence + electric pole when presented to the board. 9

3) Clarify to the board the actual roadway impact 10

4) Move it further from homes, look into other locations, specifically why not further uphill at A2? 11

EBMUD

Comment Card

Pump Station R3000
Mitigated Negative Declaration Public Meeting
October 17, 2018

Asthetics do not fit within community. Fences and electrical towers are not aesthetic within a neighborhood. 1

2. A4 is 170 feet to near homeowner in Capella. 2

Construction over 2 year period will be destructive to traffic in/out of Capella neighborhood and disrupt school traffic in area. 3

EBMUD

Comment Card

Pump Station R3000
Mitigated Negative Declaration Public Meeting
October 17, 2018

1. District did not weigh in on traffic study 4
2. Red Willow Park is less intrusive on neighborhoods. Area is larger at Red Willow 5
3. Recycled water will not serve Capella water supply. 6

From: Shital Patel Kelshikar
Sent: Wednesday, October 24, 2018 9:43 AM

To: Fierner, Maria <mfierner@sanramon.ca.gov>
Subject: EBMUD recycled water pump station proposal - A4 and A2 sites

Hi Maria:

Mayor Clarkson advised me to contact you on assistance with the EBMUD project proposal. I live closest to the A4 site which is 170 feet from the nearest home in my community. Our neighborhood opposes this site due to the noise potential with the noise being downhill in the direction of our community, traffic congestion to Coyote Creek school families since the road where construction would occur for 2 years is one of only 3 roads out of this immediate area, and the promixity to our neighborhood and devaluation of our homes. It seems that there were other sites being considered that were taken off the table. It is concerning that locations such as Red Willow Park were not considered due to 'disturbing park users' but that the 24 hour disturbance to our homes was less important. 1 2

Several of us attended the EBMUD informational meeting last week where they had very little answers for us and recommended we submit comment cards for all our concerns. Does the city have any updates on this matter I can share with our school and neighborhood community? I've notified Rick Schmitt at the school district who was unaware of this project and they were looking into the traffic impact this would have. 3

I am available by phone if you'd like to discuss further. I appreciate your time and any assistance you may have in helping resolve this for our community. We believe that the recycled water pumps are important but its the location that needs to be reconsidered away from neighborhoods and schools. 4

Thanks!
Shital Kelshikar

EBMUD

Comment Card

Pump Station R3000
Mitigated Negative Declaration Public Meeting
October 17, 2018

Thank you for doing this

7. Can we see the locations in Alamo & and Lafayette?

1. Do you have an example of something that has already been built?
Reason: I would like to go see it.

2. Sounds and odors?

3. Why don't they build it somewhere that is not close to homes?

4. Can they please mark the exact locations suggested w/ markings?

5. What were the other six locations that were suggested?

6. Can we see how the antenna looks?

[redacted]

Picture is not accurate.
Can we get a better depiction.

8

Please build behind
the tank.
Plenty of land.

9

:)

We should have another
meetins discussing
questions.

10

Underwood, Amy

From: Christopher Lahiji <
Sent: Thursday, November 15, 2018 11:17 AM
To: Glickstein, Ben
Subject: Re: Presentation from Public Meeting 11/13/18

Ben,

Thanks again for hosting. I vote no to the "Bad Wendy" in our community. 1

http://i.imgur.com/WdfUxgq.png

Secretly, Wendy's is delicious....Just don't eat the salads or the chili.

CL

On Wednesday, November 14, 2018 4:49 PM, "Glickstein, Ben" <ben.glickstein@ebmud.com> wrote:

Hello all,

Please find the presentation from last night's meeting in the "Documents" section at the bottom of this webpage: https://ebmud.com/r3000

Note that we have added reference numbers to each site identified in Slide 11. If you plan to refer to these numbers in your written comments, please mention that you are referring to "the site number as noted in the meeting presentation from 11/13/18" since some of these numbers have not been formalized elsewhere.

Thank you for your participation,

Ben

Ben Glickstein
Community Affairs Representative
East Bay Municipal Utility District
Desk: 510-287-1631
Mobile: 510-671-0571
ben.glickstein@ebmud.com

Underwood, Amy

From: Cindy Lee <
Sent: Saturday, November 17, 2018 11:59 AM
To: CEQA R3000
Subject: Water Pump Station San Ramon

CAUTION – This email came from outside of EBMUD. Do not open attachments or click on links in suspicious emails.

Dear Mr Glickstein,

We bought our house on Cattleya Way two years ago, which is right next to the proposed A4 location.

Two years ago, we did a lot research and were told that no constructions would be made near our community. That's why we decided to spend all our savings to purchase our dream house with the belief that our neighborhood would stay quiet and peaceful so our future kids can be raised in the way we would like to. 1

I was shocked when I heard about the proposal to build a water pump station right across the street. It's going to bring negative impact to the house price, affect the look of the community, break the peaceful environment and adversely impact all the kids going to the coyote elementary school two blocks away from the A4 location. I believe none of the parents want this to happen to their kids. 2

Please, please remove A4 location for project consideration. 3

Sincerely,
Cindy, homeowner of the Bridges community

Underwood, Amy

From: Deborah Lee
Sent: Thursday, October 11, 2018 12:51 AM
To: CEQA R3000
Subject: Recycled water pump station

CAUTION ? This email came from outside of EBMUD. Do not open attachments or click on links in suspicious emails.

Hi,

I received news that there will be a recycled water pump station potentially placed near my neighborhood on lilac ridge and lantana (A4). I am highly concerned about the noise effects and sight of this tower along with the electrical exposure especially with many little children walking nearby and living in the area. This is too close to neighbors residing in the area. Even A2 appears to be too close to neighbors and is a gross disruption in the scenery that many people have paid a premium for when purchasing their home. The pump station should be located farther away from neighbors and general sight, not next to homes or off a clear valley below many homes. There should be a better location for this station.

1
2
3

Sincerely,
Deborah Lee

Sent from my iPhone

Underwood, Amy

From: Yung Lew
Sent: Tuesday, October 30, 2018 9:44 AM
To: CEQA R3000
Subject: Recycled water pumping station (R3000 Project)

Dear EBMUD,

I am not an engineer thus I will not try to build a case against the construction of water pumping station so close to a residential area including a school. However, I know for sure that nothing good will come from having a large pumping station in the middle of our community. Obviously, there are few concerns...noise, smell, and other environmental consequences that might have been unintended. 1

Thanks for the opportunity to comment and I URGE you strongly to reconsider the location of the pump station somewhere away from
residential area and not too close to a school. 2

Regards,
Yung Leww

--
Sent from Gmail Mobile

Underwood, Amy

From: Marie Louie <[redacted]>
Sent: Wednesday, October 17, 2018 9:33 PM
To: Glickstein, Ben
Subject: Recycled pump project

CAUTION – This email came from outside of EBMUD. Do not open attachments or click on links in suspicious emails.

Dear Ben,

I went to the meeting tonight at your Castenada location, you mentioned that you can share your presentation PowerPoint with us. Please attach your PowerPoint by reply to this email. 1

We don't like your A4 location because it is too close to where we live. We will petition for that! 2

Thank you,
Marie
Capella resident

Sent from my iPhone

Comment Card

Pump Station R3000
Mitigated Negative Declaration Public Meeting
October 17, 2018

1. WHAT IS THE DETERMING FACTOR BETWEEN THE [redacted] SELECTION OF A2 VS A4 (ANSWERED DURING AFTER MEETING DISCUSSION) 1

2. HOW DO ACOUSTIC LOUVERS MITIGATE TURBINE NOISE 2

3 WOULD THE DESIGN OF A2 VS A4 BE DIFFERENT PICTURE IN SLIDE WOULD SEEM TO BE A2 3

4 SITE WOULD BE MUCH BETTER BEHIND WATER TANK FURTHER NORTH A4 OR UNDERGROUND! 4

Underwood, Amy

From: Naveen Nalam
Sent: Tuesday, October 16, 2018 4:24 PM
To: Glickstein, Ben
Subject: Pump Station R3000

Hi Ben,

I am a homeowner that lives about 100-200 ft away from Site A4, on Laurelspur Loop. I'm very concerned that A4 is being considered as an option. 1

I've read that this project was initially proposed in 2016, with 7 sites being considered.

Was the site at Castenada Yard 5050 Crow Canyon Road ever considered? That is already a site for public services, and not near any homes. 2

Thank you,
Naveen

Comment Card
Pump Station R3000
Mitigated Negative Declaration Public Meeting
October 17, 2018

(1) How likely to be able to buy AZ site any concerns? 1

(2) Can the station be built underground? 2

(3) can A4 be moved more into the hills away from homes 3

(4) what happened with the 5 other sites considered in 2016? 4

(5) why the pump cannot be at 5050 Castenada Yard? 5

Underwood, Amy

From: Naveen Nalam
Sent: Friday, December 07, 2018 5:18 PM
To: CEQA R3000
Subject: R3000 comments

CAUTION – This email came from outside of EBMUD. Do not open attachments or click on links in suspicious emails.

Hi,

I'm the homeowner at which in your own slides you list as the home closest to Site A4. 1

I hope that can you can remove Site A4 from consideration. In all aspects, Site A2 I strongly feel is a better choice for homeowners, city, and EBMUD. 2

A4 would severely impact the view from my house, as it's raised above the fence line. Also we have very dry brush on that hill, which is a fire hazard. We are all very concerned about fire risk, which would increase with any additional buildings on the hill. 3

Thank you
Naveen

Underwood, Amy

From: John OHanlon [redacted]
Sent: Saturday, October 27, 2018 4:09 PM
To: Glickstein, Ben
Subject: Recycled water pump station station R3000

Hi Ben -

I live near the proposed Recycled Water Pumping Station located on Dougherty Road. Some of the neighbors are pretty spun up. I am a bit concerned about ongoing impact to the neighborhood. Sorry I missed the meeting on the 17th. 1

I have downloaded the 320 page document, and it seems that most of the environmental concerns are during the construction phase, ie. dust odors, etc. Is that correct? 2

When the pumping station is operational, will there be any odor? My wife is a Rotarian and they had a speaker from EBMUD who said there would be odors. That would be a concern. 3

I think that noise and visual environmental concerns could be addressed satisfactorily. I'd like to see improvements to the landscaping which could also help mitigate noise and visual concerns. 4

But smells? Can you address why the pump station would have odor and what type of odor? 5

John O'Hanlon
[redacted]

Underwood, Amy

From: MICHAEL PANCONI
Sent: Monday, October 15, 2018 5:04 PM
Cc: Glickstein, Ben
Subject: Recycled Water Pump Station R3000 Project

Ben, I am writing you as a concerned citizen as to the location of this project(R3000) -putting this on a main road Dougherty Road which is a major intersection is not acceptable! Currently have two water fountains to beautify our location and neighborhood -this would ruin are neighborhoods appeal and property value. The 2nd issue is the home values will decrease with this project-how will this be addressed? As I am certain you would agree that the odor from recycled water will flow up hill and that's up my street). I would like the city and EBMUD to consider with all the new homes being built to put it in a planned neighborhood in which new owners would know what's happening before they make a purchase. I am also sure that with all the hills there must be a better location that isn't visible from our neighborhood.

1

2

3

Thank you and I look forward to your response

Michael Panconi

Peng, D

EBMUD

Comment Card

Pump Station R3000
Mitigated Negative Declaration Public Meeting
October 17, 2018

Show my personal info thanks!

1. How could the site affect the environment of nearby? (Noise / Smell - - -) 1

2. Will the site decrease the value of nearby houses? 2

3. ~~After~~ How will the site solve the traffic problem ~~because~~ (there is a elementary school nearby) 3

Underwood, Amy

From: Nhan Pham
Sent: Tuesday, October 09, 2018 11:25 PM
To: CEQA R3000
Subject: Potential Pump Station Sites

Ben Glickstein,
Please put pump station at location A4, because it's away from view of a busy, nicely landscaped Dougherty Rd. Location A2 will obstruct the landscape, and will be an eye sore on Dougherty Road. Please put it at location A4, away from view. It looks like there is something there already for something else not built yet. But at least it's away from view. 1

I'm a resident near Dougherty Rd between Crow Canyon and N Gale Ridge Rd. 2

Thx,
-Nhan

EBMUD

Comment Card

Pump Station R3000
Mitigated Negative Declaration Public Meeting
October 17, 2018

Site A4 is too close to Capella community, please reviews more possible sites. 1

Underwood, Amy

From: HJ JS
Sent: Monday, October 29, 2018 10:46 PM
To: Glickstein, Ben
Subject: EBMUD alternative pump station A4

Hi Ben,

I have attended the 10/17 meeting you hosted. 1

I found the 2016 news at following link:
https://danvillesanramon.com/news/2016/07/11/san-ramon-council-to-discuss-ebmud-recycled-water-pump-station 2

Below is the quote about A4 site, the least favorite among the 7 sites at that time:
"The seventh location, owned by EBMUD and the Dublin San Ramon Services District, is near Lilac Ridge Road and Lantana Way, but that spot is less desirable because it would be more visible to residents, located near a planned subdivision and would require about 2,700 feet of new pipes, which would result in higher project costs and more traffic impacts, Bartlett said." 3

What has changed that caused A4 became the 2nd choice? 4

Thanks,
James

Underwood, Amy

From: HJ JS
Sent: Friday, December 07, 2018 3:01 PM
To: Glickstein, Ben
Subject: Recycled Water Pump Station Site Selection
Attachments: 2016-CityMeeting-EBMUDReport-Table1.pdf; 2018-11-13-slide-page11.pdf; CityMeeting-EBMUDReports.pdf

Hi Ben,

Thank you for hosting last public meeting.

I'm trying to understand some of the discrepancies between the 2016 report and the current slide. please see the attached 2016 summary table and the current 2018 slide about the reasons why some of the sites were not chosen. 1

For example the A5 site were stated to be 230 feet away from the closest home in 2016(1st attachment) but now it is stated as less than 80 feet away(2nd attachment)? There have been no new homes built around A5 since 2016, how could that be changed? The 3rd attachment is the full 2016 report as a reference. 2

In fact if anything changed substantially that would be A4 site where new Capella community were built in the very close vicinity. 3

During last meeting, a site near Diablo Vista Park that with existing utilities were suggested to be looked into, has there been any progress on that discussion? 4

Best regards,

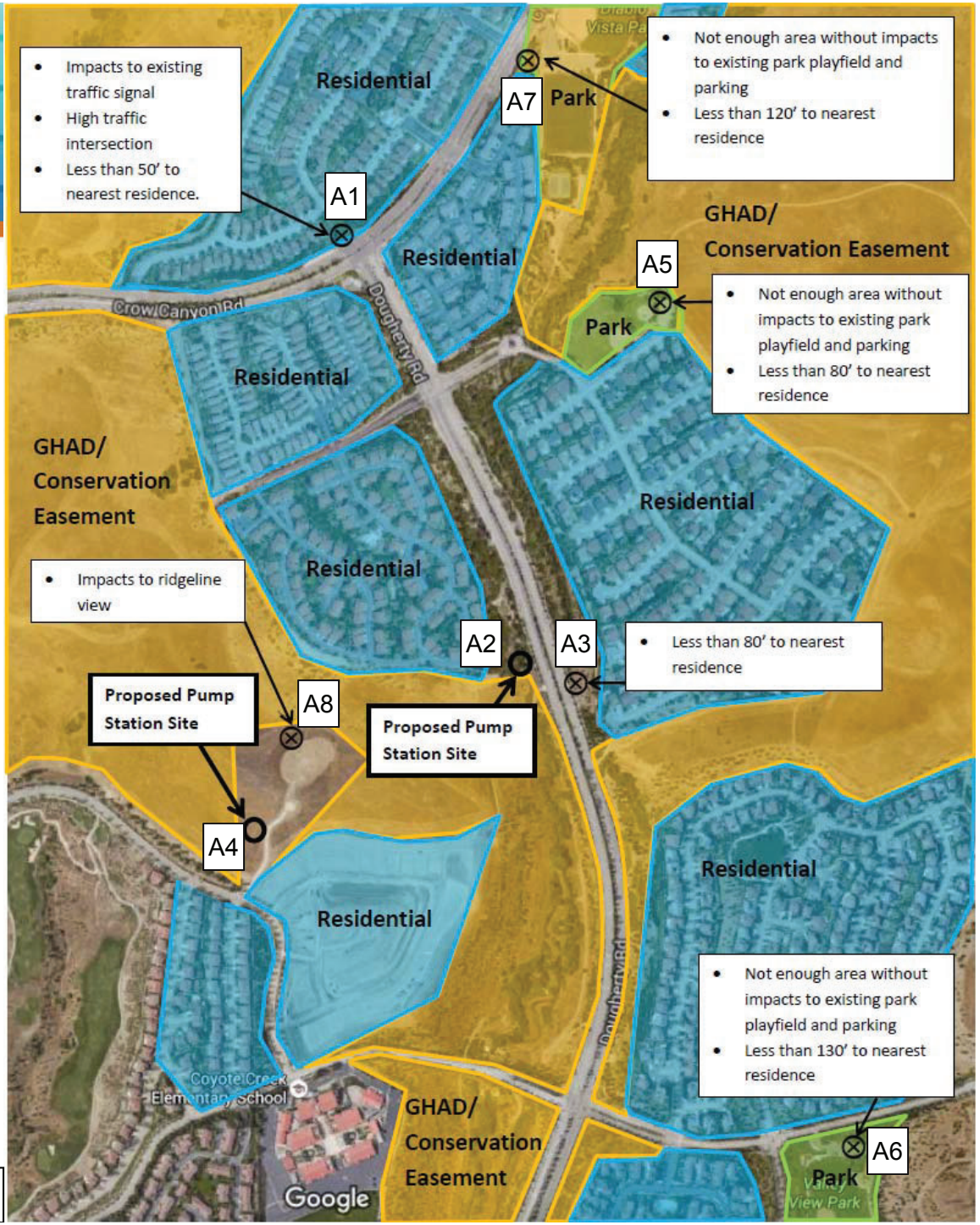
James

Table 1
Prioritization of Alternative Sites
Pump Station R3000, San Ramon Valley Recycled Water Program

	Location	Pros	Cons	Closest House feet
A1	T-Intersection Dougherty Rd & Crow Canyon Rd	CEQA complete Low pipeline impact on roads	Impact to central landscaped feature at a highly visible intersection in the center of the subdivision Traffic impacts on Intersection (Possible access from Goldenrod Lane)	38'
A2	Dougherty Rd, West Side	Low pipeline impact on roads Low visible impact (higher speed section of road, so less noticible to drivers, more densly landscaped)	Higher speed section of road (less noticible to drivers) Minor impacts to landscaping, mitigate with new planting	150'
A3	Dougherty Rd, East Side	Low pipeline impact on roads Low visible impact (higher speed section of road, so less noticible to drivers)	Visible to immediate 2 neighbors Higher speed section of road (less noticible to drivers) Minor impacts to landscaping, mitigate with new planting	60'
A4	Tank R200 Site Lilac Ridge Rd	EBMUD already owns property	Visible on hill Higher pipeline impact on roads (.5 mile)	200'
A5	Red Willow Park	Park already a public space	Higher pipeline impact on roads (.3 mile) Modest impact to park space	230'
A6	Valley View Park	Park already a public space Adjacent to existing pump facility	Higher pipeline impact on roads (.3 mile) Loss of 2 -3 parking spaces in heavily used park	230'
A7	Crow Canyon Road at Diablo Vista Park	CEQA complete	Small property Congested (pathway, electrical panels) Approximately half of the trees in the Redwood Memorial Grove could be impacted by the	

Site Decision

- EBMUD's Pump Station R3000 must be located roughly within the map area to meet pressure needs.
- Other sites are between 38-115 feet from homes
- No construction or facilities are allowable within the GHAD/Conservation Easement,
- Parks are heavily utilized by community.



Areas and locations on map are approximate

CITY COUNCIL STAFF REPORT

DATE: **July 12, 2016**

TO: **City Council/City Manager**

FROM: **Maria Fierner, Public Works Director**
By: Robin Bartlett, Division Manager/District Engineer

SUBJECT: **RESOLUTION NO. 2016-068 - Authorizing the City Manager to Negotiate an Agreement with East Bay Municipal Utility District (EBMUD) for the Sale of an Easement And/Or Property for Construction of an EBMUD Recycled Water Pump Station for Final Approval by the San Ramon City Council**

RECOMMENDED ACTION

Staff recommends adoption of this Resolution authorizing the City Manager to negotiate an Agreement with East Bay Municipal Utility District (EBMUD) for the sale of an easement and/or property for construction of an EBMUD recycled water pump station for final approval by the San Ramon City Council.

BACKGROUND/DISCUSSION

EBMUD is engaged in a multi-phased, long-term process of developing a recycled water distribution system. The recycled water provides a lower cost, drought-resistant, environmentally beneficial source of water that is extensively used by the City of San Ramon. As part of this process, EBMUD has planned to install a pump station in the general vicinity of Dougherty Road between Gale Ridge Road and Crow Canyon Road. Although the initial planning for the improvements in this phase of the Project is complete, a final site for the pump station has not been selected.

The goals and process for selecting the actual site are described in detail in the attached memorandum prepared by EBMUD (Attachment A). In this memorandum, EBMUD has identified seven (7) candidate sites and has ranked them from 1 to 7 in decreasing order of preference. Their ordering was based on a variety of issues such as hydraulic considerations, access, impacts to neighbors, amount of additional pipeline required, inclusion in existing CEQA analysis and other factors. The locations of the candidate sites are indicated in Figure 1 on page 6 of the memorandum. Following the preparation of this memorandum, EBMUD has removed site A1 from consideration due to high neighborhood impacts (north of Dougherty Road at Crow Canyon Road intersection). The sites are expected to have a footprint of approximately 5,400 square feet, although the actual needs will vary on location due to access and other

considerations.

Only one of the proposed sites for the pump station is on property owned by EBMUD (Site A4). This location is not the preferred site from EBMUD's perspective and also has substantial drawbacks from City staff's viewpoint. EBMUD staff has, therefore, discussed the possible purchase of easement rights, or a small portion of a parcel from the City, in order to facilitate the construction of the pump station. Two (2) of the sites that were evaluated are located in City parks and four (4) are located in landscaped areas adjacent to City rights-of-way. EBMUD would prefer to take ownership of the site. This approach would require slightly more work to process but would result in clearer lines of responsibility in the future. However, it should be noted that the existing Dublin San Ramon Services District pump station located at Valley View Park is within an easement dedicated for that purpose.

Staff is in general agreement with the logic and prioritization included in the EBMUD memorandum. However, as noted above, due to relatively high impacts to the neighborhood in the vicinity of Site A1, the site has been removed from consideration. Site A2 is, therefore, the preferred location by EBMUD (west of Dougherty Road between Red Willow Road and North Gale Ranch Road) and, due to the least neighborhood impacts, is also the preferred site from the City's perspective. EBMUD has also raised some construction concerns regarding site A3. Therefore, given the mutual agreement with EBMUD and City staff regarding site A2, further consideration of the other City-owned sites is not being pursued at this time.

Policy Committee

Staff discussed this item with the Policy Committee on May 25th. The Policy Committee recommended referring Sites A1 and A2 to the City Council for further consideration. As a result, EBMUD staff focused on further analysis of Site A1 and started outreach to the surrounding neighborhood. As noted in the memorandum, there are relatively high impacts to the neighborhood in the vicinity of Site A1, the highest priority site from EBMUD's perspective. Additionally, there was feedback from residents concerned about the pump station located at this site. Staff therefore concluded that Site A2 may be the preferred site from the City's perspective. EBMUD has subsequently removed Site A1 from consideration due to concerns over neighborhood impacts.

Conditions of Sale

The attached Resolution authorizes the City Manager to negotiate the sale of a portion of a parcel or of easement rights with EBMUD for final approval by the City Council. It is anticipated that the following conditions would likely apply to the sale: 1) EBMUD presents site, architectural and landscaping plans to the Architectural Review Board, Planning Commission and City staff, as appropriate; 2) the applicant completes all necessary surveying, grant of sale or easement documents or parcel maps required to complete the transfer; 3) the sale will be based on the value of the parcel or easement on a square foot basis as determined by a mutually agreed upon appraiser and the cost of all City staff time incurred in assessing sites and completing the sale; 4) any sale or transfer of easement rights will be based on its current condition, "as-is"; 5) that the total area sold does not exceed 10,000 square feet; and 6) that the process be completed by July

12, 2018..

FISCAL ANALYSIS

If the sale of an appropriate parcel, or easement, is approved, then the City would receive payment appropriate for the transfer. The magnitude of the payment would be determined based on an appraisal that would be conducted by a mutually agreed upon appraiser.

STEPS FOLLOWING APPROVAL

1. An appraisal of the value of the property will be undertaken by EBMUD using a mutually agreed upon appraiser.

2. EBMUD will continue with the design of the pump station, update their CEQA compliance analysis, and will present plans to the Architectural Review Board, City staff, and Planning Commission, as appropriate. EBMUD will conduct public outreach.

3. Staff will prepare a resolution for authorizing sale for consideration by the Council.

ATTACHMENT:

A - EBMUD MEMO

RESOLUTION NO. 2016-068

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SAN RAMON AUTHORIZING THE CITY MANAGER TO NEGOTIATE AN AGREEMENT WITH EAST BAY MUNICIPAL UTILITY DISTRICT (EBMUD) FOR THE SALE OF AN EASEMENT AND/OR PROPERTY FOR CONSTRUCTION OF AN EBMUD RECYCLED WATER PUMP STATION FOR FINAL APPROVAL BY THE SAN RAMON CITY COUNCIL

WHEREAS, EBMUD is engaged in a multi-phased, long-term process of developing a recycled water distribution system; and

WHEREAS, as part of this process EBMUD has planned to install a pump station in the general vicinity of Dougherty Road between North Gale Ridge Road and Crow Canyon Road; and

WHEREAS, EBMUD desires to purchase an easement and/or property from the City of San Ramon to construct the recycled water pump station; and

WHEREAS, the potential sites were discussed with the Policy Committee on May 25, 2016, and the Policy Committee supported referring pump station installation at either site A1 or site A2 to the City Council; and

WHEREAS, subsequent to the Policy Committee meeting, after further review and feedback from surrounding residents, site A1 has been removed for consideration.

NOW, THEREFORE, BE IT RESOLVED, that the City Council of the City of San Ramon does hereby authorizing the City Manager to negotiate an Agreement with East Bay Municipal Utility District (EBMUD) for the sale of an easement and/or property for construction of an EBMUD recycled water pump station in the vicinity of the area known as Site A2 as described in the EBMUD memorandum for Site Selection dated, May 13, 2016 and provided that:

1) The total area sold does not exceed 10,000 square feet;
2) The sale will be based on the value of the parcel or easement as determined by a mutually agreed upon appraiser and the cost of all City staff time incurred on assessing sites and completing the sale;
3) EBMUD completes all necessary surveys, parcels maps and/or, grant of easement documents by July 12, 2018; and
4) The parcel or easement is sold in an "as is" condition.

.

PASSED, APPROVED AND ADOPTED at the meeting of July 12, 2016, by the following votes:

AYES:

NOES:

ABSENT:

ABSTAIN:

_____
Bill Clarkson, Mayor

ATTEST:

_____
Renée Beck, City Clerk

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: May 13, 2016

MEMO TO: Linda Hu
Florence Wedington

FROM: Cindy Hunt

SUBJECT: Site Selection – Phase 3 Pump Station R3000
San Ramon Valley Recycled Water Program

INTRODUCTION

Pump Station R3000 is part of the Phase 3 implementation for the EBMUD San Ramon Valley Recycled Water Program (SRVRWP). The pump station will be wholly owned and operated by EBMUD. Over time, a number of alternative sites have been considered for locating Pump Station R3000. This memo summarizes and evaluates different pump station locations.

EBMUD intends to apply for $11 million in State of California Proposition 1 grant funding for this project constructing Pump Station R3000 plus Phase 3 and 5 pipelines and public site retrofits. A grant will not be awarded until CEQA is complete and property rights have been acquired. The State Water Resources Control Board (SWRCB) will accept a City Council Resolution providing a conditional sale of land or permanent easement agreement as adequate to secure funds. The State Water Resources Control Board has indicated that the Proposition 1 grant fund may be depleted as early as the end of 2016.

This additional pump station is needed to deliver recycled water to additional areas of the San Ramon, Danville and Blackhawk communities for landscape irrigation in parks, greenbelts, schools, common area landscapes, HOAs and golf courses. The benefits of this pump station and recycled water include:

- Offsets 0.6 million gallons per day of potable water demand within the City of San Ramon such as Golden View School, Red Willow Park and portions of both Crow Canyon Country Club and Canyon Lakes Golf Course
- Approximately 20% cost savings for the City of San Ramon, compared with potable water, also no 25% drought surcharge
- Protects community and private investments in parks, landscaping and school sport fields
- Uses a drought-resistant and sustainable resource given unpredictable climate change conditions.

DISCUSSION

Seven pump station site alternatives have been identified and prioritized, as summarized on Table 1 and Figure 1. The highest priority sites are those that maximize EBMUD's likelihood of obtaining

the $11 million dollars in Proposition 1 grant funding. The highest priority sites were selected based on hydraulics, existing CEQA documents, and estimated project impacts. Minimizing neighborhood impacts is an important factor and will likely expedite CEQA completion.

The alternate locations for Pump Station R3000 were evaluated with regards to the following site selection criteria:

- Fastest CEQA analysis completion (needed to obtain Proposition 1 grant funding)
- Public acceptance
- Minimize impacts and disturbance to the surrounding community (visual, noise, traffic)
- Located in the City of San Ramon along the existing recycled water pipeline (main recycled water 16-inch and 20-inch pipeline currently installed, running up Dougherty Road then east on Crow Canyon Road)
- Located at a suitable elevation to meet hydraulic pressure requirements: near Dougherty Road, between North Gale Ridge Road/N. Monarch Road and Crow Canyon Road.
- Able to feed SRVRWP Zone 3 defined in the 1996 Facilities Plan as elevations 640 feet to 800 feet
- Proximity to a sanitary sewer connection, to a 480v PG&E power source and telephone connections
- Adequate space for the pumping plant structure, an above-grade electrical substation (480V) and parking
- Property shall be either available for acquisition or already owned by EBMUD
- Geologic and geotechnical suitability

Pump Station R3000 will be architecturally pleasing and designed to blend in with the neighborhood. This new above grade pumping plant will likely consist of three or four vertical turbine pumps (approximately 350 horsepower total, 3.8 MGD, 2600 gallons per minute), a flow meter and surge provisions. The site footprint will be approximately 60 feet by 90 feet (0.13 acres), with the pumping plant structure approximately 30 feet by 40 feet. Noise reduction construction methods will be implemented, including acoustical louvers in one or two building walls that reduce noise transmission while allowing air circulation. Pumping plant noise at 50 feet is likely to be 33 dBA in the direction towards the nearest homes (no louvers), and 53 dBA in the directions pointing away from homes (acoustical louvers). These assumptions are based on a detailed review of other similar pump stations: Pump Station R200A, 8.6 MGD, constructed in 2008 in the City of San Ramon under an earlier phase of the San Ramon Valley Recycled Water Program; and the recent EBMUD 16 MGD Diablo Vista Pumping Plant in Lafayette.

The City of San Ramon owns most of the potential site properties. EBMUD/DSRSD owns one property. All sites are located outside of the FEMA 100 year floodplain and are at least 100 feet away from the West Branch of Alamo Creek. The following pump station site alternatives and priorities were identified with input by City of San Ramon staff (Robin Bartlett/District Engineer, Cindy Yee/Associate Planner):

> **A1, T-Intersection Dougherty and Crow Canyon Roads:** Grassy knoll on the north side of the T-intersection of Dougherty Road and Crow Canyon Road, adjacent to Goldenrod Lane. This is the original 1996 pump station location and so CEQA analysis is already complete. This lot is a central grassy landscaped feature at a highly visible intersection. The property is

also located in the center of a subdivision with limited open green spaces and is used like a park by adjacent residents.

Lot size is approximately 122 feet by 165 feet (0.5 acres). There is an existing EBMUD 8-inch buried steel water line routed across the property. The property is presently owned by City of San Ramon, located inside the EBMUD service area, with ground elevation approximately 640 feet. Estimated distance from the pump station structure to the closest house structure: 38 feet.

A2, Dougherty Road, West Side: Landscaped area along Dougherty Road, west side, about halfway between Crow Canyon and North Gale Ridge/N. Monarch Roads, just north of the open space and Alamo Creek. This property would result in low visible impacts to the community and a more comfortable buffer distance to the adjacent neighbors. Additional costs would be incurred because a significant retaining wall would be required.

The adjacent Geological Hazards Abatement District (GHAD) open space is about to be placed in a conservation easement. This location is zoned medium residential. This property has a small flat area and then a moderately steep hillside leading up to the housing development on Ivy Pointe Circle. There are slope and drainage easements that would need to be maintained, directing drainage towards Alamo Creek. The existing buried utilities appear to be limited to a 36-inch storm drain perpendicular to Dougherty Road, located approximately 180 feet north of the GHAD property; buried electrical lines and a PG&E 6" gas main run parallel to Dougherty beneath the sidewalk. The property is presently owned by City of San Ramon, located just inside the EBMUD service area. The ground elevation is approximately 570 feet. General area was identified in the April 2001 Draft Technical Memorandum "5.7 MGD DERWA System Hydraulic Model and Base Project Cost". Estimated distance from the pump station structure to the closest house structure: 150 feet.

A3, Dougherty Road, East Side: Landscaped area along Dougherty Road, east side, about halfway between Crow Canyon and North Gale Ridge/N. Monarch Roads, just south of Alamo Creek. This location has a medium flat area and then a slightly sloped hillside just beneath two houses at the end of Iris and Rock Rose Lanes.

A triangular wedge of property that cuts through the flat area is part of the GHAD open space and is about to be placed in a conservation easement, and so is not available for the pump station. There are slope and drainage easements that would need to be maintained, directing drainage towards Alamo Creek. Presently owned by City of San Ramon and zoned as open space, the property is located just inside the EBMUD service area. The ground elevation is approximately 570 feet. General area identified in the April 2001 Draft Technical Memorandum "5.7 MGD DERWA System Hydraulic Model and Base Project Cost". Estimated distance from the pump station structure to the closest house structure: 60 feet.

A4, Tank R200 Site at Lilac Ridge Rd: Located on the recycled water buried tank R200 property site, in open space, near Lilac Ridge Road and Lantana Way. Locate pump station along the tank access road, approximately halfway up the hill between Lilac Ridge Road and the tank R200 valve pit structure. The site is already owned by EBMUD and DSRSD. This location is slightly more visible to the community, but is on property that has already been

developed with recycled water facilities. It is immediately adjacent to and visible from the new subdivision construction at Laurelspur Loop and Sky Jasmine Way; status on developer lot/home sales is not known. Approximately 2,700 feet of additional 16-inch recycled water discharge piping would be required to reach Dougherty Road, incurring additional costs and traffic impacts.

The potential pump station site is on the west side of the access road on a relatively flat area, with ground elevation approximately 670 feet, below a hillside peak with elevation of 800 feet. There is a seasonal pond at this location, with non-protected frogs noted during the tank R200 CEQA analysis. The site is located outside the EBMUD service area.

A5, Red Willow Park: Red Willow Park is located at Red Willow road and Coriander Court. The proposed pump station location is in the far northeast corner of the park, across from the restrooms, at end of the parking lot, off Coriander Ct. The property is owned by the City of San Ramon. The ground elevation is approximately 605 feet. Approximately 1,300 feet of additional 16-inch recycled water suction and discharge piping would be required to reach Dougherty Road, incurring additional costs and traffic impacts.

A6, Valley View Park: Valley View Park is located at North Monarch Road and North Wedgewood Road. Valley View Park is heavily used, especially for weekend soccer games, with parking demand exceeding existing parking. The proposed pump station location is in NE corner of parking lot, next to existing recycled water PS R300B (1.32 MGD) structure, and might result in the loss of 2-3 parking spaces. The property is owned by the City of San Ramon. The ground elevation is approximately 660 feet. Approximately 1,400 feet of additional 16-inch recycled water suction and discharge piping would be required to reach Dougherty Road, incurring additional costs and traffic impacts.

A7, Crow Canyon Road adjacent to Diablo Vista Park: Landscaped triangular point of land on the southeast side of Crow Canyon Road, adjacent to and southwest of Diablo Vista Park, near the end of Plumpointe Lane. This site was evaluated in the 1996 CEQA work, but moderate development has occurred since that time. This is now a very small and congested site with a Redwood Memorial Grove and monument; the pump station construction would impact at least half of the redwood trees.

Lot size is triangular, approximately 130 feet by 157 feet (0.25 acres) total, with a rectangular space 54 feet by 66 feet between the existing sidewalk, electrical panels and fences. Property is presently owned by City of San Ramon, located adjacent to the boundary of the City of Danville. It was previously identified as Site 3A in the July 1996 Facilities Plan. The adjacent Diablo Vista Park and homes on Plumpointe Lane had not been developed in 1996. The site elevation is approximately 640 feet.

SCHEDULE

The project schedule for the Pump Station R3000 (PS) plus the Phase 3 and 5 pipeline and retrofits is as follows:

a.	PS CEQA/Property Acquisition	FY17	July 2016 – December 2016
b.	PS Design	FY 18	July 2017 – June 2018
c.	PS Construction	FY 19	July 2018 – June 2019
d.	Pipeline Construction	FY 19 – 20	July 2018 – June 2020 (Design already completed)
e.	Retrofit Design & Construction	FY 21 - 24	July 2020 – June 2024

RECOMMENDATION

Proceed to the City of San Ramon Policy Committee meeting on May 25, 2016 to discuss the City's willingness to sell or grant permanent easements for EBMUD's top priority pump station sites. Request that the Policy Committee recommend that the City of San Ramon City Council pass a resolution providing a conditional sale of land agreement with EBMUD.

Figure 1 Alternative Site Locations
Pump Station R3000, San Ramon Valley Recycled Water Program

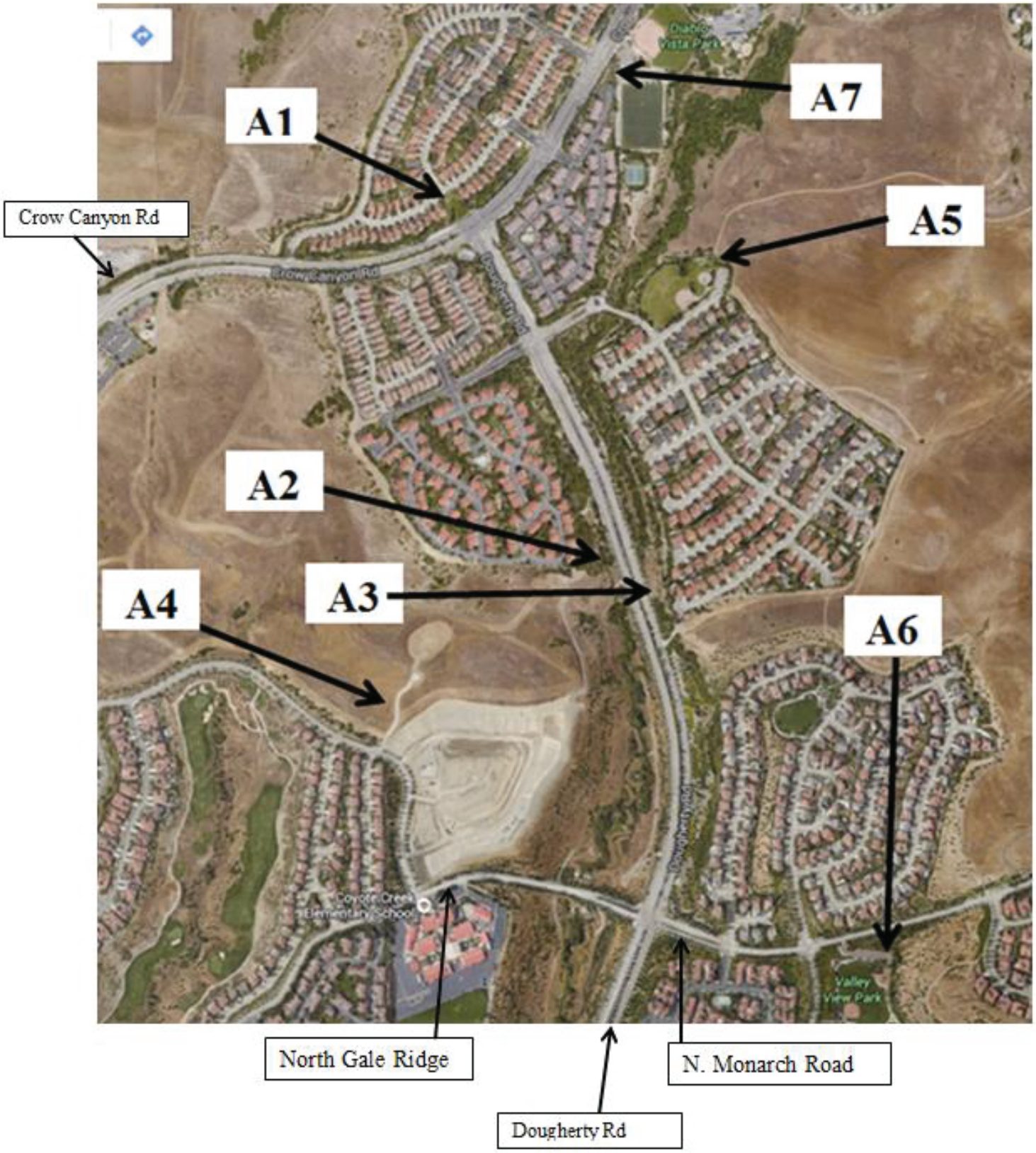
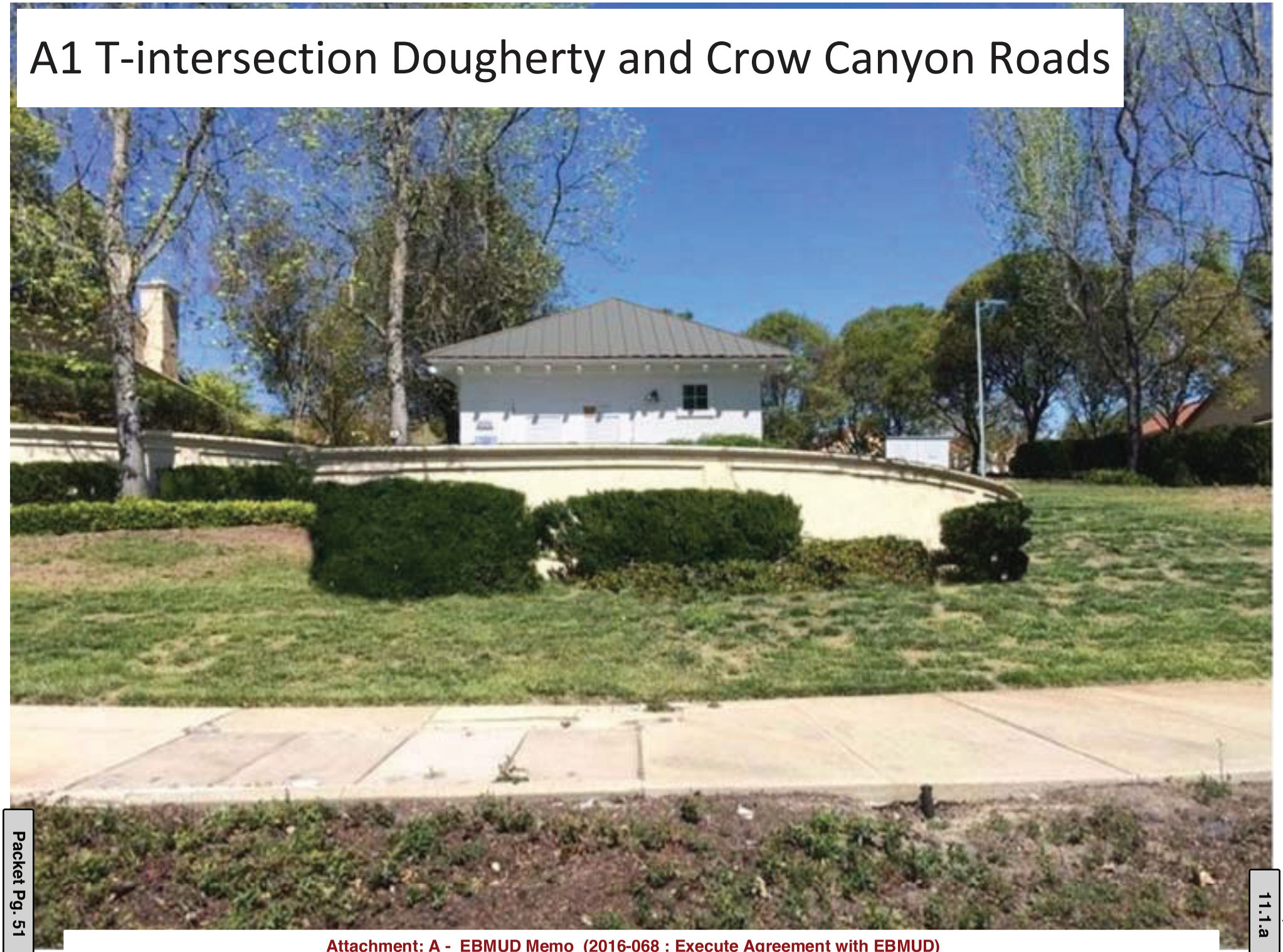


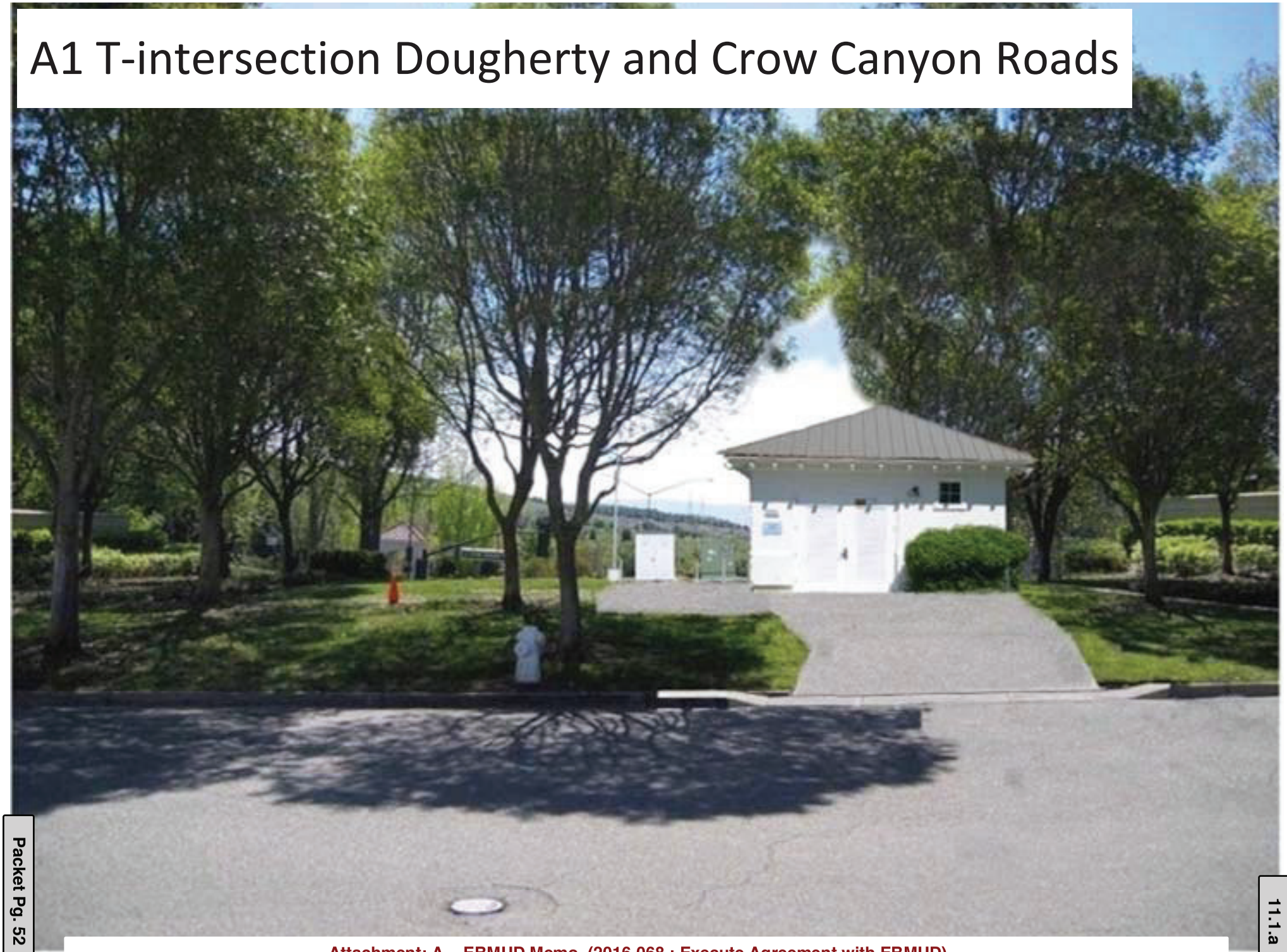
Table 1
Prioritization of Alternative Sites
Pump Station R3000, San Ramon Valley Recycled Water Program

	Location	Pros	Cons	Closest House feet
A1	T-Intersection Dougherty Rd & Crow Canyon Rd	CEQA complete Low pipeline impact on roads	Impact to central landscaped feature at a highly visible intersection in the center of the subdivision Traffic impacts on Intersection (Possible access from Goldenrod Lane)	38'
A2	Dougherty Rd, West Side	Low pipeline impact on roads Low visible impact (higher speed section of road, so less noticible to drivers, more densly landscaped)	Higher speed section of road (less noticible to drivers) Minor impacts to landscaping, mitigate with new planting	150'
A3	Dougherty Rd, East Side	Low pipeline impact on roads Low visible impact (higher speed section of road, so less noticible to drivers)	Visible to immediate 2 neighbors Higher speed section of road (less noticible to drivers) Minor impacts to landscaping, mitigate with new planting	60'
A4	Tank R200 Site Lilac Ridge Rd	EBMUD already owns property	Visible on hill Higher pipeline impact on roads (.5 mile)	200'
A5	Red Willow Park	Park already a public space	Higher pipeline impact on roads (.3 mile) Modest impact to park space	230'
A6	Valley View Park	Park already a public space Adjacent to existing pump facility	Higher pipeline impact on roads (.3 mile) Loss of 2 -3 parking spaces in heavily used park	230'
A7	Crow Canyon Road at Diablo Vista Park	CEQA complete	Small property Congested (pathway, electrical panels) Approximately half of the trees in the Redwood Memorial Grove could be impacted by the	

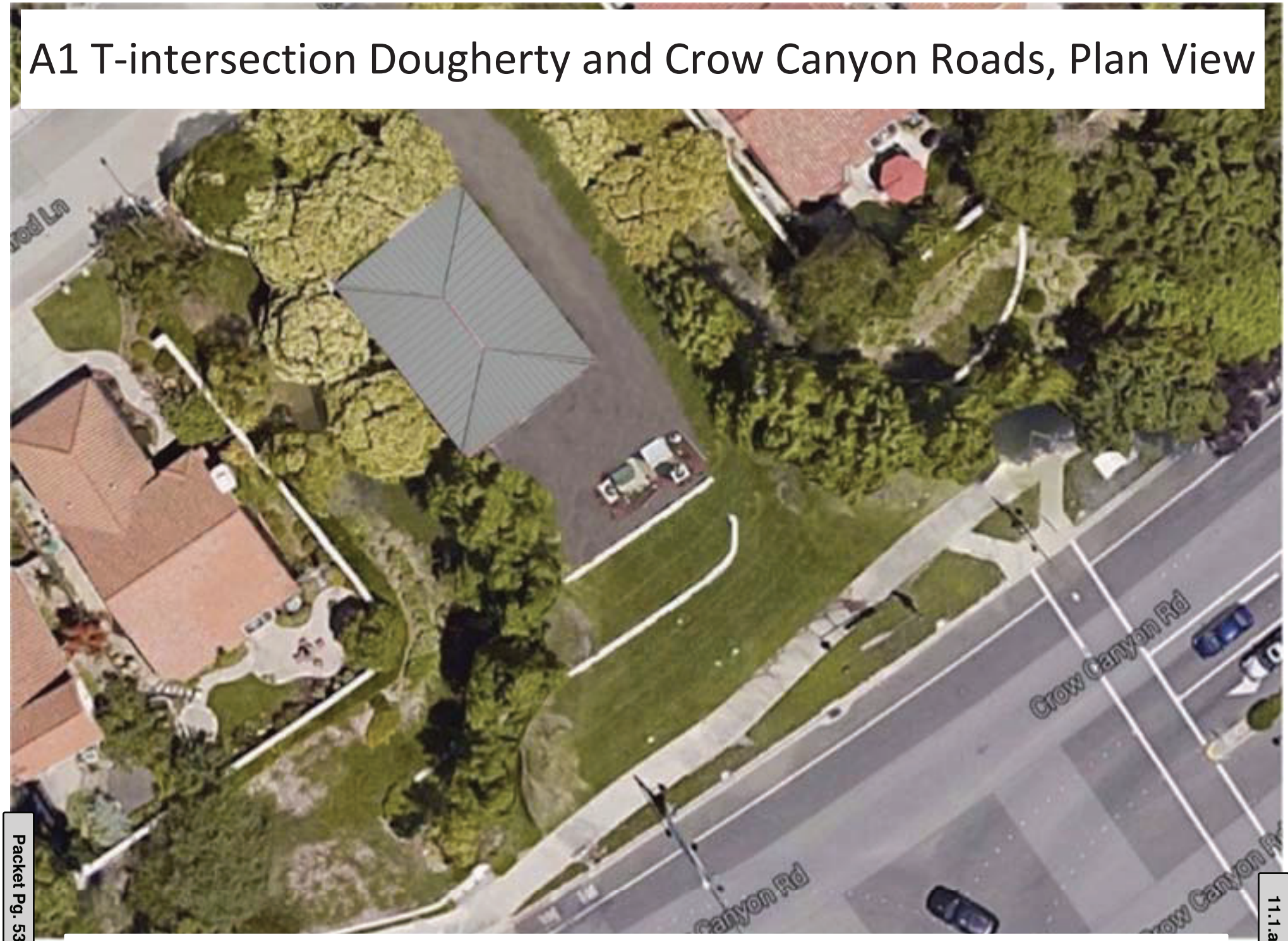
A1 T-intersection Dougherty and Crow Canyon Roads



A1 T-intersection Dougherty and Crow Canyon Roads

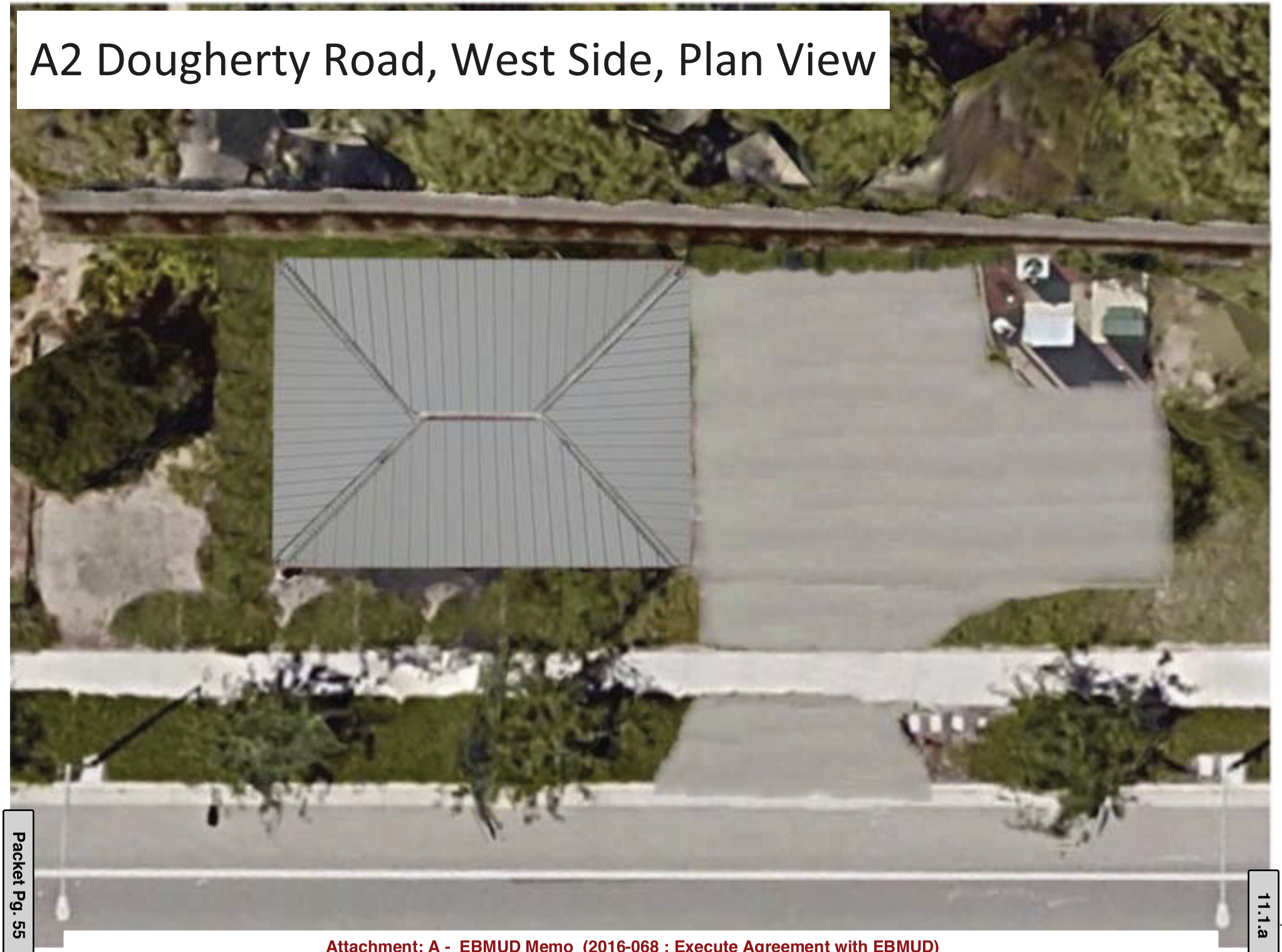


A1 T-intersection Dougherty and Crow Canyon Roads, Plan View

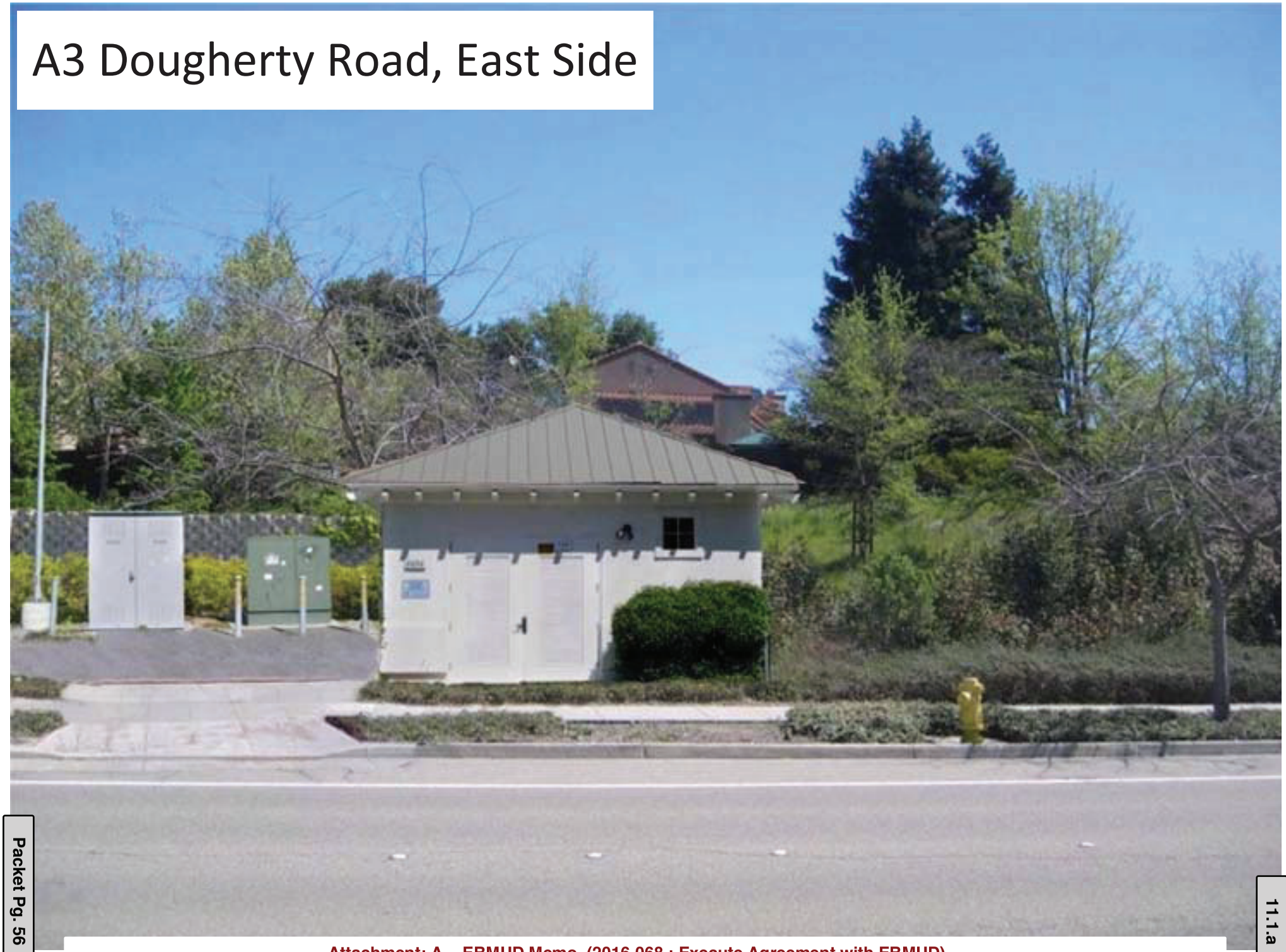


A2 Dougherty Road, West Side

A2 Dougherty Road, West Side, Plan View

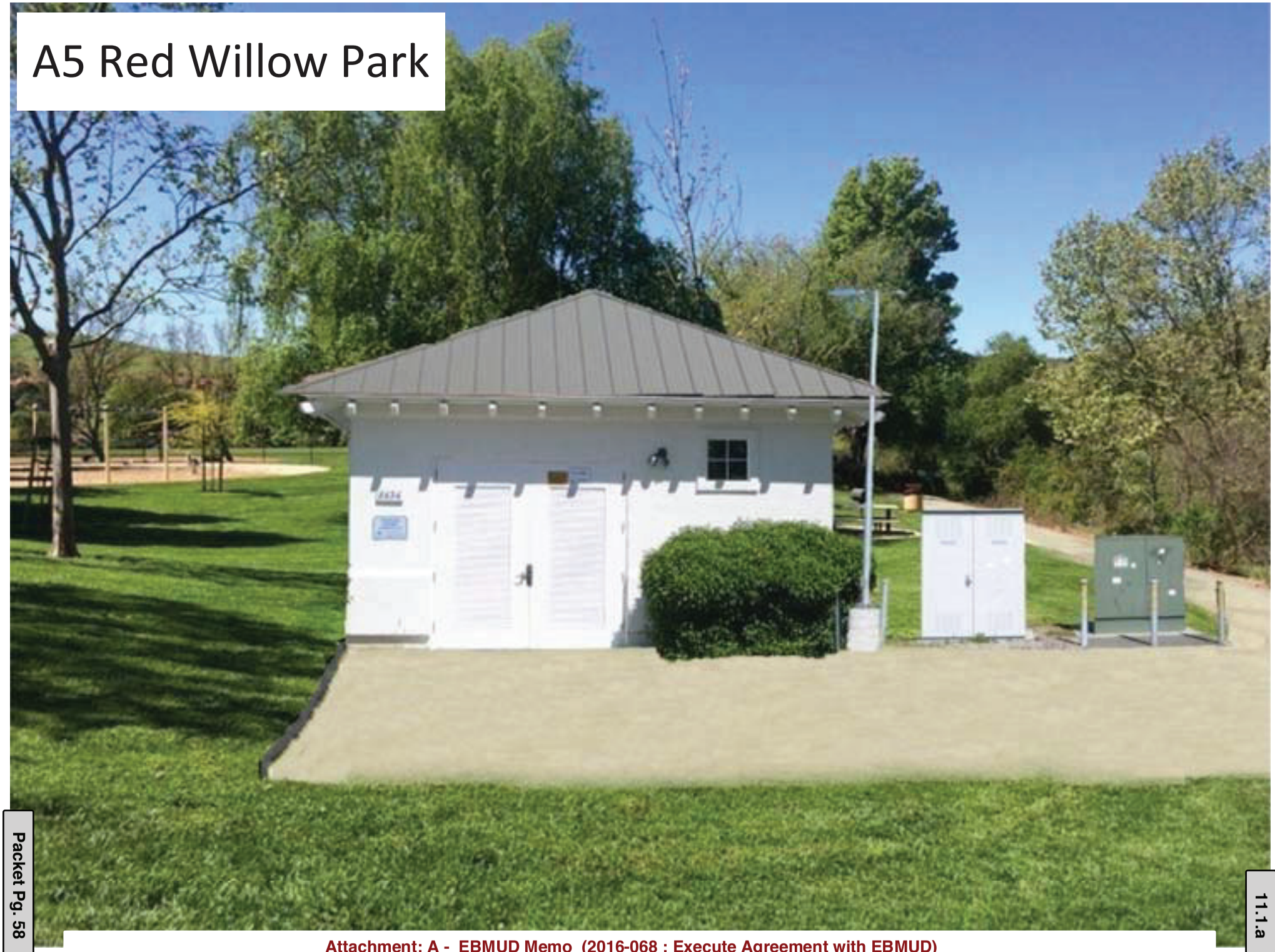


A3 Dougherty Road, East Side



A4 Tank R200 Site at Lilac Ridge Rd

A5 Red Willow Park



A5 Red Willow Park, Plan View

A6 Valley View Park

Underwood, Amy

From: Ajit Sinha
Sent: Sunday, November 11, 2018 8:13 PM
To: CEQA R3000
Subject: Recycled Water Pump Station: Dougherty Road/San Ramon

Please don't build this station in this residential neighborhood. It will be noisy eyesore and safety concern in this quite residential area. 1

comment I signed a petition with opposing this plan 2

Is it legal to build a commercial business location in a residential area ? Are zoning laws no longer honored in US ? 3
EBMUD must find an alternative location. They can't destroy the character of my neighborhood.

--
Ajit K Sinha, San Ramon, CA (USA)

From: Ajit Sinha <
Sent: Thursday, December 6, 2018 12:43 AM
To: Glickstein, Ben; Thomas, Reena
Subject: San Ramon Valley Recycled Water Program Pump Station R3000
Attachments: RedWillowParkView_2.JPG; RedWillowParkView_1.JPG; RedWillowParkLocation_GoogleMap.jpg; DoughertyBollingerCanyonIntersection_GoogleMap.png

Hello Ben , Reena

This has reference to the public meeting I attended on 11/13/2018 about above mentioned project.

In this meeting , we - the residents of San Ramon - raised many concerns about your preferred location A2 for building this pumping station and suggested few alternative locations which may meet your project needs and still not alter the residential characteristics of the area the way A2 will. You assured us that you will investigate these alternative locations, ***particularly the one near Red Willow Park, as it was in your initial shortlist of locations***. This location is far away from any nearby homes (> 500-600 ft) and well hidden too. I am sure you must have visited this site to prepare a feasibility report and I am looking forward to hear the outcome of this exercise. 1

In the meantime, I have done my own assessment of this location and one more (brand new , this was not in your shortlists) at Bollinger Canyon Road / Daugherty Road intersection near Safeway. I am enclosing details and pictures of these locations and request you to evaluate these before making a final choice. 2

1. Red Willow Park Location :
I am enclosing a Google map screen shot of this location with two areas highlighted in red which can host pumping station. One is behind the tennis court and the other one is towards red willow park. I am also enclosing two picture of this area taken from my IPhone.

my assessment:

- either of these two areas at this location is far away (> 500-600 feet) from nearby homes or the park and can't be even seen from the homes.
- since the location already hosts a tennis court, a soccer field and a park, adding a pumping station can't be denied base on selective considerations like GHAD or Conservation Easement.
- will meet your altitude requirement as it is at the same level as Daugherty Road
- accessible thru the road leading up to Red Willow Park or the Tennis Court.
- will spare the nightmare the poor residents of Ivy Point Circle, Miravilla will face on a daily basis due to a ***pumping station A2 running within 100 feet of their backyard***. 3

2. Bollinger Canyon Road / Daugherty Road intersection near Safeway : 4

I am enclosing a google map of this location too with two potential areas highlighted in red for hosting pumping station.

my assessment

- This location is surrounded by commercial buildings and nearby homes are quite far away. Pumping Station will blend well with this surrounding. 4 cont.
- is along the Daugherty Road meeting your altitude requirement
- When somebody suggested in the public meeting (on 11/13/2018) to push the location of A2 up along Daugherty Road towards Monarch Road, you said that GHAD / Conservation Easement guidelines won't permit that. To counter this argument, it was suggested that A2 is also located almost in the same surrounding as these alternative locations along Daugherty Road. Swap the area allocated to A2 for this new area so that overall big picture remains unchanged. Yo will have to take up the case for this with conviction, though, with San Ramon City to make this happen.

I make an earnest appeal one more time to consider these alternatives and hope the residential character of Miravilla and Alta Mira neighborhood is not destroyed by building an eyesore and noisy structure in the very heart of these neighborhoods. 5

Thanks Ajit

P.S. I am reproducing below some of the concerns / suggestions voiced in the public meeting on 11/13/2018 for record purposes. Hope the San Ramon City administration will keep these in consideration while making a final decision about location of R3000 6

- Is it permissible by the Zoning Laws / Guidelines to build a commercial installation like a noisy pumping station within 100 feet of the backyard of a home ? This question has to be particularly considered in the context that the location for this pump was marked as open green area with no possibility of any construction when the homes were built and bought by residents and years down the line, this is being changed which can cause huge losses to the existing home owners. 7
- Why Alternative Sight A4 can't be considered for R3000 by reconsidering the only objection this site has in terms of not preferring construction within 100 feet of ridge line ? The argument made in favor of A2 , that pumping station is a short height structure that will be hidden behind trees, can apply to justify Alternative Sight A4 too. Moreover, this site is owned by EBMUD and money will be saved. 8
- The Intersection of Red Willow Road and Daugherty Road has seen fatal accident in the past due to low visibility and high speed zone. The traffic coming out of the parking lot of this proposed A2 station near this intersection will increase risk of such accidents considerably. 9

--
Ajit K Sinha, San Ramon, CA (USA)
[redacted]

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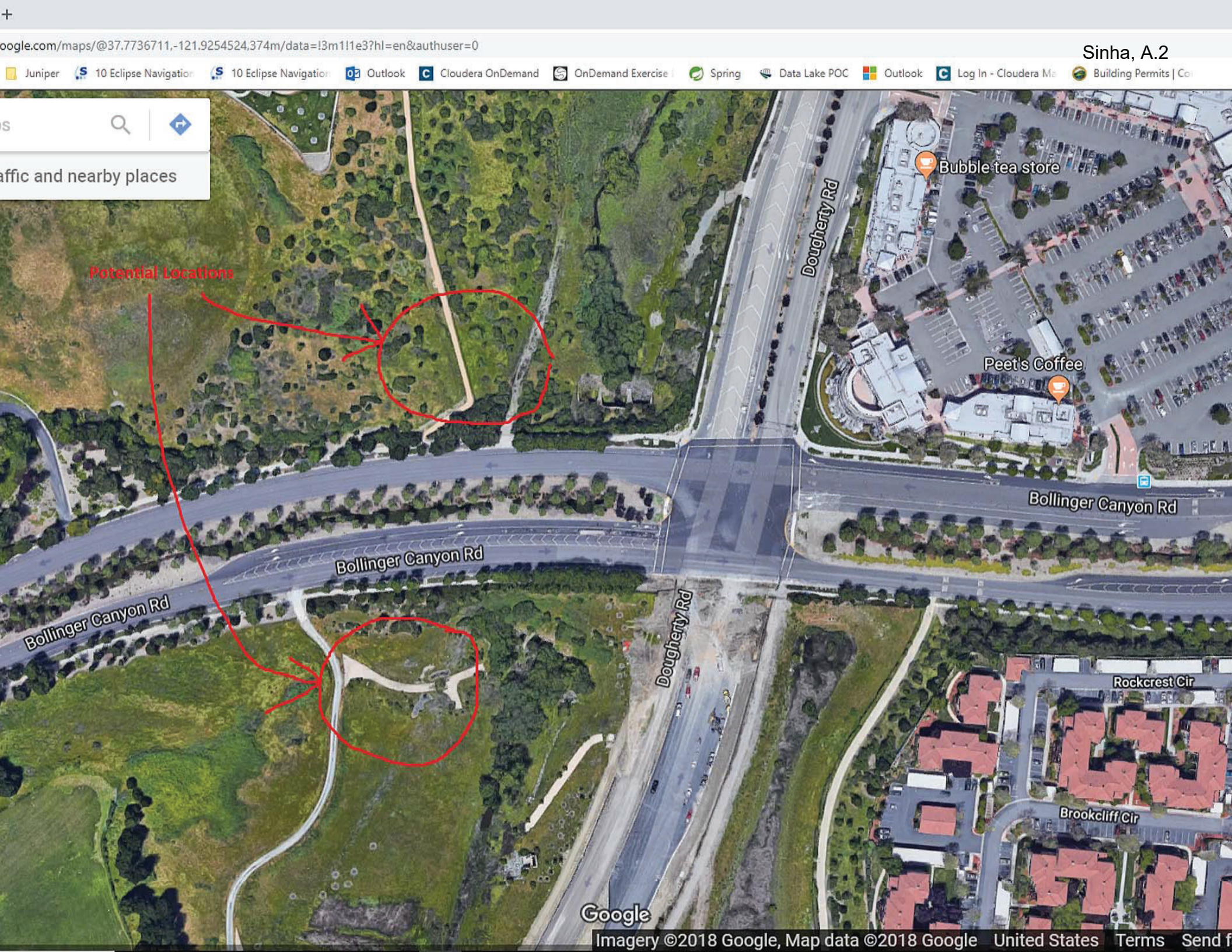
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Underwood, Amy

From: Binnu Supekar
Sent: Thursday, December 06, 2018 8:28 PM
To: Coleman, John; Glickstein, Ben
Cc: Binnu Supekar; Priya Sindhe Nagabhushana
Subject: Comment on : Recycled Water Pump Station: Dougherty Road/San Ramon

We would like to start this protest by saying that no matter where you build this on Site A4 (underground, or above the ground), some form of nature, Flora and Fauna, will be impacted.

There are number of faunas that have their home around the site A4. During our morning and evening walk over the past 3 years we have seen:
- Rabbit / hare
- Owl (yes at night)
- Eagle (flying high above the highest point where you are proposing to build; song – "Fly like an eagle" - comes to mind whenever I see them balancing stationary against the wind. Fun to watch. :)
- Turkey - plenty of them
- Squirrel
- Blue jay
- Hummingbird
- Deer
- Scores of Butterfly (including Monarch butterfly)

1

In the meeting it was revealed that an Antenna about 30 feet long would be erected alongside the building. Let's stop and think for a while what the radiation from the 30 Feet Antenna, 24x7, can do to all the fauna's listed above. Am sure EMF (Electro Magnetic Field) radiation from the Antenna will be major disruption to the way of their life as it exists today!

2

Not just wildlife around this site, there is a children school (Coyote Creek Elementary School) about 40 feet (as the crow flies) from the proposed A4 site, who will be taking these EMF radiations constantly when school is in session impacting their health

3

negatively. Please consider a site far away from protected and elementary school areas. 3 cont.

In our humble opinion, the silent beings should be protected, and so should future generation of this great neighborhood. Proposed structures should be erected far away from protected lands, and elementary school; if possible near highways for easier access for EBMUD maintenance crew to carry out maintenance services. 4

Warm Regards and Merry Christmas.
Binnu and Priya

Underwood, Amy

From:
Sent: Monday, October 15, 2018 8:44 PM
To: CEQA R3000; Glickstein, Ben
Subject: Concerns and comments regarding Recycled Water Pump Station R3000 Project

To EBMUD:

I exchanged several email on the Recycled Water Pump Station last week with Bill Clarkson (mayor of San Ramon) and he recommends I sent an email to EBMUD.
Anyway, we live at and we will like to submit my concerns and comments regarding the subject R3000 project. Our house is very close to the site location on Dougherty – our house is only 5 houses from Dougherty and I believe the pumping station is planned to be directly across Dougherty from us. In any case, we are taking this opportunity to formally submit some of our concerns/comments: 1

1. We am not sure if there is a smell from recycled water (either a constant smell or occasional smell). We believe this is NOT a recycled treatment plant and, as such, should not have smell but we are not familiar with recycled water to fully understand if there are foul or unpleasant smells associated with recycled water going through the pumping station. 2
2. I understand the pumping station will incorporate reduction designs in building but I don't think noise reduction means there won't be any noise from the pumping process. Being only 5 houses from Dougherty, and noise normally travel up hill, we believe the noise will impact our quality of life. 3
3. Notwithstanding the prior 2 concerns, we believe the building of a recycled water pumping station may/will affect the market value of our home. We are currently retired and we cannot afford the possibility of losing value on our biggest retirement asset because of EBMUD's action to build a pumping station in close proximity to our house. Unfortunately, we can't determine how much this will impact our home value until we sell the property - when our agent or a prospective buyer wants to reduce our asking price because of our proximity to the pumping station. 4
    a. When we purchased our home many years ago, we were not aware (and there were no Disclosures) that there will be a recycled water pumping station on Dougherty.
    b. If EBMUD builds the pump on Dougherty, will EBMUD establish a reserve fund/policy to indemnify the home owners in our neighborhood for any loss/reduction of market/resale value of all homes in close proximity of the pumping station?
4. We believe there is still a lot of open land (not close to existing homes) in the area that EBMUD should select for their pumping station. Instead of building this pump close to existing homes (where there was no Disclosure of the pumping station to home buyers), shouldn't EBMUD build it in a vacant area where new home builders can Disclose the existence of the pumping station to new prospective home buyers? 5

PLEASE REDACT my House Number AND Phone Number from the Final MND

These are the concerns/comments we can think of at this time. As we have additional concerns/comments we will email them to you.

Francis Tang

Underwood, Amy

From: [redacted]
Sent: Tuesday, October 16, 2018 5:45 PM
To: CEQA R3000; Glickstein, Ben
Subject: Additional comments regarding Recycled Water Pump Station R3000 Project

Hi Ben,

Thanks for taking the time to talk with me today. Based on our conversation, it sounds like the pumping station needs to be in close proximity to the recycled water lines.
In addition to the Lilac Ridge site, is there any reason why EBMUD can't build the pumping station on Dougherty after you cross Bollinger Canyon (going south)?

1. I believe the east side of Dougherty (after you cross Bollinger Canyon) is a very large vacant site in a gully/ravine that is across (and it is across from a shopping center instead of home).
2. The west side of Dougherty (after you cross Bollinger Canyon) is also vacant and there are no homes in close proximity to it.

1

I know you mentioned the engineering study but, unfortunately, some prospective home buyers may disagree with the study. As I mentioned, it is similar to studies that claim that high power electrical wires do not cause cancer, but I personally will never buy a home in close proximity to high power electrical lines, regardless of the study.

2

Thanks again for taking the time to talk with me today.

Francis Tang

From [redacted]
Sent: Monday, October 15, 2018 8:44 PM
To: 'R3000@ebmud.com'; 'ben.glickstein@ebmud.com'
Subject: Concerns and comments regarding Recycled Water Pump Station R3000 Project

To EBMUD:

I exchanged several email on the Recycled Water Pump Station last week with Bill Clarkson (mayor of San Ramon) and he recommends I sent an email to EBMUD.
Anyway, we live at [redacted] and we will like to submit my concerns and comments regarding the subject R3000 project. Our house is very close to the site location on Dougherty – our house is only 5 houses from Dougherty and I believe the pumping station is planned to be directly across Dougherty from us. In any case, we are taking this opportunity to formally submit some of our concerns/comments:

1. We am not sure if there is a smell from recycled water (either a constant smell or occasional smell). We believe this is NOT a recycled treatment plant and, as such, should not have smell but we are not familiar with recycled water to fully understand if there are foul or unpleasant smells associated with recycled water going through the pumping station.
2. I understand the pumping station will incorporate reduction designs in building but I don't think noise reduction means there won't be any noise from the pumping process. Being only 5 houses from Dougherty, and noise normally travel up hill, we believe the noise will impact our quality of life.
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PLEASE REDACT my House Number AND Phone Number from the Final MND

These are the concerns/comments we can think of at this time. As we have additional concerns/comments we will email them to you.

Francis Tang

EBMUD

Comment Card

Pump Station R3000
Mitigated Negative Declaration Public Meeting
October 17, 2018

- EBMUD To Follow up on Conservation Easement Option - contact appropriate agency to get approval. 1
- Please have a follow up Public meeting before Dec 11 in San Ramon 2
- Build behind Water Tank in A4 location 3

Contact information

CHAPTER 4

Comment Letters

APPENDIX A

Background of Site Selection

DISCUSSION

Project Purpose and Description

Pump Station R3000 would pump recycled water to the existing Reservoir R3000, providing recycled water to areas north of the pump station (i.e., parts of the San Ramon, Danville, and Blackhawk communities) above the elevation of 570 feet. Approximately 5,400 square feet (sf) of property is needed to accommodate the pump station building, electrical structures, 30-foot antenna, parking, fencing, landscaping, and retaining walls. The pump station building would be approximately 21 feet above grade with a building area of approximately 1,200 sf. The pump station would consist of four 350 horsepower (hp) vertical turbine pumps with a combined capacity of approximately 5.6 million gallons per day (MGD). New 12 to 16-inch diameter supply and discharges pipelines would connect the pump station to existing recycled water pipelines in Dougherty Road. The recycled water source is the Dublin San Ramon Services District (DSRSD) Wastewater Treatment Plant and Jeffrey G. Hansen Water Recycling Facility located in Pleasanton. The recycled water would be used for landscape irrigation by a variety of commercial and municipal customers.

Background

The Project was initially proposed as part of the San Ramon Valley Recycled Water Program (SRVRWP) Facilities Plan (Facility Plan) prepared by the DSRSD/EBMUD Recycled Water Authority (DERWA) in July 1996. The Facility Plan proposed Project location was to the north of the intersection of Dougherty Road and Crow Canyon Road. The Facility Plan proposed an alternative Project location at the entrance to Diablo Vista Park on Crow Canyon Road. Both sites are owned by the City of San Ramon (City or San Ramon). These locations were analyzed pursuant to California Environmental Quality Act (CEQA) as part of the 1996 SRVRWP Environmental Impact Report (EIR).

Staff initiated the detailed site planning for the Project in 2016 and coordinated with the City to receive input on the site plan and determine the process for property purchase from the City. City staff reviewed the sites presented in the 1996 Facility Plan and SRVRWP EIR and, due to their close proximities to existing residences and park sites and potential for greater impacts to these uses, recommended that a further review of alternative site locations be prepared and presented to the San Ramon City Council Policy Committee.

Site Evaluation and Selection

As requested by the City, a site selection analysis was completed in coordination with City staff in 2016 that evaluated seven potential pump station locations (Sites A1 through A7) with regards to the following selection criteria:

- Located along the existing recycled water pipelines in Dougherty Road to minimize pipeline length, costs, and impacts to roadway conditions and traffic
- Located at suitable elevation to meet hydraulic requirements (500-640 feet)

- Proximity to a sanitary sewer connection and 480v PG&E power source to minimize pipeline length, costs, and impacts to roadway conditions and traffic
- Adequate space for the pumping plant structure, an above-grade electrical substation and parking (at least 5,400 square feet)
- Public impact as defined by distance to nearest residences
- Minimize construction and operational visual, noise, and traffic impacts and disturbance to the surrounding community
- Property either readily available for acquisition or already owned by EBMUD or DERWA
- Avoid locations within Geologic Hazard Abatement District (GHAD), areas protected by conservation easement, designated open spaces, major ridgelines, or adjacent to Alamo Creek
- Property should not remove or impact existing playfields, parks, and parking areas
- Geologic and geotechnical suitability
- Minimize environmental review timeline to meet Project funding deadlines

The site evaluation only considered fully above-grade facilities because although buried facilities would minimize aesthetic impact, local conditions may be unsuitable for below-grade construction, operations and maintenance of below-grade facilities are more complicated and susceptible to damage from drainage or flooding, and may have longer construction time frames. A summary of the site selection analysis for Sites A1 through A7 is shown on the attached Table 1. Figure 2 (Site Location Map) shows the location of each site. Site A2 best met the site selection criteria as compared to other sites. The City approved a resolution in July 2016 to authorize the City Manager to negotiate an agreement with EBMUD for the sale of an easement/and or property for the Site A2.

Initial Study/Mitigated Negative Declaration – Additional Site Evaluation

An Initial Study/Mitigated Negative Declaration (MND) was prepared that included analysis of Site A2, the preferred project location, and Site A4, as an alternative location. Site A4 was included in the CEQA analysis because it is located on property owned by DERWA and would not require property acquisition. Project elements and locations for Sites A2 and A4 are shown in Figures 2 and 3, respectively.

In response to comments received during the public review period of the MND, staff conducted a review of seven additional potential sites (Sites B1 through B7). A summary of the site selection analysis for Sites B1 through B7 are shown in the attached Table 2. Figure 1 shows the location of each site. Sites B1 through B7 would cause more significant impacts than the preferred Site A2, and would require thousands of feet of additional pipeline compared to Site A2.

Staff's assessment remains that Site A2 has the least overall impact and is the preferred pump station site location. Site A2 is further from residences than a number of other sites. The benefits of Site A2 include its location adjacent to Dougherty Road only a short distance from the existing recycled water pipeline which minimizes construction-related noise, traffic, and roadway impacts; natural visual screening from surrounding vegetation; and it is located lower than adjacent residential developments, further minimizing visual and noise impacts to

residences. Site A2 meets the project site criteria without the need for additional mitigation, agreements, or impacts to existing land uses.

Attachments: Table 1 - Site Selection Analysis Summary Sites A1-A7
Table 2 - Site Selection Analysis Summary Sites B1-B7
Figure 1 - Vicinity and Site Selection Map
Figure 2 - Pump Station R3000 Site A2 Location Map
Figure 3 - Pump Station R3000 Site A4 Location Map
Attachment 1 – Comparative Analysis of Site A2 to Sites A1 and A3 through A7
Attachment 2 - Comparative Analysis of Site A2 to Sites B1 through B7

Table 1 - Site Selection Analysis Summary Sites A1-A7

Criteria	A1 (not considered)	A2	A3	A4	A5	A6	A7
Minimize pipeline length	150 feet	150 feet	250 feet	4,800 feet	3,000 feet	4,000 feet	2,000 feet
Elevation 500-670	620	600	560	670	590	620	610
Connection to utilities	Utilities available	Utilities available	Utilities available	Utilities available	Utilities available	Utilities available	Utilities available
Adequate space (min 5,400 sf)	> 5,400 sf	> 5,400 sf	> 5,400 sf	> 5,400 sf	> 5,400 sf	> 5,400 sf	< 5,400 sf
Distance to residence	35 feet	150 feet	60 feet	170 feet	80-220 feet	155-230 feet	115 feet
Natural screening	No	Yes	Yes	No	Yes	Yes	Yes
Property acquisition	City of San Ramon	City of San Ramon	City of San Ramon	DERWA	City of San Ramon	City of San Ramon	City of San Ramon
Avoid GHAD, conservation easements, open spaces, or major ridgelines	No land restrictions	No land restrictions	No land restrictions	No land restrictions	No land restrictions	No land restrictions	No land restriction
Impacts to parks, playfields, and parking	No impacts	No impacts	No impacts	Temporary closure of recreation trail	Loss of 3000 sf of play area or 12 parking spaces. Temporary loss of access of park facilities	Loss of 3000 sf of play area or 12 parking spaces. Temporary loss of access of park facilities	Temporary loss of access to park entrance
Geologic / geotechnical suitability	No concerns	No concerns	Potential concerns (<150 feet) to West Alamo Creek	No concerns	No concerns	No concerns	No concerns
Environmental review timeline	CEQA completed	CEQA in progress	New CEQA required	CEQA in progress	New CEQA required	New CEQA required	CEQA completed

Red indicates Site does not meet selection criteria

Table 2 - Site Selection Analysis Summary Sites B1-B7

Criteria	B1	B2	B3	B4	B5	B6	B7
Minimize pipeline length	5,000 feet	6,000 feet	2,000 feet	3,000 feet with West Alamo Creek crossing	3,000 feet with West Alamo Creek crossing	4,500 feet	4,500 feet
Elevation 500-670	740	600	600	570	600	560	550
Connection to utilities	Utilities available	Utilities available	Utilities available	Utilities available	Utilities available	Utilities available	Utilities available
Adequate space (min 5,400 sf)	> 5,400 sf	> 5,400 sf	> 5,400 sf	> 5,400 sf	> 5,400 sf	> 5,400 sf	> 5,400 sf
Distance to residence	500 feet	200 feet	80 feet	390 feet	175 feet	680 feet	640 feet
Natural screening	No	Yes	Yes	Yes	Yes	Yes	Yes
Property acquisition	DERWA	Town of Danville	Town of Danville	Town of Danville	City of San Ramon	City of San Ramon	City of San Ramon
Avoid GHAD, conservation easements, open spaces, or major ridgelines	Impacts to major ridgeline	Impacts to Scenic View designation	Impacts to Scenic View designation	Impacts to Scenic View designation	Impacts to GHAD and open space designation	Impacts to Conservation Easement. Construction restrictions	Impacts to GHAD and open space designation
Impacts to parks, playfields, and parking	Temporary closure of recreation trail	Temporary loss of access of park access	Temporary closure of recreation trail and park access	Temporary closure of recreation trail and park access	Temporary closure of recreation trail and park access	Temporary closure of recreation trail	Temporary closure of recreation trail
Geologic/geotechnical suitability	No concerns	No concerns	No concerns	No concerns	No concerns	No concerns	Potential geologic or geotechnical concerns with proximity (<150 feet) to West Alamo Creek
Environmental review timeline	New CEQA Required	New CEQA Required	New CEQA Required	New CEQA Required	New CEQA Required	New CEQA Required	New CEQA Required

Red indicates Site does not meet selection criteria

Figure 1: Vicinity and Site Selection Map

Image source: Contra Costa County GIS; City of San Ramon General Plan

Figure 2: Site A2

Figure 3: Site A4

Attachment 1 Comparative Analysis of Site A2 to Sites A1 and A3 through A7

Site A1, Dougherty and Crow Canyon Road Intersection. Site A1 is located on the north side of the intersection of Dougherty and Crow Canyon Road, San Ramon and was the proposed Project location described in the 1996 Facility Plan. Although the CEQA for Site A1 was completed as part of the 1996 SRVRWP EIR, City staff requested EBMUD to evaluate additional alternative sites because new development within very close proximity to Site A1 made it less desirable to construct a pumping plant at this site. While both Sites A1 and A2 meet a majority of the criteria, Site A2 is preferred because it is located much further from the nearest residences (by approximately 115 feet), is approximately 150 feet downslope form the nearest home, and would take advantage of natural screening between the site and nearby residences. As a result, Site A2 would minimize impacts to nearby residences better than would Site A1.

Site A3, East Side Dougherty Road. Site A3 is located within a landscaped area on the east side of Dougherty Road, south of Red Willow Road, San Ramon. Compared to Site A2, Site A3 is located closer to residences (by 90 feet), requires twice as much new recycled water pipeline in Dougherty Road, is located near West Alamo Creek which may not have suitable geologic and geotechnical viability, and requires additional CEQA review. Site A3 meets fewer key criteria and would result in additional visual, noise, and traffic impacts to the surrounding community with increased Project costs. Therefore, site A2 is preferred over Site A3.

Site A4, Reservoir R200 Access Road. Site A4 is located along the access road to the buried recycled water Reservoir R200 near the intersection of Lilac Ridge Road and Lantana Way, San Ramon. Compared to Site A2, Site A4 does not take advantage of natural screening between the site and nearby residences, requires approximately 4,700 feet more new recycled water pipeline to be constructed in residential streets and Dougherty Road, and requires temporary closure of recreational trails. Site A4 meets fewer key criteria and would result in additional visual, noise, and traffic impacts to the surrounding community with increased Project costs. Therefore, Site A2 is preferred over Site A4. Site A4 was included as an alternative Project location because it is owned by DERWA and does not require property acquisition.

Site A5, Red Willow Park. Site A5 is located at Red Willow Park on Red Willow Road and Coriander Court, San Ramon. Compared to Site A2, Site A5 requires approximately 2,900 feet more new recycled water pipeline to be constructed in residential streets and Dougherty Road, a pipeline crossing of West Alamo Creek, temporary closure of park facilities, and additional CEQA review. Site A5 would require elimination of park play field or parking lot to accommodate a pump station, whereas Site A2 would not. Site A5 meets fewer key criteria and would result in additional visual, noise, and traffic impacts to the surrounding community with increased Project costs. Therefore, Site A2 is preferred over Site A5.

Site A6, Valley View Park. Site A6 is located at Valley View Park on North Monarch Road and Wedgewood Road, San Ramon. Compared to Site A2, Site A6 requires approximately 3,900 feet more new recycled water pipeline to be constructed in residential streets and Dougherty Road, removes park facilities (i.e., park play or parking lot), and additional CEQA review. Site A6 meets fewer key criteria and would result in additional visual, noise, and traffic impacts to

the surrounding community with increased Project costs. Therefore, Site A2 is preferred over Site A6.

Site A7, Diablo Vista Park Entrance. Site A7 is located on Crow Canyon Road, adjacent to and southwest of the entrance to Diablo Vista Park, near the end of Plumpointe Lane, San Ramon. Although the CEQA for Site A7 was completed as part of the 1996 SRVRWP EIR, City staff requested EBMUD to evaluate additional alternative sites because new development surrounding Site A7 made it less desirable to construct a pumping plant at this site. While both Sites A2 and A7 meet a majority of the criteria, new developments surrounding Site A7 limit the constructible area. Site A2 is preferred because it is located further from the nearest residences (by an additional 35 feet), is approximately 150 feet downslope form the nearest home, and has more than 5,600 square feet of constructible area. As a result, Site A2 would minimize impacts to nearby residences better than would Site A7.

Attachment 2 Comparative Analysis of Site A2 to Sites B1 through A7

Site B1, Behind the existing Reservoir R200. Site B1 is located along the backside of the existing buried Reservoir R200 near the intersection of Lilac Ridge Road and Lantana Way, San Ramon. Compared to Site A2, Site B1 does not have the advantage of natural screening between the site and nearby residences, requires approximately 4,900 feet more new recycled water pipeline to be constructed in residential streets and Dougherty Road, requires temporary closure of recreational trails, and requires additional CEQA review. Due to the site's location on a major ridgeline, Site B1 would potentially impact visual resources. Site B1 meets fewer key criteria than Site A2, and would result in additional visual, noise, and traffic impacts to the surrounding community with increased Project costs. Therefore, Site A2 is preferred over Site B1.

Site B2, Behind Diablo Vista Park Basketball Courts. Site B2 is located along the backside of the Diablo Vista Park along Camino Tassajara Drive in the Town of Danville (Danville). Compared to Site A2, Site B2 requires approximately 5,900 feet more new recycled water pipeline to be constructed in Crow Canyon and Dougherty Road, would require temporary closure of park facilities, is not readily available for acquisition as it require an agreement with Danville (as opposed to San Ramon), impacts scenic view designated land, and requires additional CEQA review. Site B2 meets fewer key criteria and would result in additional noise and traffic impacts to the surrounding community with increased Project costs. Therefore, Site A2 is preferred over Site B2.

Site B3, Behind Diablo Vista Park Tennis Courts. Site B3 is located along the recreational trail behind Diablo Vista Park Tennis Courts, Danville. Compared to Site A2, Site B3 is located closer to residences (by 70 feet), requires approximately 1,900 feet more new recycled water pipeline through residential neighborhoods and in Dougherty Road, requires temporary loss of access to park facilities, impacts scenic view designated land, is not readily available for acquisition as it require an agreement with Danville (as opposed to San Ramon), and requires additional CEQA review. Site B3 meets fewer key criteria and would result in additional visual, noise, and traffic impacts to the surrounding community with increased Project costs. Therefore, site A2 is preferred over Site B3.

Site B4, North of Red Willow Park. Site B4 is located along the recreational trail behind Red Willow Park, Danville. Compared to Site A2, Site B4 requires approximately 2,900 feet more new recycled water pipeline to be constructed in residential streets and Dougherty Road, a pipeline crossing of West Alamo Creek, temporary closure of park and recreational trail facilities, impacts scenic view designated land, is not readily available for acquisition as it requires an agreement with Danville (as opposed to San Ramon), and additional CEQA review. Site B4 meets fewer key criteria and would result in additional noise and traffic impacts to the surrounding community with increased Project costs. Therefore, Site A2 is preferred over Site B4.

Site B5, East of Red Willow Park. Site B5 is located along the recreational trail to the east of Red Willow Park, San Ramon. Compared to Site A2, Site B5 requires approximately 2,900 feet more new recycled water pipeline to be constructed in residential streets and Dougherty Road, a pipeline crossing of West Alamo Creek, temporary closure of park and recreational trail

facilities, would have additional environmental impacts as it is located within the GHAD designated open space, and requires additional CEQA review. Site B5 meets fewer key criteria and would result in additional noise and traffic impacts to the surrounding community with increased Project costs. Therefore, Site A2 is preferred over Site B5.

Site B6, Northwest Bollinger Canyon and Dougherty Road Intersection. Site B6 is located along the northwest side of intersection of Bollinger Canyon and Dougherty Road, San Ramon. Compared to Site A2, Site B6 would require approximately 4,400 feet more new recycled water pipeline to be constructed in Dougherty Road, have additional environmental impacts as it is located within a GHAD designated conservation easement with construction restrictions, and require additional CEQA review. Site B6 meets fewer key criteria and would result in additional noise and traffic impacts to the surrounding community with increased Project costs. Therefore, Site A2 is preferred over Site B6.

Site B7, Southwest Bollinger Canyon and Dougherty Road Intersection. Site B7 is located along the southwest side of intersection of Bollinger Canyon and Dougherty Road, San Ramon. Compared to Site A2, Site B7 would require approximately 4,400 feet more new recycled water pipeline to be constructed in Dougherty Road, have additional environmental impacts as it is located within a GHAD designated open space, require temporary closure of recreational trails, and would require additional CEQA review. Site B7 meets fewer key criteria and would result in additional noise and traffic impacts to the surrounding community with increased Project costs. Therefore, Site A2 is preferred over Site B7.