Draft Initial Study/Mitigated Negative Declaration

Decoto Reservoir Seismic Improvements and Roof Replacement Project

Southeast of Seven Hills Park in the Cities of Union City and Fremont

CITY OF FREMONT, ALAMEDA COUNTY
CITY OF UNION CITY, ALAMEDA COUNTY

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Date: March 2024

ALAMEDA COUNTY WATER DISTRICT

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PROPOSED MITIGATED NEGATIVE DECLARATION

Project Title: Decoto Reservoir Seismic Improvements and Roof Replacement Project (Project)

Project Location: Decoto Reservoir is located within Assessor Parcel Number (APN) 507-124-15 in the City of Fremont, California. It is immediately south of and accessed through Seven Hills Park at 384 Florence Street, Union City, California.

Project Proponent: Alameda County Water District

Project Description: The Alameda County Water District (District) is proposing to replace the roof and roof framing system and seismically upgrade Decoto Reservoir, a potable water reservoir.

Finding: With implementation of mitigation measures, the proposed Project will not have a significant effect on the environment.

Reasons Supporting the Finding:

- An Initial Study of Environmental Effects has been prepared that identified no potentially significant impacts following implementation of feasible mitigation measures incorporated into the Project.
- The Project is consistent with the land use plans, policies, and regulations of the Alameda County Water District, City of Fremont, and City of Union City.
- All work would occur within the Alameda County Water District's property and would not require additional utilities or public services or the expansion of regional facilities.
- The Project will not adversely impact fish and wildlife resources or their habitats.
- The Project will not result in significant traffic or transportation impacts.

Mitigation Measures Included in the Project: The following mitigation measures are included in the Project to avoid potentially significant effects.

A. Air Quality

MM AIR-1.1: During any construction period requiring ground disturbance, the District shall ensure that the Project contractor implements measures to control dust and exhaust.

Implementation of the measures recommended by Bay Area Air Quality Management District (BAAQMD) and listed below would reduce the air quality impacts associated with grading and new construction to a less-than-significant level. In addition to the measures recommended by BAAQMD, the contractor shall implement the following best management practices that are required of all projects by the City of Fremont:

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

MM AIR-1.2: The Project shall use equipment that has low diesel particulate matter (DPM) or zero emissions as follows:

- Mobile diesel-powered off-road equipment larger than 25 horsepower and operating on the site for more than two days shall meet U.S. Environmental Protection Agency (EPA) particulate matter emissions standards for Tier 4 or use engines that include particulate matter emissions control equivalent to California Air Resources Board (CARB) Level 3 verifiable diesel emission control devices (VDECs). Alternatively (or in combination), the use of alternatively fueled or electric equipment (i.e., non-diesel) would be consistent with this requirement.
- Avoid diesel generator use by supplying line power to the construction site and limiting the use of diesel generators to no more than 50 total hours.

B. Biological Resources

MM BIO-1.1: A survey shall be conducted prior to any construction activities on-site to verify the absence of burrowing owls in the vicinity of the Project site. One "Take avoidance (pre-

construction) survey" shall be completed consistent with the California Department of Fish and Wildlife's 2012 Burrowing Owl Mitigation guidelines to detect the presence of burrowing owls in the vicinity of the Project site immediately prior to construction activities. If no owls are found during the survey, no further action is necessary**.**

MM BIO-1.2: If nesting owls are encountered during the breeding season (February 1 – August 31), active nests shall be avoided by 250 feet either until the end of the breeding season or until the nests are determined to be inactive by a qualified biologist. If work must occur within this buffer, consultation with California Department of Fish and Wildlife (CDFW) may be required. If owls are encountered during the non-breeding season (September 1 – January 1), the occupied burrow shall be avoided by 250 feet until such time as a qualified biologist can confirm that the owl is no longer utilizing the burrow site.

MM BIO-2.1: If construction activities are initiated during the nesting season (February 1 – August 31), a nesting bird survey shall be conducted by a qualified biologist within 7 days prior to the start of construction within the Project site. The nesting bird survey shall include the Project site and the immediate surrounding area.

If active nests are present, exclusion buffers appropriate to the species shall be established by the qualified biologist to prevent impacts to nesting birds. Buffers shall be maintained until the biologist determines that young have fledged, or the nest becomes inactive.

If construction activities are initiated outside of the nesting season (September 1 – January 31), no pre-construction nesting bird surveys are necessary.

MM BIO-3.1: The construction foreman shall be responsible for overseeing all equipment mobilization to ensure that riparian vegetation is not impacted by the Project. If riparian vegetation could be impacted by the equipment and materials (e.g., long beams) that are transported to the Project site via long flatbed trucks through the access road, a biological monitor or arborist shall be present during the trimming of any small branches three inches in diameter or less to facilitate equipment access. No trees shall be removed.

MM BIO-4.1: Prior to the transport of materials into the Project site, silt fencing shall be installed on the east side of the culverted road crossing to prevent any discharge from entering the drainage.

C. Cultural Resources

MM CUL-1.1: If any human remains are found during any field investigations, grading, or other construction activities, all provisions of California Health and Safety Code Sections 7054 and 7050.5 and Public Resources Code Sections 5097.9 through 5097.99, as amended per Assembly Bill 2641, shall be followed. In the event of the discovery of human remains during construction, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains, and the District shall immediately notify the Alameda County Coroner/ Medical Examiner's Office (the Coroner). The Coroner will make a determination as to whether the remains are Native American.

If the remains are believed to be Native American, the Coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours. The NAHC will then designate a Most Likely Descendant (MLD). The MLD will inspect the remains and make a recommendation on the treatment of the remains and associated artifacts. If the District concurs with the recommendation of the MLD, the District will work with the MLD and the Coroner to carry it out.

If one of the following conditions occurs, the Alameda County Water District or their authorized representative shall work with the Coroner to reinter the Native American human remains and associated grave goods with appropriate dignity in a location not subject to further subsurface disturbance:

- The NAHC is unable to identify a MLD or the MLD failed to make a recommendation within 48 hours after being notified by the Commission.
- The descendant identified fails to make a recommendation; or
- The District or its authorized representative rejects the recommendation of the descendant, and the mediation by the NAHC fails to provide measures acceptable to the landowner.

D. Geology and Soils

MM GEO-1.1: In the event that a fossil is discovered during construction of the Project, excavations within 50 feet of the find shall be temporarily halted or delayed until the discovery is examined by a qualified paleontologist, in accordance with Society of Vertebrate Paleontology standards. The District shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. If the find is determined to be significant and if avoidance is not feasible, the paleontologist shall design and carry out a data recovery plan consistent with the Society of Vertebrate Paleontology standards. The plan must include preparation, identification, cataloguing, and curation of any salvaged specimens.

E. Hazards and Hazardous Materials

MM HAZ-1.1: In conformance with State and local laws, a visual inspection/pre-demolition survey, and possible sampling, shall be conducted prior to the demolition of on-site building(s) to determine the presence of asbestos-containing materials (ACMs) and/or lead-based paint (LBP).

- During demolition activities, all building materials containing LBP shall be removed in accordance with the California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA) Lead in Title 8, CCR, Section 1532.1, including employee training, employee air monitoring, and dust control. Any debris or soil containing LBP or coatings shall be disposed of at landfills that meet acceptance criteria for the type of lead being disposed.
- All potentially friable ACMs shall be removed in accordance with National Emission Standards for Air Pollution (NESHAP) guidelines prior to demolition or renovation activities that may disturb ACMs. All demolition activities shall be

undertaken in accordance with Cal/OSHA standards contained in Title 8, CCR, Section 1529, to protect workers from asbestos exposure.

- A registered asbestos abatement contractor shall be retained to remove and dispose of ACMs identified in the asbestos survey performed for the site in accordance with the standards stated above.
- Materials containing more than one-percent asbestos are also subject to BAAQMD regulations. Removal of materials containing more than one-percent asbestos shall be completed in accordance with BAAQMD requirements and notifications.
- Based on Cal/OSHA rules and regulations, the following conditions are required to limit impacts from LBP to construction workers.
    - Prior to commencement of demolition activities, a building survey, including sampling and testing, shall be completed to identify and quantify building materials containing LBP.
    - During demolition activities, all building materials containing LBP shall be removed in accordance with Cal/OSHA Lead in Construction Standard, Title 8, CCR, Section 1532.1, including employee training, employee air monitoring and dust control.
    - Any debris or soil containing LBP or lead-based coatings shall be disposed of at landfills that meet acceptance criteria for the type of waste being disposed.

F. Noise

MM NOI-1.1: During construction of the Project, the District shall implement the following measures required by the City of Fremont to reduce construction noise:

- Construction equipment shall be well-maintained and used judiciously to be as quiet as practical.
- Construction, excavating, grading, and filling activities (including the loading and unloading of materials, truck movements, and warming of equipment motors) shall be limited as provided in City Code Section 18.160.010.
- All internal combustion engine-driven equipment shall be equipped with mufflers, which are in good condition and appropriate for the equipment.
- The contractor shall utilize “quiet” models of air compressors and other stationary noise sources where technology exists.
- Loading, staging areas, stationary noise generating equipment, etc., shall be located as far as feasible from sensitive receptors.
- The contractor shall comply with Air Resource Board idling prohibitions of unnecessary idling of internal combustion engines.
- Signs shall be posted at the construction site that include permitted construction days and hours (Monday through Friday 7 a.m. to 5 p.m.), a day and evening contact number for the job site, and a contact number for the

District in the event of noise complaints. The District shall designate an on-site complaint and enforcement manager to track and respond to noise complaints.

- Temporary noise barriers, such as solid plywood fences, shall be installed around construction sites adjacent to operational business, residences or noise-sensitive land uses, unless an existing wall or other barrier provides equivalent noise attenuation. (City of Fremont Ord. 27- 2016 § 37, 12-6-16; Ord. 23-2018 § 41, 10-2-18; Ord. 05-2021 § 52, 4-20-21.)

G. Tribal Cultural Resources

MM TCR-1.1: A qualified archaeologist shall be present at the Project site during any ground-disturbing activities to monitor sites or objects of significance to Native Americans and to provide, in coordination with a tribal cultural representative, construction worker tribal cultural resources awareness training including applicable regulations and protocols for avoidance, confidentiality, and culturally appropriate treatment.

The archaeological monitor shall have the ability to request that work be stopped, diverted, or slowed if sites or objects of significance to Native Americans are encountered within the direct impact area and shall be consulted for recommendations regarding the appropriate treatment of such sites or objects.

Initial Study Prepared by: Alameda County Water District

I, Girum Awoke, hereby certify that this Mitigated Negative Declaration was prepared in accordance with the provisions of the California Environmental Quality Act of 1970, as amended, and all applicable State and City Guidelines.

By: _____ Date: 05/06/24

Girum Awoke
Director of Engineering and Technology

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1.0 INTRODUCTION AND PURPOSE

1.1 PURPOSE OF THE INITIAL STUDY

The Alameda County Water District (District), as the Lead Agency, has prepared this Initial Study for the Decoto Reservoir Seismic Improvements and Roof Replacement Project (Project) in compliance with the California Environmental Quality Act (CEQA) and the CEQA Guidelines (California Code of Regulations §15000 et. seq.).

The District proposes the Project which would replace the roof and roof framing system and seismically upgrade the Decoto Reservoir. This Initial Study evaluates the environmental impacts that might reasonably be anticipated to result from implementation of the proposed Project.

1.2 PUBLIC REVIEW PERIOD

Publication of this Initial Study marks the beginning of a 30-day public review and comment period. During this period, the Initial Study will be available to local, state, and federal agencies and to interested organizations and individuals for review. Written comments concerning the environmental review contained in this Initial Study during the 30-day public review period should be sent to:

Carlos Sempere, Project Manager
Alameda County Water District
43885 South Grimmer Blvd.
Fremont, CA 94538
Carlos.Sempere@acwd.com

1.3 CONSIDERATION OF THE INITIAL STUDY AND PROJECT

District adoption of the Initial Study/Mitigated Negative Declaration (IS/MND) at a regularly scheduled meeting of the District's Board of Directors follows the conclusion of the public review period. The IS/MND is considered together with any comments received during the public review process at the meeting, as well as Project approval actions.

1.4 NOTICE OF DETERMINATION

The District finds 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 District per the IS/MND. Upon Project approval and adoption of the IS/MND, the District's Notice of Determination (NOD) is filed and available for public inspection and posted within 24 hours of receipt at the County Clerk's Office for 30 days. The filing of the NOD starts a 30-day statute of limitations on court challenges to the approval under CEQA (CEQA Guidelines Section 15075(g)).

2.0 PROJECT INFORMATION

2.1 PROJECT TITLE

Decoto Reservoir Seismic Improvements and Roof Replacement Project (Project)

2.2 LEAD AGENCY CONTACT

Carlos Sempere
Project Manager
Alameda County Water District
43885 South Grimmer Boulevard
Fremont, CA 94538
Carlos.Sempere@acwd.com

2.3 PROJECT PROPONENT

Alameda County Water District (the District)

2.4 PROJECT LOCATION

The Project is located within the City of Fremont, California, immediately southeast of Seven Hills Park in Union City, California.

2.5 ASSESSOR'S PARCEL NUMBER

Assessor's Parcel Numbers (APNs): 507-124-15

2.6 GENERAL PLAN DESIGNATION AND ZONING DISTRICT

General Plan Designation: *Open Space (OS)-Hill Face*

Zoning District: *OS*

Figure 1. Regional Location Map

Decoto Reservoir Improvement Project
Union City, California

0 0.25 0.5 Miles

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wra Environmental Consultants

Figure 1: Regional Location Map

Figure 2: Vicinity Map

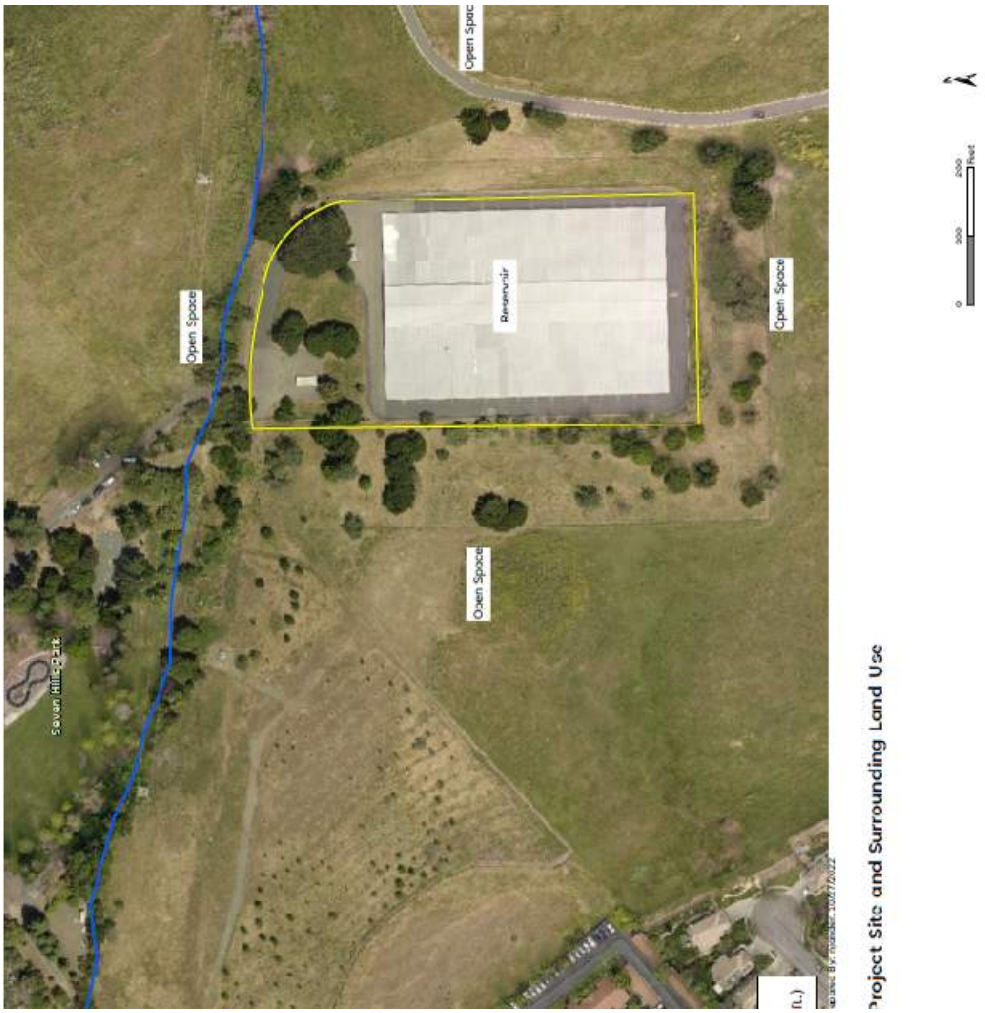


Figure 3: Aerial Map and Surrounding Land Uses

3.0 PROJECT DESCRIPTION

Project Title

Decoto Reservoir Seismic Improvements and Roof Replacement Project (Project)

Lead Agency Name and Address

Alameda County Water District (District)
43885 South Grimmer Boulevard
Fremont, CA 94538

Contact Person and Phone Number

Carlos Sempere, Project Manager, (510) 668-4200

Project Location

The Project site is located within APN 507-124-15 in the City of Fremont, CA and is located immediately southeast of Seven Hills Park at 384 Florence St. in Union City, CA.

3.1 PROJECT BACKGROUND

The District is proposing to upgrade the Decoto Reservoir by replacing the roof and roof framing system and seismically upgrading the reservoir. Decoto Reservoir is a 14.55-million-gallon potable water reservoir that was built in 1964. The reservoir has a roof area of approximately 4100 feet by 270 feet, or 2.54 acres in size. It is served by a 30-inch diameter inlet/outlet pipeline and its overflow siphon drains to a storm drain on Veneto Avenue.

The reservoir was constructed by cut and fill on a 15% hillside slope. Three sides of the reservoir are part natural, part clay-core, and part native backfill, are classified as dams, and fall under the jurisdiction of the Department of Water Resources, Division of Safety of Dams (DSOD). The reservoir was constructed with earth levees, perimeter concrete walls, precast concrete columns on spread-footings, and asphalt slab-on-grade floor. Below the reservoir floor is a subdrain system of perforated pipes to collect and monitor water leakage. The reservoir has a maximum water depth of 29.3 feet. The perimeter concrete walls have screened openings separated by narrow concrete piers with continuous two by four nailers supporting the roof framing. The roof is painted corrugated metal deck over wooden glulam beams and purlins. A pop-up roof structure with vents (roof monitor) runs along the ridge of the reservoir. Access to the interior of the reservoir is through the double doors located at the north end of the reservoir.

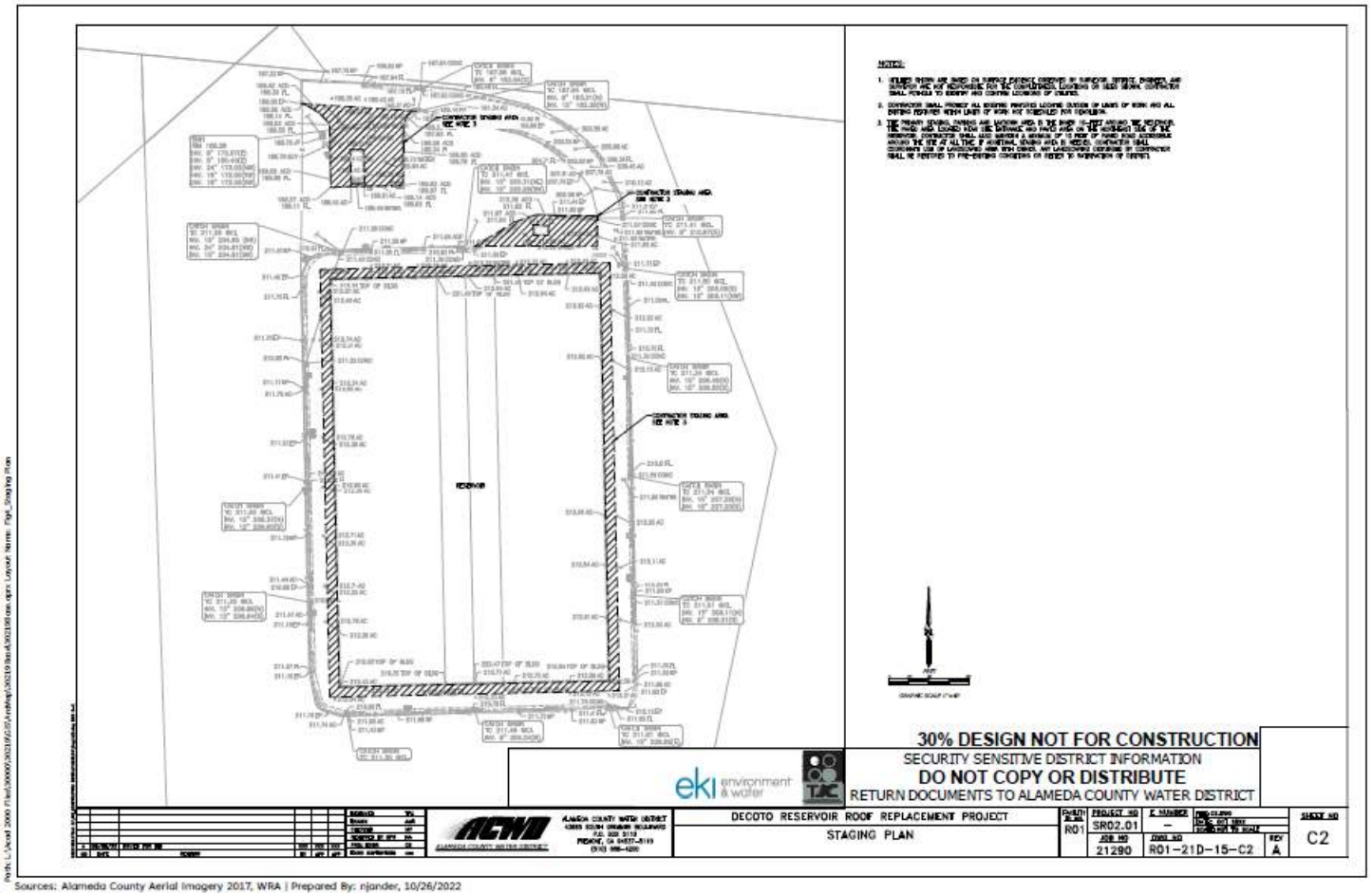
Project work includes the following:

- Replacement of the corrugated galvanized steel over timber framing roof system;
- Seismic upgrade of the reservoir;
- Replacement of five existing valves in vaults; and
- Installation of new chlorosulfonated polyethylene (CSPE) reservoir liner.

The District's construction window for the seismic retrofit and roof replacement is autumn 2024 through spring 2026.

As a separate project that was approved and found Categorically Exempt from CEQA in January 2021, the Solar Photovoltaic System Installation Project would install solar panels on the replaced roof

structure in 2025 or 2026. This project was previously approved as part of the District's Clean Energy Program and is independent of the Decoto Reservoir Improvements and Roof Replacement Project.



Sources: Alameda County Aerial Imagery 2017, WRA | Prepared By: njander, 10/26/2022

Figure 4. Staging Plan

Decoto Reservoir Improvement Project
Union City, California

Figure 4: Staging Plan

3.2 PROJECT DESIGN

This section summarizes the proposed improvements to be implemented for the Project.

3.2.1 Roof System Seismic Retrofit

The District would construct the project with insulated roof panels over structural metal deck diaphragm on wood framing. A new lateral force-resisting system would consist of concrete moment frames in both the north/south and east/west directions. The concrete moment frames would be tied together at the roof level with horizontal concrete Vierendeel trusses which will assist in distributing diaphragm loads to the moment frames.

This would involve the replacement of 16 columns with new larger (3 foot by 3 foot) precast concrete columns plus at least 22 additional lateral precast concrete tie-beams between them. Installation of the new larger columns will require cutting into the concrete floor of the reservoir to install new 5-foot by 5-foot footings. Buried precast concrete tie-beams will be installed in 10 locations to connect the bases of the new columns.

3.2.2 Civil/Site Work

An existing perimeter baffle system along the interior walls of the reservoir, whose function is to address sloshing forces in a predicted earthquake, has been determined to not meet current design standards. This baffle system will be superseded by increasing the perimeter concrete wall heights by 2 feet. This will cause the overall height of the reservoir roof to be increased by 1 foot to allow 1-foot-tall ventilation screening to be installed at the top of the wall. At three places along each side of the reservoir, the concrete wall will not be raised by 2 feet but will be replaced in its entirety with a concrete shear panel (wall) for additional strength. Site civil improvements are generally expected to be minor and would mainly be needed to facilitate the various reservoir improvements. Site civil work is expected include the following elements:

- Minor clearing and grubbing may be needed to facilitate staging of equipment and materials in non-paved areas. Contractors will not be permitted to damage trees.
- Limited trenching may be required and would generally be associated with installation of the new reservoir roof structure walls and electrical infrastructure.
- Grading may be required in areas that require paving. Paving would only be performed where existing pavement is removed. Minimal paving would be expected; however, an asphalt seal coat would be placed over the paved area surrounding the reservoir.

The existing ethylene propylene diene monomer (EPDM) reservoir liner would be replaced with a chlorosulfonated polyethylene (CSPE) geomembrane liner as part of the retrofit.

3.2.3 Concrete Column Repair

The reservoir could not be drained prior to inspecting the condition of the reservoir columns. The tops of the columns are in good condition and do not require repairs. When the lower portions of the columns are inspected during construction, it may be determined that repair of cracks and corrosion, or column replacement, is required. To extend their lives, the existing precast concrete columns to be retained and new replaced columns would be treated with an application of a surface applied corrosion

inhibitor, such as Sika FerroGard® 903 and an external fiber reinforced polymer coating, such as Simpson Strong-Tie composite strengthening system.

3.2.4 Electrical and Lighting

The existing electrical system comprises two utility services from Pacific Gas & Electric (PG&E). One of these services utilizes a 10KVA, 220V, 3 phase, 3 wire, 70A service for the existing reservoir circulating pumps; the second service utilizes a 25KVA, 220-120V, 1 Phase, 3 wire service for lighting, small power, and programmable logic controller (PLC) loads. The existing 3-phase electrical utility service would be maintained. No electrical utility improvement is proposed for the Project.

Lighting would be added to the interior of the reservoir, which would not illuminate the exterior. LED floodlights would be installed around the interior perimeter wall. The illumination level averages 2.97 footcandles in the reservoir, using 12 LED lighting fixtures. In addition, an emergency exit LED lighting fixture would be provided over each door. Power to the new lighting system would be via an underground conduit, stubbing up at the exterior wall to provide power to a new wall mounted lighting panelboard next to the north entrance to the reservoir.

3.2.5 Ventilation System

The reservoir currently operates with natural ventilation through low wall louvers (mesh screens) and a central roof opening (monitor). Condensation occurs when warm air, present within the reservoir, comes into contact with a cold surface (the reservoir's corrugated metal deck). The Project would eliminate the temperature differential through the use of insulated roof panels, so that condensation build-up within the reservoir would be minimized. Seismic retrofits of the roof system would rely on the structural metal deck to distribute seismic forces to the vertical lateral force resisting elements through diaphragm action. As such the roof monitor would be removed. The Project would replace the existing natural ventilation system with a forced air system to maintain airflow at least equal to that currently found within the reservoir to prevent the occurrence of chlorine gas pockets. The forced air system would monitor indoor temperature and humidity. When the interior space approaches the dew point, the system would ramp up to ventilate the space achieving a safe margin. The forced air system would include four ventilation fan units and would require installation of new variable frequency drives for the fans on the exterior wall of the reservoir building.

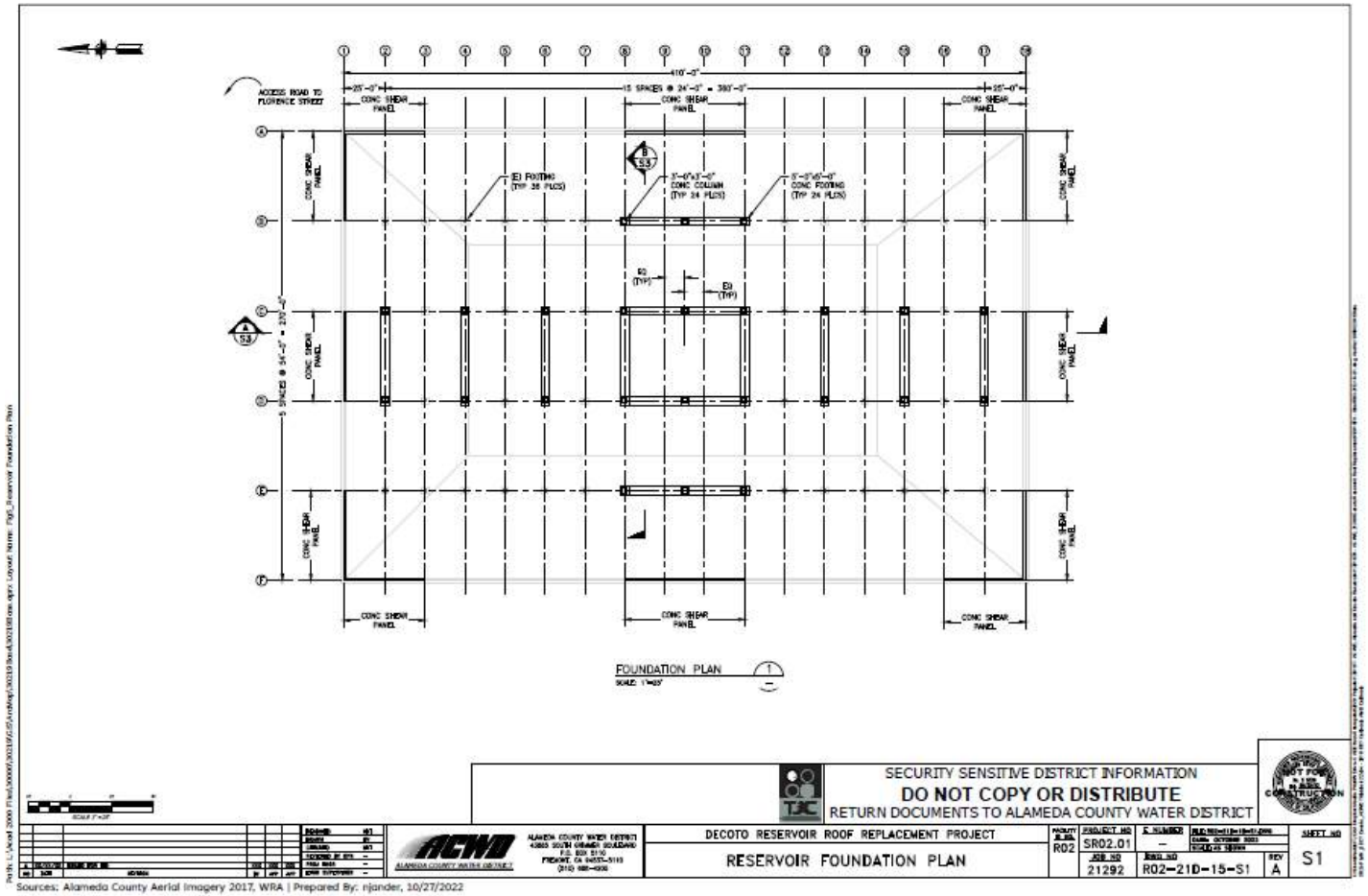


Figure 5. Reservoir Foundation Plan

Decoto Reservoir Improvement Project
Union City, California

Figure 5: Reservoir Foundation Plan Views

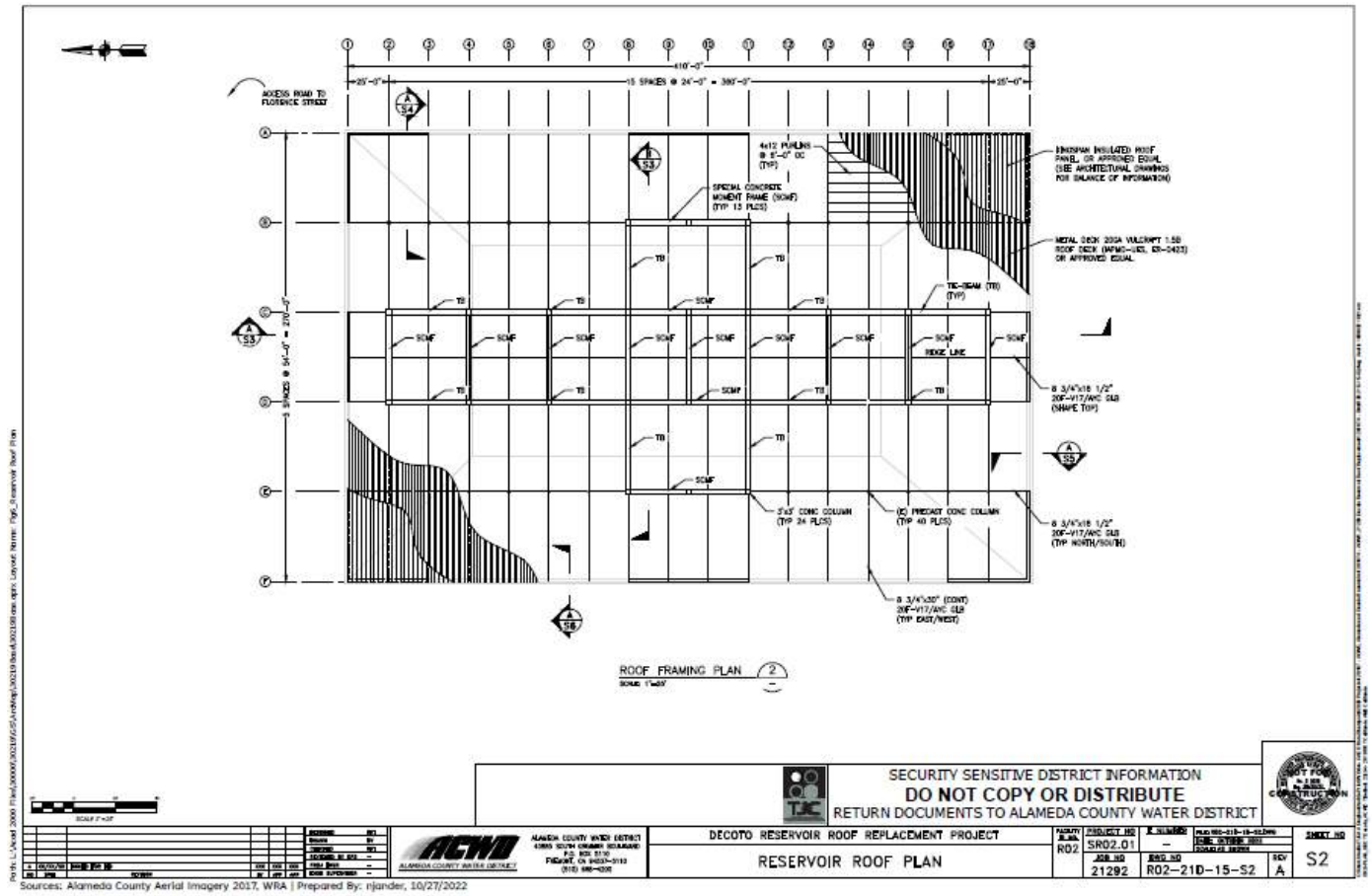


Figure 6. Reservoir Roof Plan

Decoto Reservoir Improvement Project
Union City, California

Figure 6: Reservoir Roof Plan

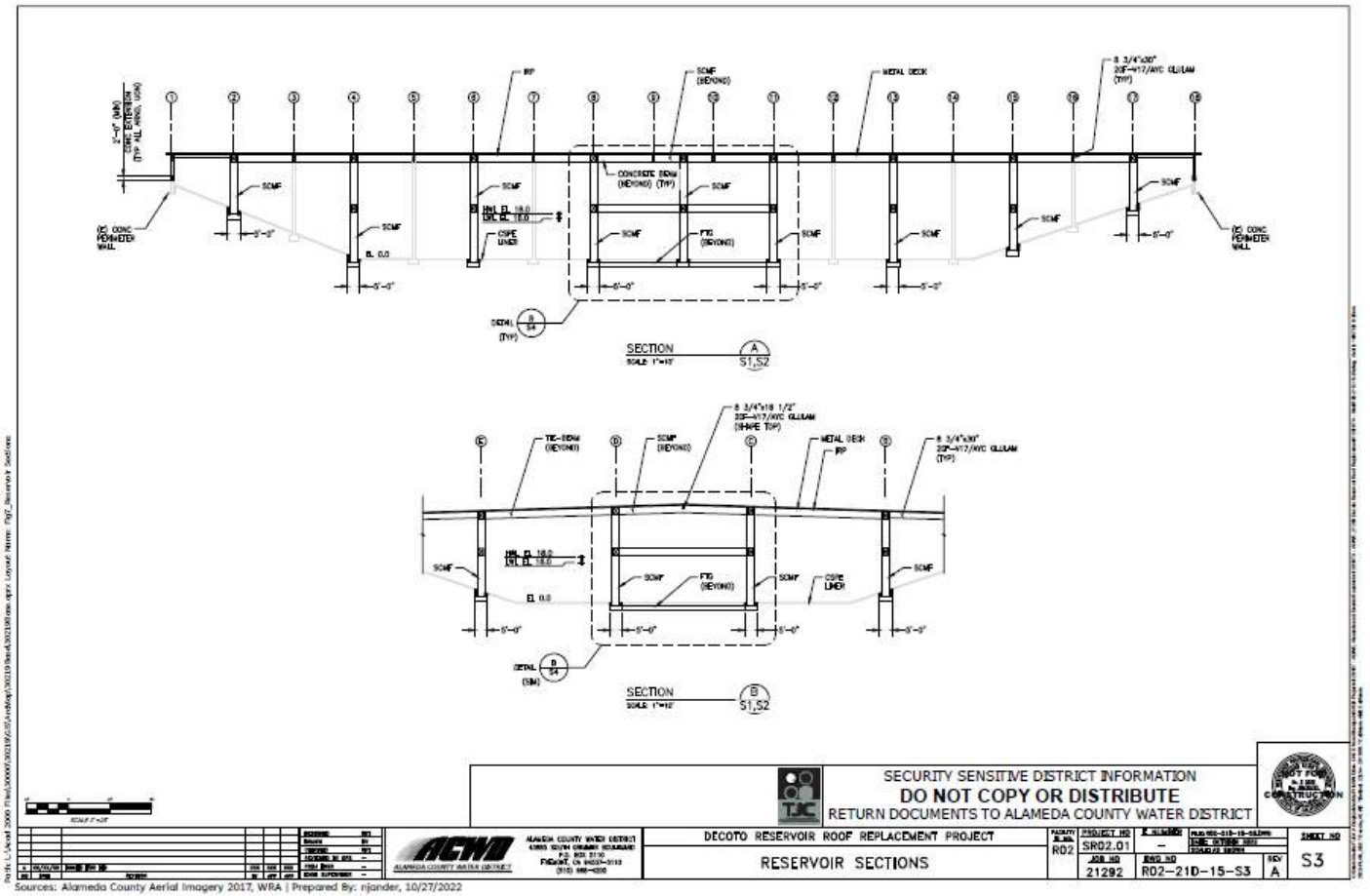


Figure 7. Reservoir Sections

Decoto Reservoir Improvement Project
Union City, California

Figure 7: Reservoir Sections

3.3 PROJECT CONSTRUCTION

3.3.1 Site Preparation, Staging and Material Storage

Prior to the start of construction, the reservoir would be taken out of service, drained, and isolated from the distribution system. The reservoir would be drained until the water surface is approximately four feet from the reservoir bottom. The remaining water would be processed to remove residual chlorine and then pumped and discharged to the on-site storm drain.

During construction, the contractor would have access to the site through the entrance off of Florence Street. The entrance road to the reservoir is shared with the public entrance and parking area for Seven Hills Park owned by the City of Union City. On the reservoir property is a paved access road, parking areas and perimeter road and the entire site is within a gated chain link fence. The staging areas would be within the inner 10 feet of the reservoir's perimeter road, directly adjacent to the reservoir walls, the paved area located near the site entrance, and the paved area on the northeast side of the reservoir (Figure 4). At least 10 feet of the paved road would be accessible around the perimeter of the reservoir and between the entrance and reservoir at all times. If additional staging areas are needed, the contractor may make a request to the District to use portions of the unpaved areas surrounding the perimeter road. Only areas that are not planted with trees would be considered for staging. Minor clearing and grubbing may be required at the discretion of the District.

3.3.2 Construction Equipment and Schedule

Construction of the proposed Project would include 6 phases. The construction phases are summarized in Table 1 and the estimated duration of each phase is provided in Table 2.

Table 1: Construction Phases

Phase	Description of Work Performed During Phase
1. Site Preparation and Mobilization	Establish material staging and storage areas, mobilize heavy equipment, tree protection.
2. Demolition of Existing Reservoir Roof and Off-haul Materials	Selective demolition of the roof monitor, concrete column and pavement, roof metal deck, glue laminated girders and purlins.
3. Installation of Lateral Force Resisting Systems and Concrete Perimeter Wall Improvements	Excavation and installation of concrete column foundations. Installation of columns and bracing members. Demolition of portions of perimeter wall and installation of new cast-in-place concrete wall extensions and shear panels.
4. Installation of New Roofing Structural Members and New Roof Deck	Installation of new glue-laminated girders, roof purlins, and new roof deck.
5. Installation of Ventilation and Interior Lighting System	Install new ventilation units and interior lighting fixtures.
6. Project closeout	Reservoir disinfection, site restoration and demobilization.

Site Preparation and Mobilization

In this preliminary phase, the contractor would prepare the site for work by establishing staging areas and bringing heavy construction equipment on-site. The District would draw down the reservoir using system demands and pump any remaining water into the on-site storm drain following dechlorination.

Demolition of Existing Reservoir Roof and Off-haul Materials

In this phase, a crane located along the perimeter driveway would be used for selective demolition of portions of the roof including the roof monitor, the roof corrugated metal deck, glue laminated timber girders and purlins, and concrete columns. The demolition materials would be loaded into approximately 20 dump trucks per day and hauled off-site for disposal or recycling over the 60-day demolition period.

Installation of Lateral Force Resisting Systems and Perimeter Wall

Following roof demolition, the new concrete columns and tie-beams would be installed followed by installation of the perimeter wall extensions and shear panels. The shear panels would be installed to about 1 foot below grade so some pavement removal and over-excavation would be performed. Concrete perimeter wall construction would include demolition of asphalt paving, sawcut and drilling of existing concrete, base compaction, installation of formwork and rebar, and pouring of concrete. The Project would result in approximately 550 cubic yards of cut and fill materials. The concrete columns would be replaced or repaired. The newly replaced columns and retained columns would be treated with corrosion inhibitor and an external fiber reinforced polymer coating for corrosion protection. Replacement of five valves including the 6-inch drain valve 24-inch check valve, 24-inch velocity valve, 24-inch altitude valve, and 30-inch inlet/outlet valve and valve stem could occur in this phase as well[1].

Installation of New Roofing Structural Members and New Roof Deck

In this phase, the new timber and metal roof structural members would be installed followed by the new metal deck and/or insulated roof panels across the top of the entire reservoir.

Installation of Ventilation and Interior Lighting System

The contractor would install the ventilation system and interior lighting with associated wiring and electrical conduit in this phase. Electrical wiring would be routed in existing spare conduit buried in the roadway from the existing electrical panel to the reservoir. From there, new electrical conduit would be routed along the existing perimeter walls or over the roof deck to the new light fixtures and fans.

[1] The drain valve, inlet/outlet valve, and valve stem are in the reservoir. The check valve, velocity valve, and altitude valve are outside the reservoir in the valve vault within the project site.

Project Closeout

In this final phase, the reservoir would be filled, disinfected, and placed back into service. The areas used for construction activities surrounding the reservoir would be restored, including replanting areas used for staging equipment, demobilizing construction equipment, and conducting final paving.

Table 2: Preliminary Construction Schedule

Phase	Duration of Phase	Anticipated Start Date	Anticipated End Date
1. Site Preparation and Mobilization	4 weeks	October-2024	November-2024
2. Demolition of Existing Reservoir Roof and Off-haul Materials	12 weeks	November 2024	March-2025
3. Installation of Lateral Force Resisting Systems and Concrete Perimeter Wall Improvements	8 weeks	March-2025	May-2025
4. Installation of New Roofing Structural Members and New Roof Deck	20 weeks	May 2025	October 2025
5. Installation of Ventilation and Interior Lighting System	8 weeks	October-2025	December 2025
6. Project Closeout*	8 weeks	December 2025	February 2026
* To be conservative in the analysis, this schedule assumes that the construction period will go through February 2026, which is one month longer than the currently planned construction schedule.			

Typical construction equipment that is anticipated to be required during construction is listed below in Table 3. Construction hours shall be limited to the hours of 7:00 a.m. to 5:00 p.m. Monday through Friday, and to the hours of 9:00 a.m. to 6:00 p.m. on Saturdays and holidays if needed. Per the City of Fremont Noise Ordinance, construction activities are not allowed within 500 feet of residences on weekends and City-recognized holidays.

Table 3: Construction Equipment and Number of Construction Vehicle Trips

Equipment	Total Number of Equipment	Total Construction Vehicle Trips Per Phase	Average Number of Construction Trips Per Day[1]
Demolition Phase (60 days)			
Boom Truck[2]	1	2	--
Dump Trucks	--	1,200	20
TOTAL:	**1**	**1,202**	**20**
Construction Phase (160 days)			

Equipment	Total Number of Equipment	Total Construction Vehicle Trips Per Phase	Average Number of Construction Trips Per Day[1]
Material Handling Crane	1	2	--
Backhoe	2	--	--
Boom Truck[2]	1	2	--
Vendor Trucks	--	120	1
Concrete Pump Truck[3]	--	30	1
Concrete Trucks[3]	--	40	2
Contractor/Personal Vehicles	--	3,200	20
TOTAL:	**4**	**3,394**	**24**

[1] Depicts round trips.

[2] One truck would be present during the entire duration of the phase.

[3] Assumes three distinct concrete placements over a 3-day duration.

3.4 OPERATION AND MAINTENANCE ACTIVITIES

Like all water storage facilities, the reservoir would be visited by District staff regularly for inspections and maintenance. The reservoir perimeter may be visually inspected daily by District staff. Samples of the finished water in the reservoir would be taken approximately three to seven times per week. No samples would be collected during Project construction since the reservoir would be drained empty. The isolation valve would be exercised on an annual basis as needed. The ventilation equipment will be checked, the filter replaced as needed and mechanical problems repaired.

3.5 REQUIRED PERMITS AND APPROVALS

The District is the Lead Agency under CEQA. This Initial Study (IS) would provide the City of Fremont, other public agencies, and the general public with relevant environmental information to use in considering the Project. The District anticipates that there will be no discretionary approvals required from the City of Fremont for the Project. There are two permits required for this Project:

- The water system permit amendment from the State Water Resources Control Board Division of Drinking Water (DDW)
- A permit from the Department of safety of Dams (DSOD) for modifications to the jurisdictional dams which comprise three sides of the reservoir

4.0 ENVIRONMENTAL SETTING, CHECKLIST, AND IMPACT DISCUSSION

4.1 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this Project, involving at least one impact that is potentially significant unless mitigation is incorporated, as indicated by the checklist on the following pages.

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

The discussion for each environmental factor includes the following subsections:

• **Environmental Setting** – This subsection 1) provides a brief overview of relevant plans, policies, and regulations that compose the regulatory framework for the Project and 2) describes the existing, physical environmental conditions at the Project site and in the surrounding area, as relevant.

• **Impact Discussion** – This subsection 1) includes the recommended checklist questions from Appendix G of the CEQA Guidelines to assess impacts and 2) discusses the Project's impact on the environmental subject as related to the checklist questions. For significant impacts, feasible mitigation measures are identified. "Mitigation measures" are measures that will minimize, avoid, or eliminate a significant impact (CEQA Guidelines Section 15370). Each impact is numbered to correspond to the checklist question being answered. For example, Impact BIO-1 answers the first checklist question in the Biological Resources section. Mitigation measures are also numbered to correspond to the impact they address. For example, MM BIO-1.3 refers to the third mitigation measure for the first impact in the Biological Resources section.

4.2 INITIAL STUDY CHECKLIST

The following sections describe the existing environmental conditions in and near the Project area and evaluate environmental impacts associated with the proposed Project. The environmental checklist, as recommended in the CEQA Guidelines (Appendix G), was used to identify environmental impacts that

could occur if the proposed Project is implemented. The right-hand column in the checklist lists the source(s) for the answer to each question. The cited sources are identified at the end of this section.

Each of the environmental categories was fully evaluated, and one of the following four determinations was made for each checklist question:

- **"No Impact"** means that no impact to the resource would occur as a result of implementing the Project.
- **"Less than Significant Impact"** means that implementation of the Project would not result in a substantial and/or adverse change to the resource, and no mitigation measures are required.
- **"Less than Significant with Mitigation Incorporated"** means that the incorporation of one or more mitigation measures is necessary to reduce the impact from potentially significant to less than significant.
- **"Potentially Significant Impact"** means that there is either substantial evidence that a Project-related effect may be significant, or due to a lack of existing information, could have the potential to be significant.

4.2.1 Aesthetics

Except as provided in Public Resources Code Section 21099, would the Project:	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☐	☒
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

Regulatory Setting

State

Streets and Highway Code Sections 260 through 263

The California Scenic Highway Program (Streets and Highway Code, Sections 260 through 263) is managed by the California Department of Transportation (Caltrans). The program is intended to protect and enhance the natural scenic beauty of California highways and adjacent corridors through special conservation treatment. California Route 84 (CA-84) from California Route 238 (CA-238) to Interstate 680 is an officially designated State Scenic Highway.[2] This segment of CA-84 is approximately 1.7 miles southeast of the Project site and is separated by hillside open spaces. As such, the site is not visible from the scenic highway.

Local

City of Fremont 2030 General Plan

The proposed Project would be subject to the aesthetic and design policies of the City Fremont's General Plan, as described in Table 4 below.

[2] *California Department of Transportation. "California State Scenic Highway System Map". Accessed February 23, 2022. https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa.*

Table 4: City of Fremont 2030 General Plan Policies

Policy	Description
Policy 4-4.6	• Lighting shall be restrained and targeted to its purpose to protect dark skies, reduce glare and glow and promote sustainability. Ensure that the lighting of exterior spaces, including streetlights and building illumination, contributes to the overall quality of public space. Lighting should be used to improve safety and nighttime visibility, as well as to reinforce the character of corridors, centers, and neighborhoods. Variations in lighting should help define street function, highlight important intersections, and define edges and activity centers. • Lighting should utilize technology and design approaches that minimize energy use and associated impacts.
Policy 4-5.1	• Provide visual buffers or screening between adjacent uses which are potentially incompatible, such as industrial and residential uses. Buffers may consist of streets, setbacks, open space, landscaping, building design, reductions in height and bulk, and other site planning methods which minimize the impacts of a particular use on its neighbors. On a smaller scale, activities on individual development sites which could detract from the visual quality or enjoyment of a property—such as mechanical equipment and trash collection areas—should be appropriately screened and buffered.
Policy 4-5.5	• Maintain a network of designated scenic routes through Fremont. The visual features which contribute to scenic designations should be protected through land use, transportation, and capital improvement decisions, as well as landscaping, operations, and maintenance activities along these corridors. • A particular road or corridor may be considered scenic by virtue of its design or amenities, the terrain and natural features it traverses, or the views and visual importance it commands. In Fremont's case, the designation expresses intent to maintain or improve visual quality but does not necessarily limit abutting uses. For example, the designation of an arterial as a locally scenic roadway could affect the City's decision to use landscaping versus sound walls, or could result in a particular gateway being assigned a higher priority for improvement.

Union City 2040 General Plan

The proposed Project would be subject to the aesthetic and design policies of Union City's General Plan, as described below.

Goal RC-1:

- Policy: RC-1.2 Protect Scenic Views. The City shall strive to protect areas of outstanding natural scenic qualities and outstanding views of natural or manmade significance, such as ridgelines and valley sides in the eastern hillsides and the critical wetland areas at the western end of the

city through regulation, public acquisition, or dedication of development rights or scenic easements.

Environmental Setting

The Project is located on an approximately 4.8-acre site off of Florence Street and southeast of Seven Hills Park in Union City, although the reservoir itself is located on an elevated hillside in the City of Fremont. The Project site, Decoto Reservoir, is surrounded by a paved and gated access road and is landscaped with trees and bushes that serve to screen the reservoir from the surrounding land uses. Views of the Project site and surrounding land uses are shown in Figure 7 below.

The surrounding area is mostly comprised of hillside open space, with Seven Hills Park located approximately 500 feet northwest of the Project site. Residential neighborhoods consisting of single-family homes and apartments are located in the greater vicinity of the Project site. There is one single-family residence located approximately 500 feet east of the Project site. The surrounding neighborhood land uses are shown in Figure 3.

Paseo Padre Parkway (from CA-84 to East Warren Avenue) is designated as a scenic corridor in the City of Fremont General Plan. This designation expresses an intent to maintain or improve visual quality, but it does not limit the abutting uses. The Project site is located approximately 1.5 miles northeast of Paseo Padre Parkway. The Project site is located on an elevated hill face and is generally screened from view by trees. Mission Boulevard is designated as a scenic roadway in the City of Fremont General Plan. The segment of Mission Boulevard (from Union City border to Interstate-880/Warren Avenue Interchange) is also considered a scenic corridor. The Project site is located approximately 960 feet northeast of the Mission Boulevard scenic corridor. Due to the surrounding residential uses, the Project site is also screened from public views by trees and single-family homes from the Mission Boulevard scenic corridor.

Figure 8: Views of the Project Site and Surrounding Land Uses

Access road to the Project site, looking north from the Project site.

Access road to the Project site, looking north from the gate.

Open space and a tennis court within the Seven Hills Park located northwest of the Project site.

Looking at the reservoir from the southwest corner of the Project site with open space in the background.

Open space and trees located west of the Project site

Open space located east of the Project site.

Discussion of Impacts

a) *Have a substantial adverse effect on a scenic vista?*

No Impact. There are no scenic vistas within the Project site or parcels adjacent to the Project site. The Project site does not provide visual access to any scenic vista. Although Paseo Padre Parkway and Mission Boulevard are designated scenic corridors, the Project site is not visible from either roadway. Views of the Project site are limited as the site is blocked by landscaping including trees and bushes that serve to screen the reservoir from the surrounding neighborhood and roadways. The views of the on-site facilities from the approach along Florence Street are partially hidden by vegetation. For these reasons, the proposed Project would not block any scenic vistas from area residences. No impacts would occur.

b) *Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?*

No Impact. The location of the proposed Project site is not within or visible from a designated state scenic highway. The purpose of the Project is to replace the roof and roof framing system, the liner and valves and associated piping, and seismically upgrade the reservoir. Upon Project completion, the visual appearance of the Project area would be similar to existing conditions. For these reasons, the proposed Project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. No impacts would occur.

c) *In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?*

No Impact. The Project is located in an urbanized area, the purpose of the Project is to replace the roof and roof framing system, the liner and valves and associated piping, and seismically upgrade the reservoir on-site. Therefore, the Project would not introduce an aesthetic element that would be inconsistent with the existing visual character in the Project area. Upon Project completion, the visual appearance of the Project area would be similar to existing conditions. No tree removal is anticipated, so there would be no impacts to any potential landmark trees. The Project would not conflict with any applicable zoning and other regulations governing scenic quality. No impacts would occur.

d) *Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*

No Impact. As proposed, the Project would add lighting to the interior of the reservoir, which would not illuminate the exterior. Since Project lighting would not illuminate the exterior of the reservoir, no new sources of light would be introduced to the Project area. In terms of glare, the current roof deck is corrugated steel painted a matte off-white color. Proposed materials to be used for the new roof deck are insulated roof panels or a painted metal deck. The proposed materials would be similar to the existing materials (light color with a matte finish) and would therefore not subject the site to new glare. For these reasons, the proposed Project lighting

would not adversely affect day or nighttime views in the Project area, or create new sources of substantial light or glare, and there would be no impact.

4.2.2 Agricultural and Forestry Resources

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the Project:	***Potentially Significant Impact***	***Less than Significant Impact with Mitigation Incorporated***	***Less than Significant Impact***	***No Impact***
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?	☐	☐	☐	☒

Regulatory Setting

Farmland Mapping and Monitoring Program

The California Department of Conservation's Farmland Mapping and Monitoring Program (FMMP) assesses the location, quality, and quantity of agricultural land and conversion of these lands over time. Agricultural land is rated according to soil quality and irrigation status. The best quality land is called Prime Farmland. In CEQA analyses, the FMMP classifications and published county maps are used, in part, to identify whether agricultural resources that could be affected are present on-site or in the Project area.[3]

California Land Conservation Act

The California Land Conservation Act (Williamson Act) enables local governments to enter into contracts with private landowners to restrict parcels of land to agricultural or related open space uses. In return, landowners receive lower property tax assessments. In CEQA analyses, identification of properties that are under a Williamson Act contract is used to also identify sites that may contain agricultural resources or are zoned for agricultural uses.[4]

Fire and Resource Assessment Program

The California Department of Forestry and Fire Protection (CAL FIRE) identifies forest land, timberland, and lands zoned for timberland production that can (or do) support forestry resources.[5] Programs such as CAL FIRE's Fire and Resource Assessment Program and are used to identify whether forest land, timberland, or timberland production areas that could be affected are located on or adjacent to a project site.[6]

Environmental Setting

The Project site is located on the edge of a developed, residential area in the City of Fremont, and is not used for agricultural or forestry purposes. Parcels on three sides of the Project site are zoned for Open Space and single-family residential. No land adjacent to the Project site is used for or designated as farmland, timberland or forest land. The site is designated as *Urban and Built-Up Land.*[7] Common

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[3] *California Department of Conservation. "California Important Farmland Finder." Accessed February 22, 2022. https://maps.conservation.ca.gov/DLRP/CIFF/.*

[4] *California Department of Conservation. "Williamson Act." http://www.conservation.ca.gov/dlrp/lca.*

[5] *Forest Land is land that can support 10 percent native tree cover and allows for management of forest resources (California Public Resources Code Section 12220(g)); Timberland is land not owned by the federal government or designated as experimental forest land that is available for, and capable of, growing trees to produce lumber and other products, including Christmas trees (California Public Resources Code Section 4526); and Timberland Production is land used for growing and harvesting timber and compatible uses (Government Code Section 51104(g)).*

[6] *California Department of Forestry and Fire Protection. "Fire and Resource Assessment Program." Accessed February 22, 2022. http://frap.fire.ca.gov/.*

[7] *Farmland Mapping and Monitoring Program. Alameda County Important Farmland 2018. Available at: https://www.conservation.ca.gov/dlrp/fmmp/Pages/Alameda.aspx Accessed on February 22, 2022.*

examples of Urban and Built-Up Land include urban residential, industrial, and commercial uses; golf courses; landfills; airports; sewage treatment; and water control structures. The Project site is not subject to a Williamson Act contract.

Discussion of Impacts

a-e) *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? Conflict with existing zoning for agricultural use, or a Williamson Act contract? 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))? Result in a loss of forest land or conversion of forest land to non-forest use? Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?*

No Impact. The Project area is designated *Urban and Built-Up Land* on the Alameda County Important Farmland 2018 map.[8] As the Project would be constructed within existing right-of-way and utility easements, it would not result in the conversion or loss of prime farmland, unique farmland, or farmland of statewide importance to non-agricultural use.

The Project site is not under a Williamson Act contract. Therefore, there would be no conflict with existing zoning for agriculture use or a Williamson Act contract. The Project site and surrounding area are located in a developed area and not zoned for forest land or timberland. Therefore, the Project would not conflict with existing zoning, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production. Neither the Project site, nor any of the properties adjacent to the Project site or in the vicinity, are used for forest land or timberland. Therefore, the proposed Project would not impact forest land or timberland. The Project would not result in the conversion of forest or farmlands to other uses. No impacts would occur.

[8] *Farmland Mapping and Monitoring Program. Alameda County Important Farmland 2018. Available at:* https://www.conservation.ca.gov/dlrp/fmmp/Pages/Alameda.aspx *Accessed on July 28, 2021.*

4.2.3 Air Quality

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

Regulatory Setting

Federal and State

Clean Air Act

At the federal level, the United States Environmental Protection Agency (EPA) is responsible for overseeing implementation of the Clean Air Act and its subsequent amendments. The federal Clean Air Act requires the EPA to set national ambient air quality standards for the six common criteria pollutants, including particulate matter (PM), ozone (O_3), carbon monoxide (CO), sulfur oxides (SO_X), nitrogen oxides (NO_X), and lead. California Air Resources Board (CARB) is the state agency that regulates mobile sources throughout the state and oversees implementation of the state air quality laws and regulations, including the California Clean Air Act. The EPA and the CARB have adopted ambient air quality standards establishing permissible levels of these pollutants to protect public health and the climate. Violations of ambient air quality standards are based on air pollutant monitoring data and are determined for each air pollutant. Attainment status for a pollutant means that a given air district meets the standard set by the EPA and/or CARB.

Risk Reduction Plan

To address the issue of diesel emissions in the state, CARB developed the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. In addition to requiring more stringent emission standards for new on-road and off-road mobile sources and stationary diesel-fueled engines to reduce particulate matter emissions by 90 percent, the plan involves application of emission control strategies to existing diesel vehicles and equipment to reduce diesel particulate matter (DPM) (in additional to other pollutants). Implementation of this plan, in conjunction with stringent federal and

CARB-adopted emission limits for diesel fueled vehicles and equipment (including off-road equipment), will significantly reduce emissions of DPM and NO_X.

Regional

2017 Clean Air Plan

The Bay Area Air Quality Management District (BAAQMD) is the agency primarily responsible for assuring that the federal and state ambient air quality standards are maintained in the San Francisco Bay Area. Regional air quality management districts, such as BAAQMD, must prepare air quality plans specifying how state and federal air quality standards will be met. BAAQMD's most recently adopted plan is the Bay Area 2017 Clean Air Plan (2017 CAP). The 2017 CAP focuses on two related BAAQMD goals: protecting public health and protecting the climate. To protect public health, the 2017 CAP describes how BAAQMD will continue its progress toward attaining state and federal air quality standards and eliminating health risk disparities from exposure to air pollution among Bay Area communities. To protect the climate, the 2017 CAP includes control measures designed to reduce emissions of methane and other super-greenhouse gases (GHGs) that are potent climate pollutants in the near-term, and to decrease emissions of carbon dioxide by reducing fossil fuel combustion.[9]

CEQA Air Quality Guidelines

The BAAQMD CEQA Air Quality Guidelines are intended to serve as a guide for those who prepare or evaluate air quality impact analyses for projects and plans in the San Francisco Bay Area.

Jurisdictions in the San Francisco Bay Area Air Basin utilize the thresholds and methodology for assessing air quality impacts developed in the BAAQMD CEQA Air Quality Guidelines. The guidelines include information on legal requirements, BAAQMD rules, methods of analyzing impacts, and recommended mitigation measures.

Local

City of Fremont Municipal Code

The City of Fremont's Municipal Code provides measures to reduce construction-related fugitive dust and exhaust emissions. The portions of the Municipal Code that are relevant for this Project are as follows:

[9] *BAAQMD. Final 2017 Clean Air Plan. April 19, 2017. http://www.baaqmd.gov/plans-and-climate/air-quality- plans/current-plans.*

Chapter 18.218.050 Standard Development Requirements. (a) Air Quality

(1) Construction Related Emissions. The following construction measures, as periodically amended by BAAQMD, are required for all proposed development projects[10] to reduce construction-related fugitive dust and exhaust emissions:

A. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times daily.

B. All haul trucks transporting soil, sand, or other loose material off site shall be covered.

C. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

D. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.

E. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

F. 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 airborne toxics control measure Title 13, Section 2485 of California Code of Regulations (CCR)). Clear signage shall be provided for construction workers at all access points.

G. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

H. A publicly visible sign shall be posted with the telephone number and person to contact regarding dust complaints. This person shall respond and take corrective action within 48 hours. BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

(2) Construction Related Emissions – Supplemental Measures. The following supplemental construction measures, as periodically amended by BAAQMD, are required for all proposed development projects that would exceed the thresholds of significance for construction criteria air pollutant and precursors provided in the most recent BAAQMD CEQA Guidelines:

[10] *"Development projects" under Chapter 18.218.050 shall mean the placement or erection of any solid material or structure; discharge or disposal of any dredged material or any gaseous, liquid, solid or thermal waste; grading, removing, dredging, mining or extraction of any soil or materials; change in the density or intensity of use of land including, but not limited to, amendments to the general plan and zoning ordinance or subdivision pursuant to the State Subdivision Map Act (commencing with Cal. Gov't Code § 66410), and any other division of land, including lot splits, except where the land division is brought about in connection with the purchase of such land by a public agency for public recreational use; change in the intensity of use of water, or of access thereto; construction, reconstruction, demolition or alteration of the size of any structure, including any facility of any private, public or municipal utility; and the removal of any major vegetation. As used in the municipal code, "structure" includes, but is not limited to, any building, road, pipe, flume, conduit, siphon, aqueduct, telephone line, and electrical power transmission and distribution line.*

A. All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.

B. All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.

C. Wind breaks (e.g., trees, fences) shall be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50 percent air porosity.

D. 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.

E. The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the total area of surfaces disturbed at any one time.

F. All trucks and equipment, including their tires, shall be washed off prior to leaving the site.

G. Site accesses to a distance of 100 feet from the paved road shall be treated with a six- to 12-inch compacted layer of wood chips, mulch, or gravel.

H. 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.

I. Idling time of diesel-powered construction equipment shall be limited to two minutes.

J. The Project shall develop a plan demonstrating that the off-road equipment (more than 50 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a Project-wide fleet-average 20 percent nitrogen oxide (NOx) reduction and 45 percent particulate matter (PM) reduction compared to the most recent Air Resources Board fleet average. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available.

K. Low volatile organic compound (i.e., reactive organic gas) coatings (i.e., BAAQMD Regulation 8, Rule 3: Architectural Coatings) shall be used.

L. All construction equipment, diesel trucks, and generators shall be equipped with best available control technology for emission reductions of NOx and PM.

M. All contractors shall use equipment that meets the Air Resources Board's most recent certification standard for off-road heavy-duty diesel engines.

Environmental Setting

Criteria Pollutants

Air quality in the San Francisco Bay Area is assessed related to six common air pollutants (referred to as criteria pollutants), including ground-level O_3, NOx, PM, CO, SOx, and lead. Criteria pollutants are

regulated because they result in health effects. An overview of the sources of criteria pollutants and their associated health effects are summarized in Table 5. The most regulated criteria pollutants in the Bay Area are discussed further below.

Table 5: Health Effects of Air Pollutants

Pollutants	Sources	Primary Effects
Ozone (O_3)	Atmospheric reaction of organic gases with nitrogen oxides in sunlight	• Aggravation of respiratory and cardiovascular diseases • Irritation of eyes, cardiopulmonary function impairment
Nitrogen Dioxide (NO_2)	Motor vehicle exhaust, high temperature stationary combustion, atmospheric reactions	• Aggravation of respiratory illness • Reduced visibility
Fine Particulate Matter ($PM_{2.5}$) and Coarse Particulate Matter (PM_{10})	Stationary combustion of solid fuels, construction activities, industrial processes, atmospheric chemical reactions	• Reduced lung function, especially in children • Aggravation of respiratory and cardiorespiratory diseases • Increased cough and chest discomfort • Reduced visibility
Toxic Air Contaminants (TACs)	Cars and trucks, especially diesel-fueled; industrial sources, such as chrome platers; dry cleaners and service stations; building materials and products	• Cancer • Chronic eye, lung, or skin irritation • Neurological and reproductive disorders

High O_3 levels are caused by the cumulative emissions of reactive organic gases (ROG) and NO_x. These precursor pollutants react under certain meteorological conditions to form high O_3 levels. Controlling the emissions of these precursor pollutants is the focus of the Bay Area's attempts to reduce O_3 levels. The highest O_3 levels in the Bay Area occur in the eastern and southern inland valleys that are downwind of air pollutant sources.

PM is a problematic air pollutant of the Bay Area. PM is assessed and measured in terms of respirable particulate matter or particles that have a diameter of 10 micrometers or less (PM_{10}) and fine particulate matter where particles have a diameter of 2.5 micrometers or less ($PM_{2.5}$). Elevated concentrations of PM_{10} and $PM_{2.5}$ are the result of both region-wide emissions and localized emissions.

Toxic Air Contaminants (TACs)

TACs are a broad class of compounds known to have health effects. They include but are not limited to criteria pollutants. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, diesel fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter [DPM] near a freeway).

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs. Diesel exhaust is a complex mixture of gases, vapors, and fine particles.

Medium- and heavy-duty diesel trucks represent the bulk of DPM emissions from California highways. The majority of DPM is small enough to be inhaled into the lungs. Most inhaled particles are subsequently exhaled, but some deposit on the lung surface or are deposited in the deepest regions of the lungs (most susceptible to injury).[11] Chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by CARB.

Sensitive Receptors

Some groups of people are more affected by air pollution than others. CARB has identified the following persons who are most likely to be affected by air pollution: children under 16, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, and elementary schools.

The Bay Area is considered a non-attainment area for ground-level O_3 and $PM_{2.5}$ under both the federal Clean Air Act and state Clean Air Act. The area is also considered nonattainment for PM_{10} under the state act, but not the federal act. The area has attained both state and federal ambient air quality standards for CO. As part of an effort to attain and maintain ambient air quality standards for O_3 and PM_{10}, BAAQMD has established thresholds of significance for these air pollutants and their precursors. These thresholds are for O_3 precursor pollutants (ROG and NO_X), PM_{10}, and $PM_{2.5}$, and apply to both construction period and operational period impacts.

There are no hospitals, daycare facilities, elder care facilities, or elementary schools within a quarter mile of the Project area that would be considered sensitive receptors for the Project. The closest existing sensitive receptors to the Project site are the residences surrounding the Decoto Reservoir facility, with the nearest home located approximately 150 feet away from the property line. The Project would not introduce any new sensitive receptors to the Project area.

Discussion of Impacts

Thresholds of Significance

As discussed in CEQA Guidelines Section 15064(b), the determination of whether a project may have a significant effect on the environment calls for judgment on the part of the lead agency and must be based to the extent possible on scientific and factual data. The District has considered the air quality thresholds updated by BAAQMD in 2022 and regards these thresholds to be based on the best information available for the San Francisco Bay Area Air Basin and conservative in terms of the assessment of health effects associated with TACs and $PM_{2.5}$. The BAAQMD CEQA Air Quality thresholds used in this analysis are identified in Table 6.

[11] *California Air Resources Board. "Overview: Diesel Exhaust and Health." Accessed February 22, 2022. https://www.arb.ca.gov/research/diesel/diesel-health.htm.*

Table 6: BAAQMD Air Quality Significance Thresholds

Pollutant	Construction Thresholds	Operation Thresholds	
	Average Daily Emissions (pounds/day)	Average Daily Emissions (pounds/ day)	Annual Average Emissions (tons/year)
Criteria Air Pollutants			
ROG, NO_x	54	54	10
PM_{10}	82 (exhaust)	82	15
$PM_{2.5}$	54 (exhaust)	54	10
CO	Not Applicable	9.0 parts per million (eight-hour) or 20.0 parts per million (one-hour)	
Fugitive Dust	Dust Control Measures/Best Management Practices	Not Applicable	
Health Risks and Hazards for New Sources (within a 1,000-foot Zone of Influence[1])			
Health Hazard	**Single Source**	**Combined Cumulative Sources**	
Excess Cancer Risk	10 per one million	100 per one million	
Hazard Index	1.0	10.0	
Incremental Annual $PM_{2.5}$	0.3 microgram per cubic meter	0.8 microgram per cubic meter (average)	

[1] Zone of Influence refers to the radius around the Project boundary used to identify the area potentially impacted by emissions generated at the Project site.

a) *Conflict with or obstruct implementation of the applicable air quality plan?*

Less-Than-Significant Impact. Determining consistency with BAAQMD 2017 CAP involves assessing whether a project would alter the population growth and vehicle miles traveled assumptions of the CAP. Construction of the Project would not be considered growth-inducing as it would not in and of itself increase the region's population or provide expanded infrastructure that would remove an existing constraint on growth in the region. Since the construction of the Project would be short-term and temporary and there would be no long-term operational component to the Project that would generate air emissions, it would not

generate substantial new vehicle trips in the Air Basin that would conflict with the 2017 CAP. (See vehicle trip discussion below.) As a result, the Project would not conflict with or obstruct implementation of the Plan, and this impact would be less than significant.

b) *Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?*

Less-Than-Significant Impact. The Bay Area is a non-attainment area for ground-level ozone and $PM_{2.5}$ under both the Federal Clean Air Act and the California Clean Air Act. The Bay Area is also a non-attainment area for PM_{10} under the California Clean Air Act.

Construction Period Emissions

Construction activity is anticipated to include demolition, installation of the lateral force resisting system, installation of new roofing structural members and new roof deck, installation of a ventilation system, and installation of an interior lighting system. Construction activity would occur between 2024 and 2026 with a maximum of 330 working days (approximately sixteen months of construction). Vehicle trips were estimated to be approximately 20 trips per day during the 60-day demolition phase, and 24 trips per day during the 265-day construction phase.

Construction emissions were estimated for a similar size project, the Alameda Reservoir Roof Replacement Project, using the California Emissions Estimator Model (CalEEMod) version 2020.4.0. The Alameda Reservoir Roof Replacement Project is also located in the City of Fremont, approximately 9 miles south of the Project site, and includes similar construction activities (e.g., demolition, installation of new roofing and roof deck, installation of a ventilation system, and installation of interior lighting system) as the proposed Project. Both projects have similar construction phasing, equipment list, truck trips, and seismic retrofit improvements. Therefore, the CalEEMod modeling conducted for the Alameda Reservoir Improvements Project would be applicable for the proposed Project and was used to analyze the air quality impacts resulting from the proposed Project. Complete CalEEMod results and assumptions can be viewed in Appendix A. Table 7 summarizes the estimated annual and average daily construction emissions for the Alameda Reservoir Improvements Project. As shown in Table 7, the anticipated construction emissions are below the BAAQMD thresholds. The proposed Project is anticipated to result in similar construction emissions as the Alameda Reservoir Roof Replacement Project as shown in Table 7. Therefore, impacts would be less than significant.

Table 7:

Unmitigated Construction Period Emissions for the Alameda Reservoir Roof Replacement Project

Year	ROG	NOx	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
Unmitigated Construction Emissions Per Year (Tons)				
2022	0.04	0.49	0.018	0.016

Year	ROG	NOx	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
2023	0.05	0.52	0.023	0.021
Total	0.09	1.01	0.041	0.037

Daily Construction Emissions (Pounds)				
Average (assuming 220 construction days)*	0.8	9.2	0.37	0.34
BAAQMD Thresholds (pounds per day)	54	54	82	54
Exceed Threshold?	**No**	**No**	**No**	**No**

*Note: The proposed Project construction activities would last up to 330 days, 110 days longer than the Alameda Reservoir Roof Replacement Project (220 days). However, the total estimated construction emission per year would be similar for both projects. As a result, the proposed Project would generate less daily construction emissions than the Alameda Reservoir Improvements Project.

Operational Period Emissions

The existing Decoto Reservoir has minor equipment that operates on electrical power. The proposed Project would result in the continued operation of the Decoto Reservoir with a minor increase in electricity demand to operate the new ventilation system and lighting. No operational emissions, with the exception of vehicle trips associated with maintenance and inspection by District staff, would occur. The Project would not involve the addition of any other stationary equipment that would result in air pollutant emissions. The Project would not increase vehicle traffic to or from the Project site compared to the existing condition. For these reasons, Project operation would not result in an increase of air pollutant emissions.

c) *Expose sensitive receptors to substantial pollutant concentrations?*

Less-Than-Significant Impact with Mitigation Incorporated.

Toxic Air Contaminants

Construction equipment and heavy-duty truck operation associated with construction activities generate TACs in the form of diesel exhaust and fugitive dust. The nearest sensitive receptors to the Project site are two residences located to the southeast and east of the Decoto Reservoir facility, approximately 150 feet and 500 feet away from the property line, respectively.

Residences located to the west of the reservoir along Mission Boulevard are also considered sensitive receptors located within 1,000 feet from the Project site. The residents are assumed to be present and exposed during all the construction activities, which would last for approximately a year. Due to the proximity of residential sensitive receptors to the Project site, the construction activities are considered to result in potentially significant impacts in terms of excess cancer risk to any sensitive receptors present as well as resulting from increased annual $PM_{2.5}$ concentrations caused by construction equipment and traffic exhaust and fugitive dust. Therefore, the Project would incorporate measures contained in section 18.218.050 of the City of Fremont's Municipal Code (MM AIR-1.1, shown below) to reduce fugitive dust and exhaust emissions.

Impact AIR-1: The proposed Project could result in potentially significant cancer risk impacts to sensitive receptors or increased annual $PM_{2.5}$ concentrations caused by construction equipment and traffic exhaust and fugitive dust.

Mitigation Measures: The following mitigation measures would be implemented during all demolition and construction activities to reduce TAC emission impacts:

MM AIR-1.1: During any construction period requiring ground disturbance, the District shall ensure that the Project contractor implements measures to control dust and exhaust. Implementation of the measures recommended by Bay Area Air Quality Management District (BAAQMD) and listed below would reduce the air quality impacts associated with grading and new construction to a less-than-significant level. In addition to the measures recommended by BAAQMD, the contractor shall implement the following best management practices that are required of all projects by the City of Fremont:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times daily.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day.The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in propercondition prior to operation.

- A publicly visible sign with the telephone number and person to contact at the District regarding dust complaints shall be posted. This person shall respond and take corrective action within 48 hours. BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

MM AIR-1.2: The Project shall use equipment that has low diesel particulate matter (DPM) or zero emissions as follows:

- Mobile diesel-powered off-road equipment larger than 25 horsepower and operating on the site for more than two days shall meet U.S. Environmental Protection Agency (EPA) particulate matter emissions standards for Tier 4 or use engines that include particulate matter emissions control equivalent to California Air Resources Board (CARB) Level 3 verifiable diesel emission control devices (VDECs). Alternatively (or in combination), the use of alternatively fueled or electric equipment (i.e., non-diesel) would be consistent with this requirement.
- Avoid diesel generator use by supplying line power to the construction site and limiting the use of diesel generators to no more than 50 total hours.

With implementation of the above measures, construction-period emissions would be less than significant.

Criteria Pollutant Emissions

In a 2018 decision (*Sierra Club v. County of Fresno*), the State Supreme Court determined that CEQA requires that when a project's criteria air pollutant emissions would exceed applicable thresholds and contribute a cumulatively considerable contribution to a significant cumulative regional criteria pollutant impact, the potential for the Project's emissions to affect human health in the air basin must be disclosed. State and federal ambient air quality standards are health-based standards and exceedances of those standards result in continued unhealthy levels of air pollutants. As stated in the 2017 BAAQMD CEQA Air Quality Guidelines, air pollution by its nature is largely a cumulative impact. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. 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 has a less than significant impact for criteria pollutants, it is assumed to have no adverse health effect.

The Project would result in a less than significant project-level and cumulative operational and construction criteria pollutant impact as discussed previously. Therefore, the Project would result in a less than significant health impact to sensitive receptors.

d) *Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?*

Less-Than-Significant Impact. The proposed Project would result in the continued operation of Decoto Reservoir without any substantial changes in operation. The reservoir operation would not result in emissions such as odors with the potential to adversely affect any number of people. Odors from construction equipment (e.g., diesel exhaust) and materials (e.g., asphalt)

may be noticeable in the Project vicinity during construction of the proposed Project. Project construction would be temporary and, therefore, odors generated during construction activities are not considered significant.

4.2.4 Biological Resources

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

The following section is based in part on a Biological Resources Technical Report (BRTR) prepared for the proposed project. The BRTR is attached as Appendix B to this IS/MND.

Regulatory Setting

Sensitive Natural Communities

Sensitive natural communities include habitats that fulfill special functions or have special values. Natural communities considered sensitive are those identified in local or regional plans, policies, regulations, or by CDFW. CDFW ranks sensitive communities as "threatened" or "very threatened" (CDFW 2022a) and keeps records of their occurrences in its California Natural Diversity Database

(CNDDB; CDFW 2022b). Vegetation alliances are ranked 1 through 5 in the CNDDB based on NatureServe's (2020) methodology, with those alliances ranked globally (G) or statewide (S) as 1 through 3 considered sensitive. Impacts to sensitive natural communities identified in local or regional plans, policies, or regulations or those identified by the CDFW or U.S. Fish and Wildlife Service (USFWS) must be considered and evaluated under CEQA (CCR Title 14, Div. 6, Chap. 3, Appendix G). In addition, this general class includes oak woodlands that are protected by local ordinances under the Oak Woodlands Protection Act and Section 21083.4 of California Public Resources Code.

Waters of the United States, Including Wetlands

The U.S. Army Corps of Engineers (Corps) regulates "Waters of the United States" under Section 404 of the Clean Water Act (CWA). Waters of the United States are defined in the Code of Federal Regulations (CFR) as including the territorial seas, and waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, such as tributaries, lakes and ponds, impoundments of waters of the U.S., and wetlands that are hydrologically connected with these navigable features (33 CFR 328.3). Potential wetland areas, according to the three criteria used to delineate wetlands as defined in the *U.S. Army Corps of Engineers Wetlands Delineation Manual* (Corps Manual; Environmental Laboratory 1987), are identified by the presence of (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. Unvegetated waters including lakes, rivers, and streams may also be subject to Section 404 jurisdiction and are characterized by an ordinary high-water mark (OHWM) identified based on field indicators such as the lack of vegetation, sorting of sediments, and other indicators of flowing or standing water. The placement of fill material into Waters of the United States generally requires a permit from the Corps under Section 404 of the CWA.

The Corps also regulates construction in navigable waterways of the U.S. through Section 10 of the Rivers and Harbors Act (RHA) of 1899 (33 USC 403). Section 10 of the RHA requires Corps approval and a permit for excavation or fill, or alteration or modification of the course, location, condition, or capacity of, any port, roadstead, haven, harbor, canal, lake, harbor or refuge, or enclosure within the limits of any breakwater, or of the channel of any navigable water of the United States. Section 10 requirements apply only to navigable waters themselves, and are not applicable to tributaries, adjacent wetlands, and similar aquatic features not capable of supporting interstate commerce.

Waters of the State, Including Wetlands

The term "Waters of the State" is defined by the Porter-Cologne Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." The State Water Resource Control Board (SWRCB) and nine Regional Water Quality Control Boards (RWQCB) protect waters within this broad regulatory scope through many different regulatory programs. Waters of the State in the context of a CEQA Biological Resources evaluation include wetlands and other surface waters protected by the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* (SWRCB 2019). The SWRCB and RWQCB issue permits for the discharge of fill material into surface waters through the State Water Quality Certification Program, which fulfills requirements of Section 401 of the CWA and the Porter-Cologne Water Quality Control Act. Projects that require a Clean Water Act permit are also required to obtain a Water Quality Certification. If a project does not require a federal permit but does involve discharge of dredge or fill material into surface waters of the State, the SWRCB and RWQCB may issue a permit in the form of Waste Discharge Requirements.

Sections 1600-1616 of California Fish and Game Code

Streams and lakes, as habitat for fish and wildlife species, are regulated by CDFW under Sections 1600-1616 of California Fish and Game Code (CFGC). Alterations to or work within or adjacent to streambeds or lakes generally require a 1602 Lake and Streambed Alteration Agreement. The term “stream”, which includes creeks and rivers, is defined in the California Code of Regulations (CCR) as “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life [including] watercourses having a surface or subsurface flow that supports or has supported riparian vegetation” (14 CCR 1.72). The term “stream” can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife (CDFG 1994). Riparian vegetation has been defined as “vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself” (CDFG 1994). Removal of riparian vegetation also requires a Section 1602 Lake and Streambed Alteration Agreement from CDFW.

Endangered and Threatened Plants, Fish, and Wildlife

Specific species of plants, fish, and wildlife species may be designated as threatened or endangered by the federal Endangered Species Act (ESA), or the California Endangered Species Act (CESA). Specific protections and permitting mechanisms for these species differ under each of these acts, and a species’ designation under one law does not automatically provide protection under the other.

The ESA (16 USC 1531 *et seq*.) is implemented by the USFWS and the National Marine Fisheries Service (NMFS). The USFWS and NMFS maintain lists of endangered and threatened plant and animal species (referred to as "listed species"). "Proposed" or "candidate" species are those that are being considered for listing and are not protected until they are formally listed as threatened or endangered. Under the ESA, authorization must be obtained from the USFWS or NMFS prior to take of any listed species. “Take” under the ESA is defined as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Take under the ESA includes direct injury or mortality to individuals, disruptions in normal behavioral patterns resulting from factors such as noise and visual disturbance and impacts to habitat for listed species. Actions that may result in take of an ESA-listed species may obtain a permit under ESA Section 10, or via the interagency consultation described in ESA Section 7. Federally listed plant species are only protected when take occurs on federal land.

The ESA also provides for designation of critical habitat, which are specific geographic areas containing physical or biological features “essential to the conservation of the species”. Protections afforded to designated critical habitat apply only to actions that are funded, permitted, or carried out by federal agencies. Critical habitat designations do not affect activities by private landowners if there is no other federal agency involvement.

The CESA (CFGC 2050 et seq.) prohibits a take of any plant and animal species that the CFGC determines to be an endangered or threatened species in California. CESA regulations include take protection for threatened and endangered plants on private lands, as well as extending this protection to candidate species which are proposed for listing as threatened or endangered under CESA. The definition of a "take" under CESA ("hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill") only applies to direct impact to individuals, and does not extend to habitat impacts or harassment. CDFW may issue an Incidental Take Permit under CESA to authorize take if it is incidental to otherwise lawful activity and if specific criteria are met. Take of these species is also authorized if the geographic

area is covered by a Natural Community Conservation Plan (NCCP), as long as the NCCP covers that activity.

Fully Protected Species and Designated Rare Plant Species

This category includes specific plant and wildlife species that are designated in the CFGC as protected even if not listed under CESA or ESA. Fully Protected Species includes specific lists of birds, mammals, reptiles, amphibians, and fish designated in CFGC. Fully protected species may not be taken or possessed at any time. No licenses or permits may be issued for take of fully protected species, except for necessary scientific research and conservation purposes. The definition of "take" is the same under the California Fish and Game Code and the CESA. By law, CDFW may not issue an Incidental Take Permit for Fully Protected Species. Under the California Native Plant Protection Act (NPPA), CDFW has listed 64 "rare" or "endangered" plant species, and prevents "take", with few exceptions, of these species. CDFW may authorize take of species protected by the NPPA through the Incidental Take Permit process, or under a NCCP.

Special Protections for Nesting Birds and Bats

The federal Bald and Golden Eagle Protection Act provides relatively broad protections to both of North America's eagle species (bald eagle [*Haliaeetus leucocephalus*] and golden eagle [*Aquila chrysaetos*)] that in some regards are similar to those provided by the ESA. In addition to regulations for special-status species, most native birds in the United States, including non-status species, have baseline legal protections under the Migratory Bird Treaty Act of 1918 and CFGC, i.e., sections 3503, 3503.5 and 3513. Under these laws/codes, the intentional harm or collection of adult birds as well as the intentional collection or destruction of active nests, eggs, and young is illegal. For bat species, the Western Bat Working Group (WBWG) designates conservation status for species of bats, and those with a high or medium-high priority are typically given special consideration under CEQA.

Essential Fish Habitat

The Magnuson-Stevens Fishery Conservation and Management Act provides for conservation and management of fishery resources in the U.S., administered by National Marine Fisheries Service (NMFS). This Act establishes a national program intended to prevent overfishing, rebuild overfished stocks, ensure conservation, and facilitate long-term protection through the establishment of Essential Fish Habitat (EFH). EFH consists of aquatic areas that contain habitat essential to the long-term survival and health of fisheries, which may include the water column, certain bottom types, vegetation (e.g., eelgrass (*Zostera* spp.)), or complex structures such as oyster beds. Any federal agency that authorizes, funds, or undertakes action that may adversely affect EFH is required to consult with NMFS.

Species of Special Concern, Movement Corridors, and Other Special-status Species under CEQA

To address additional species protections afforded under CEQA, CDFW has developed a list of special species as "a general term that refers to all of the taxa the CNDDB is interested in tracking, regardless of their legal or protection status." This list includes lists developed by other organizations, including for example, the Audubon Watch List Species, the Bureau of Land Management Sensitive Species, and USFWS Birds of Special Concern. Plant species on the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (Inventory) with California Rare Plant Ranks (Rank) of 1 and 2, as well as

some with a Rank of 3, are also considered special-status plant species and must be considered under CEQA. Some Rank 3 species and all Rank 4 species are typically only afforded protection under CEQA when such species are particularly unique to the locale (e.g., range limit, low abundance/low frequency, limited habitat) or are otherwise considered locally rare. Additionally, any species listed as sensitive within local plans, policies and ordinances are likewise considered sensitive. Movement and migratory corridors for native wildlife (including aquatic corridors) as well as wildlife nursery sites are given special consideration under CEQA.

Local Plans and Policies

City of Fremont General Plan

The City of Fremont General Plan contains policies and implementations pertaining to the following biological resources categories:

- Wetlands, streams, riparian, and aquatic areas (Policy 7-1.1, Implementations 7-1.1A, 7-1.1.B, and 7-1.1.C; Policy 7-2.1)
- Vegetation communities (Policy 7-1.1, Implementation 7-1.1.D)
- Plant Species (Policy 7-1.2, Implementations 7-1.2.A and 7-1.2.D)
- Wildlife Species (Policy 7-1.2, Implementations 7-1.2.A and 7-1.2.D)

Fremont Municipal Code

Chapter 18.55, "O-S Open Space District" of the City of Fremont Municipal Code outlines development standards for the Open Space District within the City. Section 18.55.040(b)(7) states that no development shall be located within a riparian corridor, except for otherwise permitted flood control, erosion control, water supply, transportation facilities, fences or hiking or equestrian trails. This is a water supply project that would upgrade the Decoto Reservoir for increased reliability, maintainability, and earthquake safety. As such, the Project would be exempt from Section 18.55.040(b)(7).

Chapter 18.210.120 of the City of Fremont Municipal Code stipulates regulations designed to preserve watercourses within the City of Fremont. Every person owning property through which a watercourse passes is required to keep and maintain that part of the watercourse within the property reasonably free of trash, debris, excessive vegetation, and other obstacles which would pollute, contaminate, or significantly retard the flow of water through the watercourse. All structures within or adjacent to watercourses must be maintained so that the structure will not become a hazard to the use, function, or physical integrity of the watercourse. Healthy bank vegetation cannot not be removed in such a manner that would increase the vulnerability of the watercourse to erosion. No person can commit (or cause to be committed) any of the following acts, unless a written permit has been obtained from the City manager:

- Modify the natural flow of water in a watercourse
- Carry out development within 30 feet of the center line of any creek or 20 feet of the top of bank, whichever is greater
- Deposit in, plant in, or remove any material from a watercourse, including its banks, except as required for necessary maintenance
- Construct, alter, enlarge, connect to, change, or remove and structure in a watercourse

- Place any loose or unconsolidated material along the side or within a watercourse or so close to the side as to cause a diversion of flow, or to cause a probability of such material being carried away by storm waters passing through such watercourse.

The City of Fremont's Municipal Code provides measures to protect special-status species within the City of Fremont. The portions of the Municipal Code that are relevant for this Project are as follows:

> ***Chapter 18.218.050 Standard Development Requirements***. (b) Biology, Special-Status Species
>
> (2) Nesting Birds. New development projects with the potential to impact nesting birds through tree or shrub removal shall implement the following measures prior to removal of any trees/shrubs, grading, or ground disturbing activities:
>
> A. Avoidance. Proposed projects shall avoid construction activities during the bird nesting season (February 1st through August 31st).
>
> B. Preconstruction Surveys. If construction activities are scheduled during the nesting season, a qualified biologist shall conduct a preconstruction survey to identify any potential nesting activity. The biologist shall determine the number and time frame (prior to construction) of surveys to be conducted.
>
> C. Protective Buffer Zone(s). If the survey indicates the presence of nesting birds, protective buffer zones shall be established around the nests. The size of the buffer zone shall be recommended by the biologist in consultation with the CDFW depending on the species of nesting bird and level of potential disturbance.
>
> D. Initiation of Construction Activities. The buffer zones shall remain in place until the young have fledged and are foraging independently. A qualified biologist shall monitor the nests closely until it is determined the nests are no longer active, at which time construction activities may commence within the buffer area.

Fremont Tree Preservation Ordinances

Chapter 18.215, "Tree Preservation" of the City of Fremont Municipal Code provides regulations designed to preserve and protect trees within the City of Fremont. Protected trees subject to permit requirements include:

- A tree having a "diameter-at-breast-height" (DBH) of 6 inches or more, and located on a vacant or undeveloped lot
- A tree having a DBH of 6 inches or more, and located on a developed lot which is the subject of a contemplated or pending application for a development project
- A native tree or tree of exceptional adaptability to the Fremont area having a DBH of 10 inches or more
- A tree having a DBH of 18 inches or more
- A tree that was required by the City to be planted or retained as mitigation for the removal of a tree
- A tree planted or retained as a condition of any City-conferred development project approval

- One of six or more trees of the same species that are located on the same lot that measure at least 6 inches DBH

Anyone who proposes to damage or remove a protected tree is required to acquire a tree removal permit from the City of Fremont. In addition to protected trees, any tree designated as a landmark tree by resolution of the Fremont City Council, as well as any tree that has been designated in the General Plan as a primary historic resource may not be damaged or removed without a permit. Native trees protected in the Tree Ordinance include oak, redwood, buckeye, madrone, sycamore, big-leaf maple, red-bud, and bay. Mitigation in the form of tree replacement is required as a condition of removal authorization in accordance with specifications listed in Chapter 18.215.080 of the City's Tree Ordinance.[12] Private trees exempt from permit requirements include:

- A tree on a developed lot not greater than 10,000 square feet in area and zoned either R-1 or single-family detached planned district, when the tree is behind the forward-most face of the front of the principal building
- A container tree
- A fruit or nut tree of a species grown for commercial food production, except a black walnut or olive tree
- A private tree or a landmark tree removed or damaged under emergency circumstances
- A tree, other than a landmark tree, removed or damaged by a public utility to the extent that such removal or damage is necessary for building or maintaining the public utility's facilities

Private trees exempt from permit requirements do not require authorization through a tree removal permit and do not require mitigation for damage, removal, or relocation.

No landmark trees exist on the Project site. Mature trees within the project site might be impacted are potentially exempt from protection per the Fremont Tree Preservation Ordinance (Fremont Municipal Code Chapter 18.215.050).

Environmental Setting

Database Search and Site Visit

On June 22, 2022, WRA, Inc. (WRA) biologists visited the Project site and surrounding area to map vegetation, aquatic communities, unvegetated land cover types, document plant and wildlife species present, and evaluate on-site habitat for the potential to support special-status species as defined by CEQA. Prior to the site visit, WRA biologists reviewed literature resources and performed database searches to assess the potential for sensitive biological communities (e.g., wetlands) and special-status species (e.g., endangered plants) to occur on the Project site, including:

- Soil Survey of 2022, California
- Niles 7.5-minute U.S. Geological Survey (USGS) quadrangle
- Contemporary aerial photographs
- Historical aerial photographs

[12] *City of Fremont Municipal Code. Chapter 18.215. Tree Preservation. Available at:* https://www.codepublishing.com/CA/Fremont/#!/Fremont18/Fremont18215.html%2318.215 *Accessed on: August 10, 2021.*

- National Wetlands Inventory
- California Aquatic Resources Inventory
- CNDDB
- CNPS Inventory
- USFWS List of Federal Endangered and Threatened Species
- eBird Online Database
- California Bird Species of Special Concern in California
- California Amphibian and Reptile Species of Special Concern
- A Field Guide to Western Reptiles and Amphibians
- A Manual of California Vegetation, Online Edition
- Preliminary Descriptions of the Terrestrial Natural Communities
- California Natural Community List
- Database searches (i.e., CNDDB, CNPS) for special-status species focused on the *Niles* and eight surrounding USGS 7.5-minute quadrangles.

Following the remote assessment, WRA biologists completed a field review to document: (1) land cover types (e.g., terrestrial communities, aquatic resources), (2) existing conditions and to determine if such provide suitable habitat for any special-status plant or wildlife species, (3) if and what type of aquatic natural communities (e.g., streams) are present, and (4) if special-status species are present.

Vegetation Communities and Other Land Cover

Non-sensitive communities observed on-site include developed land and ruderal/landscaped land. Sensitive communities observed on-site include an ephemeral drainage and riparian community.

Non-Sensitive Communities

Developed areas comprise the majority of the Project Site, including the reservoir, the asphalt access perimeter road and the driveway access road off Florence Street. These areas are comprised entirely of asphalt and do not support vegetation aside from the overlapping canopy of large adjacent trees. Developed areas do not constitute a sensitive community, although wooden utility poles may provide potential nesting habitat for common cavity nesting birds.

Ruderal/landscaped areas comprised a portion of the Project site. These areas are dominated by mature ornamental and planted trees as well as ornamental shrubs including pine (*Pinus sp.*), coast live oak (*Quercus agrifolia*), olive (*Olea europaea*), date palm (*Phoenix dactylifera*), California pepper tree (*Schinus molle*), firethorn (*Pyracantha* sp.), prickly pear (*Opuntia* sp.), and juniper shrubs (*Juniperus* sp.). Ground vegetation in these areas is heavily grazed and dominated by ruderal (weedy) species, including ripgut brome (*Bromus diandrus*), foxtail barley (*Hordeum murinum leporinum*), wild oat (*Avena barbata*), cheeseweed (*Malva parviflora*), Mediterranean mustard (*Hirschfeldia incana*), Italian thistle (*Carduus pycnocephalus*), fennel (*Foeniculum vulgare*), tall willowherb (*Epilobium brachycarpum*), purple starthistle (*Centaurea calcitrapa*), and California poppy (*Eschscholzia californica*). Ruderal/landscaped areas do not constitute a sensitive community, although several trees and shrubs provide potential nesting habitat for common nesting bird species.

Sensitive Communities

An ephemeral drainage occurs north of the Project Site, outside of the developed reservoir facility. The drainage is dominated by riparian and wetland vegetation, including willows (*Salix* sp.), California sycamore (*Platanus racemosa*), tall flatsedge (*Cyperus eragrostis*), Himalayan blackberry (*Rubus armeniacus*), rabbitsfoot grass (*Polypogon monspeliensis*), creeping bentgrass (*Agrostis stolonifera*), and bristly oxtongue (*Helminthotheca echioides*), among others. Although the drainage and associated riparian vegetation constitute a sensitive biological resource, those features are outside of the limit of disturbance of the Project and impacts to those features will be avoided.

Special-status Species

Special-status Plants

Based upon the review of the resource database listed above, 52 special-status plant species have been documented in the vicinity of the Project site (see Appendix D of the BRTR). However, none of these species have the potential to occur in the Project site for one or more of the following reasons:

- Hydrologic conditions (e.g., tidal, riverine) necessary to support the special-status plant species are not present in the Project site;
- Edaphic (soil) conditions (e.g., volcanic tuff, serpentine) necessary to support the special-status plant species are not present in the Project site;
- Topographic conditions (e.g., north-facing slope, montane) necessary to support the special-status plant species are not present in the Project site;
- Unique pH conditions (e.g., alkali scalds, acidic bogs) necessary to support the special-status plant species are not present in the Project site;
- Associated natural communities (e.g., interior chaparral, tidal marsh) necessary to support the special-status plant species are not present in the Project site;
- The Project site is geographically isolated (e.g., below elevation, coastal environ) from the documented range of the special-status plant species;
- Land use history and contemporary management (e.g., grading, intensive grazing) has degraded the localized habitat necessary to support the special-status plant species.

No special-status plants were identified during the site survey conducted by WRA biologists on June 22, 2022. Based on the highly developed nature of the site, and lack of associated natural vegetation communities within the reservoir facility, the Project site does not provide suitable habitat for special-status plant species.

Special-status Wildlife

Based upon the review of the resource database listed above, 37 special-status wildlife species have been documented in the vicinity of the Project site (see Appendix D of the BRTR). Most of the 37 special-status wildlife species are excluded from the Project site due to lack of habitat features. Features not found within the Project site that are required to support special-status wildlife species include:

- Vernal pools
- Perennial aquatic habitat (e.g., streams, rivers or ponds)
- Tidal marsh areas
- Old growth redwood or fir forest

- Serpentine soils to support host plants
- Sandy beaches or alkaline flats
- Presence of specific host plants
- Caves, mine shafts, or abandoned buildings

The absence of such habitat features eliminates components critical to the survival or movement of most special-status species found in the vicinity. Species like California red-legged frog (*Rana draytonii*; CRLF) and California tiger salamander (*Ambystoma californiense;* CTS) are known to occur in open spaces in the greater vicinity; however, the fully developed Project site and surrounding area do not contain suitable aquatic breeding habitat and provide little to no habitat value for these species. Given the absence of suitable habitat and distance from potential source populations, it is unlikely that either species would disperse into the Project site. A single occurrence of CRLF was documented 0.4 mile west in 1999 (CDFW 2022). However, the individual was collected from this location at the time of the discovery, and the immediate area has since been developed. As such, this occurrence record is considered extirpated.

Other species that are known to occur in the vicinity, like Alameda whipsnake (*Masticophis lateralis euryxanhus;* AWS), have potential to disperse into the surrounding grasslands; however, the Project site primarily consists of the reservoir facility surrounded by asphalt, which would preclude this species from entering the Project site.

Two special-status species have potential to occur in the immediate vicinity of the Project site: western burrowing owl (*Athene cunicularia*) and white-tailed kite (*Elanus leucurus*).

Western Burrowing Owl (CDFW Species of Special Concern, USFWS Bird of Conservation Concern. Moderate Potential to Occur). The burrowing owl occurs as a year-round resident and winter visitor in much of California's lowlands, inhabiting open areas with sparse or non-existent tree or shrub canopies. Typical habitat is annual or perennial grassland, although human-modified areas such as agricultural lands and airports are also used (Poulin et al. 1993). This species is dependent on burrowing mammals to provide the burrows that are characteristically used for shelter and nesting, and in northern California is typically found in close association with California ground squirrels (*Otospermophilus beecheyi*). Manmade substrates such as pipes or debris piles may also be occupied in place of burrows. Prey consists of insects and small vertebrates. Breeding typically takes place from March to July.

Western burrowing owl is known to occur within three to five miles of the Project site (eBird 2022, CNDDB 2022). No signs of owl occupancy were detected by biologists during the site visit on June 22, 2022. However, there is a high degree of California ground squirrel activity within the surrounding area. Several burrow clusters were observed on the berms around the perimeter of the Project site, and in adjacent grassland. Due to the presence of suitable burrows, this species has potential to occur immediately adjacent to the Project site.

White-tailed Kite (CDFW Fully Protected Species. Moderate Potential to Occur). The white-tailed kite is resident in open to semi-open habitats throughout the lower elevations of California, including grasslands, savannahs, woodlands, agricultural areas and wetlands. Vegetative structure and prey availability seem to be more important habitat elements than associations with specific plants or vegetative communities (Dunk 1995). Nests are constructed mostly of twigs and placed in trees, often at habitat edges. Nest trees are highly variable in size, structure, and immediate surroundings, ranging from shrubs to trees greater than 150 feet tall (Dunk 1995). This species preys upon a variety of small mammals, as well as other vertebrates and invertebrates. White-tailed kite has potential to nest in the trees within the Project site and the immediate vicinity. In addition, non-special-status native birds and

raptors may nest on the ground, in trees, and in vegetation within the Project site or the surrounding area.

In addition, the Project site contains two artificial nest boxes that have potential to support cavity-nesting birds. The nest boxes were intended to recruit barn owls (*Tyto alba*) to the facility in an effort to control local California ground squirrel populations. Due to variability in size, WRA biologists determined that only one provides a cavity diameter large enough to support nesting barn owls (i.e., greater than three inches). The smaller of the two nest boxes is suitable for smaller cavity-nesting raptors, such as American kestrel (*Falco sparverius*) and western screech owl (*Megascops asio*). During the site visit on June 22, 2022, the smaller nest box contained an active western bluebird (*Sialia mexicana*) nest. The larger nest box was unoccupied at the time of the site visit and no indications of owl presence (i.e., pellets, white wash) were observed. These nesting boxes can be removed during the non-nesting season (i.e. September through January) to reduce the potential for nesting birds on the Project site. The installation of raptor perches may promote the recruitment of red-tailed hawks and better facilitate ground squirrel control at this facility in the future.

Wildlife Corridors and Native Wildlife Nursery Sites

The Project site does not function as a wildlife movement corridor. The Project site is primarily asphalt, enclosed by fencing, and is relatively small in the context of the surrounding landscape. The overgrazed hillsides that surround the Project site substantially reduce its value as a "stepping stone" corridor for avian or terrestrial species which could originate from nearby open space areas. Although common urban-adapted species may utilize the surrounding grasslands and the ephemeral drainage north of the Project site to some degree for movement at a local scale, the proposed Project would not change the current characteristics of the surrounding landscape.

No native wildlife nursery sites are present on the Project site.

Discussion of Impacts

a) *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or United States Fish and Wildlife Service (USFWS)?*

Special-status Plants

No Impact. The Project site does not provide suitable habitat for special-status plant species, and no special-status plant species were identified during the stie survey conducted by WRA biologists on June 22, 2022. Therefore, no impact would occur.

Special-Status Wildlife

Less-Than-Significant with Mitigation Incorporated. Western burrowing owl and white-tailed kite have moderate potential to occur within the Project site. No indications of western burrowing owl occupancy were detected by biologists within the Project area during the site survey; however, suitable burrows and burrow surrogates for this species were observed within and in the immediate vicinity of the Project site. Ground disturbing activities and operation of heavy equipment during construction may result in noise and vibration that could cause nest abandonment and loss of young or reduced survival rates due to reduced health and vigor of eggs and/or nestlings. Impacts would be significant if direct mortality or injury to western burrowing owl occur during construction. However, impacts would be reduced to less-than-significant levels with implementation of Mitigation Measures BIO 1.1 and 1.2 which require pre-construction survey for burrowing owls and nest avoidance if nesting owls are encountered.

White-tailed kite has the potential to nest within the immediate vicinity of the Project site. Non-special-status native birds (e.g., passerines, raptors) may also nest on the ground, in trees, and in vegetation within and immediately surrounding the Project site. The active nests of such birds are protected under the federal Migratory Bird Treaty Act (MBTA) and CFGC. If construction is scheduled to begin during the avian nesting season, generally February 1 to August 31, nesting birds may be impacted by noise and vibration generated by the use of heavy equipment during construction, sufficient to cause nest abandonment. If the Project were to result in nest abandonment or disturbance, the impact would be significant. However, impacts to white-tailed kite and nesting birds would be reduced to less-than-significant levels with implementation of Mitigation Measure BIO 2.1 which requires a nesting bird survey prior to construction if work is anticipated to occur during nesting season.

Impact BIO-1: The proposed Project's construction activities may result in noise and vibration impacts that may result in: (1) nest abandonment; (2) loss of young; (3) reduced health and vigor of eggs and/or nestlings (resulting in reduced survival rates).

Implementation of Mitigation Measures BIO-1.1 and BIO-1.2 would reduce impact to western burrowing owl to a less-than-significant level.

MM BIO-1.1: A survey shall be conducted prior to any construction activities on-site to verify the absence of burrowing owls in the vicinity of the Project site. One "Take avoidance (pre-construction) survey" shall be completed consistent with the California Department of Fish and Wildlife's 2012 Burrowing Owl Mitigation guidelines to detect the presence of burrowing owls in the vicinity of the Project

site immediately prior to construction activities. If no owls are found during the survey, no further action is necessary.

MM BIO-1.2: If nesting owls are encountered during the breeding season (February 1 – August 31), active nests shall be avoided by 250 feet either until the end of the breeding season or until the nests are determined to be inactive by a qualified biologist. If work must occur within this buffer, consultation with CDFW may be required. If owls are encountered during the non-breeding season (September 1 – January 1), the occupied burrow shall be avoided by 250 feet until such time as a qualified biologist can confirm that the owl is no longer utilizing the burrow site.

Impact BIO-2: Construction activities associated with the proposed Project could result in construction-related disturbance sufficient to cause nest abandonment of special-status or non-special-status bird species protected under MBTA and CFGC.

The following mitigation measure would ensure impacts to white-tailed kite and nesting birds be reduced to a less-than-significant level.

MM BIO-2.1: If construction activities are initiated during the nesting season (February 1 – August 31), a nesting bird survey shall be conducted by a qualified biologist within 7 days prior to the start of construction within the Project site. The nesting bird survey shall include the Project site and the immediate surrounding area.

If active nests are present, exclusion buffers appropriate to the species shall be established by the qualified biologist to prevent impacts to nesting birds. Buffers shall be maintained until the biologist determines that young have fledged, or the nest becomes inactive.

If construction activities are initiated outside of the nesting season (September 1 – January 31), no pre-construction nesting bird surveys are necessary.

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 CDFW or USFWS?*

Less-Than-Significant with Mitigation Incorporated. There is an ephemeral drainage located immediately north of the Project site. The ephemeral drainage is surrounded by riparian habitat. Construction activities would occur within the developed/landscaped portion of the Project site. However, transporting construction equipment and materials (e.g., long beams) to the Project site via long flatbed trucks through the access road to the north may result in impacts to mature riparian trees growing around the ephemeral drainage. Impacts to mature riparian trees would be considered potentially significant. With implementation of Mitigation Measure BIO-3.1, impacts to riparian habitat would be less than significant.

Impact BIO-3: Equipment mobilization through the access road to the north of the Project site could result in impacts to mature riparian trees surrounding the ephemeral drainage.

Implementation of Mitigation Measure BIO-3.1 would reduce impact to riparian habitat to a less-than-significant level.

MM BIO-3.1: The construction foreman shall be responsible for overseeing all equipment mobilization to ensure that riparian vegetation is not impacted by the Project. If riparian vegetation could be impacted by the equipment and materials (e.g., long beams) that are transported to the Project site via long flatbed trucks through the access road, a biological monitor or arborist shall be present during the trimming of any small branches three inches in diameter or less to facilitate equipment access. No trees shall be removed.

c) *Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

Less-Than-Significant with Mitigation Incorporated. There is an ephemeral drainage located immediately north of the Project site. Project construction activities would occur in the developed/landscaped portion of the Project site. Construction equipment and materials would be transported to the site through the access road from the north. The access road crosses the ephemeral drainage. Transporting equipment and materials via the access road could result in indirect impacts to the ephemeral drainage if construction materials (e.g., sediment) are discharged to the drainage unintentionally. Mitigation Measure BIO-4.1 requires installation of silt fence to prevent unintentional discharge of materials. With implementation of Mitigation Measure BIO-4.1, impacts to the ephemeral drainage would be reduced to a less-than-significant level.

Impact BIO-4: Transportation equipment and materials through the access road to the north of the Project site could result in unintentional discharge of materials into the ephemeral drainage.

Implementation of Mitigation Measure BIO-4.1 would reduce impact to the ephemeral drainage to a less-than-significant level.

MM BIO-4.1: Prior to the transport of materials into the Project site, silt fencing shall be installed on the east side of the culverted road crossing to prevent any discharge from entering the drainage. This silt fencing shall remain for the duration of the Project construction and shall be removed from the drainage upon completion of the Project construction phase.

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?*

No Impact. The Project site consists primarily of the reservoir surrounded by asphalt, enclosed by fencing, and is relatively small in the context of the surrounding landscape. The Project site does not provide connectivity between areas of suitable habitat. Although common urban-adapted species may utilize the surrounding grasslands and the ephemeral drainage north of the Project site to some degree for movement at a local scale, the Project would not change the existing conditions of the surrounding landscape. Therefore, no impact would occur to habitat corridors and linkages for terrestrial and aquatic species.

e) *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

No Impact. Local plans and policies related to biological resources are included in the Local Plans and Policies above. The Project will comply with all City of Fremont's policies and ordinances, and no trees would be removed. Therefore, implementation of the proposed Project would not conflict with any local biological protection policies or ordinances, including tree ordinances and there would be no impact.

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?*

No Impact. The Project site is not within the area of any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. As a result, the Project would not conflict with the provisions of an adopted HCP, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. Therefore, no impacts would occur.

4.2.5 Cultural Resources

Would the Project:	*Potentially Significant Impact*	*Less than Significant Impact with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

This section is based in part on a Phase I Archaeological Cultural Resources Investigation prepared by Pacific Legacy, Inc. (Pacific Legacy) and a Historic Resources Evaluation prepared by Yarbrough Architectural Resources, Inc. (YAR). The Pacific Legacy technical memorandum contains sensitive cultural and tribal cultural resources information and is available for review upon request to qualified individuals only.

Regulatory Setting

National Historic Preservation Act

Federal protection is legislated by the National Historic Preservation Act of 1966 (NHPA) and the Archaeological Resource Protection Act of 1979. These laws maintain processes for the determination of the effects on historical properties eligible for listing in the National Register of Historic Places (NRHP). Section 106 of the NHPA and related regulations (36 Code of Federal Regulations [CFR] Part 800) constitute the primary federal regulatory framework guiding cultural resources investigations and require consideration of effects on properties that are listed or eligible for listing in the NRHP. Impacts to properties listed in the NRHP must be evaluated under CEQA (14 California Code of Regulations § 15064.5).

California Register of Historical Resources

The California Register of Historical Resources (CRHR) is administered by the State Office of Historic Preservation and encourages protection of resources of architectural, historical, archeological, and cultural significance. The CRHR identifies historic resources for state and local planning purposes and affords protections under CEQA. Under Public Resources Code Section 5024.1(c), a resource may be eligible for listing in the CRHR if it meets any of the NRHP criteria.[13]

[13] *California Office of Historic Preservation. "CEQA Guidelines Section 15064.5(a)(3) and California Office of Historic Preservation Technical Assistance Series #1." Accessed October 24, 2022. https://ohp.parks.ca.gov/pages/1054/files/ts01ca.pdf*

Historical resources eligible for listing in the CRHR must meet the significance criteria described previously and retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. A resource that has lost its historic character or appearance may still have sufficient integrity for the CRHR if it maintains the potential to yield significant scientific or historical information or specific data.

The concept of integrity is essential to identifying the important physical characteristics of historical resources and, therefore, in evaluating adverse changes to them. Integrity is defined as "the authenticity of a historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance." The processes of determining integrity are similar for both the CRHR and NRHP and use the same seven variables or aspects to define integrity that are used to evaluate a resource's eligibility for listing. These seven characteristics include 1) location, 2) design, 3) setting, 4) materials, 5) workmanship, 6) feeling, and 7) association.

California Native American Historical, Cultural, and Sacred Sites Act

The California Native American Historical, Cultural, and Sacred Sites Act applies to both state and private lands. The act requires that upon discovery of human remains, construction or excavation activity must cease, and the county coroner be notified.

Public Resources Code Sections 5097 and 5097.98

Section 15064.5 of the CEQA Guidelines specifies procedures to be used in the event of an unexpected discovery of Native American human remains on non-federal land. These procedures are outlined in Public Resources Code Sections 5097 and 5097.98. These code sections protect such remains from disturbance, vandalism, and inadvertent destruction, establish procedures to be implemented if Native American skeletal remains are discovered during construction of a project, and establish the Native American Heritage Commission (NAHC) as the authority to resolve disputes regarding disposition of such remains.

Pursuant to Public Resources Code Section 5097.98, in the event of human remains discovery, no further disturbance is allowed until the county coroner has made the necessary findings regarding the origin and disposition of the remains. If the remains are of a Native American, the county coroner must notify the NAHC. The NAHC then notifies those persons most likely to be related to the Native American remains. The code section also stipulates the procedures that the descendants may follow for treating or disposing of the remains and associated grave goods.

City of Fremont Municipal Code

The City of Fremont's Municipal Code provides measures to protect cultural and tribal cultural resources prior to and during Project construction. The portions of the Municipal Code that are relevant for this Project are as follows:

> ***Chapter 18.218.050 Standard Development Requirements***. (d) Cultural and Tribal Cultural Resources:

(1) Notification, Affiliated California Native American Tribes. Within 14 days of determining that an application for a project is complete or a decision by the City is made to undertake a project, the City shall provide formal notification to the designated contact or a tribal representative of traditionally and culturally affiliated California Native American tribes that have requested to receive such notice from the City. The written notification shall include a brief description of the proposed project and its location, project contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to Cal. Pub. Res. Code § 64352.4.

(2) Accidental Discovery of Cultural Resources. The following requirements shall be met to address the potential for accidental discovery of cultural resources during ground disturbing excavation:

A. The project proponent shall include a note on any plans that require ground disturbing excavation that there is a potential for exposing buried cultural resources.

B. The project proponent shall retain a professional archaeologist to provide a preconstruction briefing to supervisory personnel of any excavation contractor to alert them to the possibility of exposing buried cultural resources, including significant prehistoric archaeological resources. The briefing shall discuss any cultural resources, including archaeological objects, that could be exposed, the need to stop excavation at the discovery, and the procedures to follow regarding discovery protection and notification of the project proponent and archaeological team.

C. In the event that any human remains, or historical, archaeological or paleontological resources are discovered during ground disturbing excavation, the provisions of CEQA Guidelines Sections 15064.5(e) and (f), and of subsection (d)(2)(C) of this section, requiring cessation of work, notification, and immediate evaluation shall be followed.

D. If resources are discovered during ground disturbing activities that may be classified as historical, unique archaeological, or tribal cultural resources, ground disturbing activities shall cease immediately, and the planning manager shall be notified. The resources will be evaluated by a qualified archaeologist and, in the planning manager's discretion, a tribal cultural monitor. If the resources are determined to be historical, unique archaeological, or tribal cultural resources, then a plan for avoiding the resources shall be prepared. If avoidance is infeasible, then all significant cultural materials recovered shall be, as necessary and at the discretion of the consulting archaeologist, subject to scientific analysis, professional museum curation, and documentation according to current professional standards. Any plan for avoidance or mitigation shall be subject to the approval of the planning manager.

E. As used herein, "historical resource" means a historical resource as defined by CEQA Guidelines Section 15064.5(a); "unique archaeological resource" means unique archaeological resource as defined by Cal. Pub. Res. Code § 21083.2(g); and "tribal cultural resource" means tribal cultural resource as defined by Cal. Pub. Res. Code § 21074. Collectively, these terms describe "significant cultural materials."

(3) Archaeological Monitoring. New development projects with the potential to impact subsurface archaeological or cultural resources through grading, demolition, and/or new construction, if so determined by a site-specific study prepared by an archaeologist that meets the Secretary of the Interior's professional qualifications standards for archaeology,

shall implement the following measures prior to any grubbing, grading, or ground disturbing activities:

A. An archaeologist shall monitor construction-related ground disturbance within the vicinity of project site features identified as having the potential to include subsurface archaeological, cultural, or tribal cultural resources that could be impacted through ground-disturbing activities related to the construction of the project. Monitoring should continue until the archaeologist determines that there is a low potential for encountering subsurface archaeological, cultural, or tribal cultural resources. An archaeologist that meets the Secretary of the Interior's professional qualifications standards for archaeology shall oversee the monitoring. Any compensation for time and expenses related to this activity shall be borne by the project proponent.

(4) Tribal Cultural Monitoring and Training. Should the city receive a formal written request by the designated contact or a tribal representative of a traditionally and culturally affiliated California Native American tribe pursuant to Cal. Pub. Res. Code § 64352.4 to have a tribal cultural representative present at the project site before or during construction activities to identify or monitor sites or objects of significance to Native Americans or to provide construction worker tribal cultural resources awareness training including applicable regulations and protocols for avoidance, confidentiality, and culturally appropriate treatment, the project proponent shall honor that request and include tribal cultural monitoring or training as a component of their project. The tribal cultural representative shall have the ability to request that work be stopped, diverted, or slowed if sites or objects of significance to Native Americans are encountered within the direct impact area and shall be consulted for recommendations regarding the appropriate treatment of such sites or objects. Any compensation for time and expenses related to this activity shall be borne by the project proponent.

Environmental Setting

A Technical Memorandum was prepared for the proposed Project which presents the results of Phase I Archaeological Cultural Resources Investigation by Pacific Legacy.

The investigation revealed that there were no previously identified archaeological or built environment resources within the Project area, but one historic resource is located within a 0.25-mile radius of the Project site. Pacific Legacy performed an on-site pedestrian survey and did not observe intact prehistoric or historic period features, deposits, or artifacts.

The NAHC Sacred Lands File search was positive for cultural resources in the Project vicinity. Tribal cultural resources are addressed in Section 4.2.18.

The Decoto Reservoir complex was built in 1964, which makes it 58 years old, and a historic period-built environment resource; however, this complex has not been previously recorded or evaluated for NRHP or CRHP eligibility. YAR prepared a Historic Resources Evaluation to formally evaluate the Decoto Reservoir's eligibility for listing in the NRHP and CRHP and concluded that the reservoir is not eligible for listing in either register.

Discussion of Impacts

a) Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA

Guidelines Section 15064.5?

No Impact. The reservoir was constructed in 1964 and is 58 years old, which is considered a historic period-built environment resource. The Historic Resources Evaluation (included as Appendix C) concluded that the reservoir does not meet any of the criteria that would make it eligible for listing in either the NRHP or CRHP. Therefore, the Project would have no impact with respect to causing a substantial adverse change in the significance of a historical resource.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?

Less-Than-Significant Impact with Mitigation Incorporated. As described above in the Environmental Setting, no previously identified archaeological or bult environment resources fall within the Project site. One previously documented resource was identified within 0.25 mile of the Project site. The proposed Project activities would be confined within the Project site and would not impact the previously documented resource. The project would implement Mitigation Measure CUL-1.1 pertaining to the accidental discovery of buried materials on the Project site. With implementation of this mitigation measure, the impact would be less than significant.

c) *Disturb any human remains, including those interred outside of dedicated cemeteries?*

Less-Than-Significant Impact with Mitigation Incorporated. As a result of the original construction activities for Decoto Reservoir in 1964, subsurface soils on-site have been previously disturbed. However, it is possible that unknown and unrecorded human remains could be discovered during ground disturbing construction activities.

Impact CUL-1: Construction of the proposed Project may involve some ground-disturbing activities such as drilling and excavation, which have the potential to unearth or adversely impact historical and/or archeological resources.

Mitigation Measure: The following mitigation measure shall be implemented to reduce impacts to undiscovered human remains that may be present on the site.

MM CUL-1.1: If any human remains are found during any field investigations, grading, or other construction activities, all provisions of California Health and Safety Code Sections 7054 and 7050.5 and Public Resources Code Sections 5097.9 through 5097.99, as amended per Assembly Bill 2641, shall be followed. In the event of the discovery of human remains during construction, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains, and the District shall immediately notify the Alameda County Coroner/ Medical Examiner's Office (the Coroner). The Coroner will make a determination as to whether the remains are Native American.

If the remains are believed to be Native American, the Coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours. The NAHC will then designate a Most Likely Descendant (MLD). The MLD will inspect the

remains and make a recommendation on the treatment of the remains and associated artifacts. If the District concurs with the recommendation of the MLD, the District will work with the MLD and the Coroner to carry it out.

If one of the following conditions occurs, the Alameda County Water District or their authorized representative shall work with the Coroner to reinter the Native American human remains and associated grave goods with appropriate dignity in a location not subject to further subsurface disturbance:

- The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 48 hours after being notified by the Commission.
- The descendant identified fails to make a recommendation; or
- The District or his/her authorized representative rejects the recommendation of the descendant, and the mediation by the NAHC fails to provide measures acceptable to the landowner.

With the implementation of Mitigation Measure CUL-1.1, the proposed Project would result in less than significant impacts to unknown human remains.

4.2.6 Energy

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

Regulatory Setting

Federal and State

Renewables Portfolio Standard Program

In 2002, California established its Renewables Portfolio Standard Program, with the goal of increasing the percentage of renewable energy in the state's electricity mix to 20 percent of retail sales by 2010. In 2008, Executive Order S-14-08 was signed into law, requiring retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. In October 2015, Governor Brown signed SB 350 to codify California's climate and clean energy goals. A key provision of SB 350 requires retail sellers and publicly owned utilities to procure 50 percent of their electricity from renewable sources by 2030. SB 100, passed in 2018, requires 100 percent of electricity in California to be provided by 100 percent renewable and carbon-free sources by 2045.

Environmental Setting

Total energy usage in California was approximately 6,923 trillion British thermal units (Btu) in 2020, the most recent year for which this data was available.[14] Out of the 50 states, California is ranked second in total energy consumption. The breakdown by sector was approximately 21.8 percent (1,507.8 trillion Btu) for residential uses, 19.6 percent (1,358.4 trillion Btu) for commercial uses, 24.6 percent (1,701.3 trillion Btu) for industrial uses, and 34.0 percent (2,356.1 trillion Btu) for transportation.[15] This energy is primarily supplied in the form of natural gas, petroleum, nuclear electric power, and hydroelectric power.

[14] *United States Energy Information Administration. "Table P3. Total Primary Energy Production and Total Energy Consumption Estimates in Trillion BUT, 2020". Available at: https://www.eia.gov/state/search/#?1=78&2=185. Accessed November 22, 2022.*

[15] *United States Energy Information Administration. "California Energy Consumption by End-Use Sector, 2020". Available at: https://www.eia.gov/state/?sid=CA#tabs-2. Accessed November 22, 2022.*

Electricity

In 2020, a total of approximately 10,247 gigawatt hours (GWh) of electricity was consumed in Alameda County.[16] Electricity in Alameda County in 2020 was consumed primarily by the non-residential sector (67.7 percent), followed by the residential sector consuming 32.2 percent.[17]

East Bay Community Energy (EBCE) and/or PG&E is the electricity provider for Alameda County. EBCE and/or PG&E sources the electricity and PG&E delivers it to customers over their existing utility lines. EBCE customers are automatically enrolled in Brilliant 100, which provides electricity from 100 percent carbon-free sources (hydropower).[18] Customers also have the option to enroll in Renewable 100, which sources energy from 100 percent renewable sources (small hydroelectric, solar, and wind), and Bright Choice, which is at least 38 percent renewable and an additional 47 percent carbon-free.

Fuel and Motor Vehicles

In the first two quarters in 2020, 4.15 billion gallons of gasoline were sold in California.[19] The average fuel economy for light-duty vehicles (autos, pickups, vans, and sport utility vehicles) in the United States has steadily increased from about 13.1 miles per gallon (mpg) in the mid-1970s to 24.9 mpg in 2019.[20] Federal fuel economy standards have changed substantially since the Energy Independence and Security Act was passed in 2007. That standard, which originally mandated a national fuel economy standard of 35 miles per gallon by the year 2020, was updated in March 2020 to require all cars and light duty trucks achieve an overall industry average fuel economy of 40.4 mpg by model year 2026. [21][22]

Discussion of Impacts

a) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less-Than-Significant Impact The Project would involve the removal and replacement of the roof and roof framing system, and seismic upgrades to the Decoto Reservoir. Energy requirements throughout the construction phase include energy for the manufacturing and transportation of building materials, preparation of the site, and use of construction equipment and vehicles.

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[16] *California Energy Commission. Energy Consumption Data Management System. "Electricity Consumption by County." Accessed February 22, 2022. http://ecdms.energy.ca.gov/elecbycounty.aspx.*

[17] *Ibid.*

[18] *East Bay Community Energy. "Power Mix". https://ebce.org/our-power-mix/index.html/ Accessed February 22, 2022.*

[19] *California Department of Tax and Fee Administration. "Net Taxable Gasoline Gallons." Accessed February 23, 2022. https://www.cdtfa.ca.gov/dataportal/dataset.htm?url=VehicleTaxableFuelDist.*

[20] *United States Environmental Protection Agency. "The 2020 EPA Automotive Trends Report: Greenhouse Gas Emissions, Fuel Economy, and Technology since 1975." January 2021.*

[21] *United States Department of Energy. Energy Independence & Security Act of 2007. Accessed February 22, 2022. http://www.afdc.energy.gov/laws/eisa.*

[22] *Public Law 110–140—December 19, 2007. Energy Independence & Security Act of 2007. Accessed February 22, 2022. http://www.gpo.gov/fdsys/pkg/PLAW-110publ140/pdf/PLAW-110publ140.pdf.*

The operation of the Project would have new electricity demands for lighting and operating the internal ventilation system. The Project would not increase the capacity nor change the operations of the Decoto Reservoir. For these reasons, the rehabilitated reservoir will not result in wasteful, inefficient, or unnecessary consumption of energy.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Less-Than-Significant Impact. As described above, the proposed Project would not result in wasteful, inefficient, or unnecessary consumption of energy during any Project phase. The Project would allow the continued operation of critical water supply infrastructure by the District. After construction, the Project would generally be similar to existing conditions except for operation of the new ventilation system. Electricity demands on-site would be slightly increased due to operation of new ventilation system but would be adequately served by the current provider (EBCE and/or PG&E), who is required to meet state and local plans for meeting renewable energy goals. Therefore, the Project would not conflict with state or local plans for renewable energy or energy efficiency. The impact would be less than significant.

4.2.7 Geology and Soils

Would the Project:	*Potentially Significant Impact*	*Less than Significant Impact with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

Regulatory Setting

State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was passed following the 1971 San Fernando earthquake. The act regulates development in California near known active faults due to hazards associated with

surface fault ruptures. Alquist-Priolo maps are distributed to affected cities, counties, and state agencies for their use in planning and controlling new construction. Areas within an Alquist-Priolo Earthquake Fault Zone require special studies to evaluate the potential for surface rupture to ensure that no structures intended for human occupancy are constructed across an active fault.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act (SHMA) was passed in 1990 following the 1989 Loma Prieta earthquake. The SHMA directs the California Geological Survey (CGS) to identify and map areas prone to liquefaction, earthquake-induced landslides, and amplified ground shaking. CGS has completed seismic hazard mapping for the portions of California most susceptible to liquefaction, landslides, and ground shaking, including the central San Francisco Bay Area. The SHMA requires that agencies only approve projects in seismic hazard zones following site-specific geotechnical investigations to determine if the seismic hazard is present and identify measures to reduce earthquake-related hazards.

California Building Standards Code

The California Building Code (CBC) prescribes standards for constructing safe buildings. The CBC contains provisions for earthquake safety based on factors including occupancy type, soil and rock profile, ground strength, and distance to seismic sources. The CBC requires that a site-specific geotechnical investigation report be prepared for most development projects to evaluate seismic and geologic conditions such as surface fault ruptures, ground shaking, liquefaction, differential settlement, lateral spreading, expansive soils, and slope stability. The CBC is updated every three years.

California Division of Occupational Safety and Health Regulations

Excavation, shoring, and trenching activities during construction are subject to occupational safety standards for stabilization by the California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA) under Title 8 of the California Code of Regulations and Excavation Rules. These regulations minimize the potential for instability and collapse that could injure construction workers on the site.

Public Resources Code Section 5097.5

Paleontological resources are the fossilized remains of organisms from prehistoric environments found in geologic strata. They range from mammoth and dinosaur bones to impressions of ancient animals and plants, trace remains, and microfossils. These materials are valued for the information they yield about the history of the earth and its past ecological settings. California Public Resources Code Section 5097.5 specifies that unauthorized removal of a paleontological resource is a misdemeanor. Under the CEQA Guidelines, a project would have a significant impact on paleontological resources if it would disturb or destroy a unique paleontological resource or site or unique geologic feature.

Local

City of Fremont Municipal Code

The City of Fremont's Municipal Code provides measures to address seismic-related impacts on people or structures resulting from new development projects.[23] The portions of the Municipal Code that are relevant for this Project are as follows:

Chapter 18.218.050 Standard Development Requirements. (e) Geology and Soils

(1) New development projects with the potential to expose people or structures to substantial adverse effects, including the risk of loss, injury, or death due to seismic activity and potential seismic-related ground shaking including liquefaction, if so determined by a site-specific geotechnical study prepared to the satisfaction of the city engineer or his/her designee, shall implement the following measures prior to or during project construction, as applicable.

A. The project geotechnical consultant shall review all geotechnical aspects of the project building and grading plans (i.e., site preparation and grading, site drainage improvements, and design parameters for foundations, and retaining walls). The consultant shall verify that their recommendations, including those regarding the need for further evaluation for potential liquefaction and the presence and lateral extent of any undocumented fill as well as laboratory testing for corrosive soil, have been properly conducted and any necessary design measures are incorporated into the construction plans. The results of the plan review shall be summarized by the geotechnical consultant in a letter and submitted to the city engineer prior to issuance of building permits for the project.

B. The project geotechnical consultant shall inspect, test (as needed), and approve all geotechnical aspects of project construction. The inspections shall include, but not necessarily be limited to: site preparation and grading, site surface and subsurface drainage improvements, and excavations for foundations and retaining walls prior to the placement of steel and concrete. The results of these inspections and the as-built conditions of the project shall be summarized by the project geotechnical consultant in a letter and submitted to the city building official/city engineer for review prior to final (as-built) project approval.

[23] *"Development project" shall mean the placement or erection of any solid material or structure; discharge or disposal of any dredged material or any gaseous, liquid, solid or thermal waste; grading, removing, dredging, mining or extraction of any soil or materials; change in the density or intensity of use of land including, but not limited to, amendments to the general plan and zoning ordinance or subdivision pursuant to the State Subdivision Map Act (commencing with Cal. Gov't Code § 66410), and any other division of land, including lot splits, except where the land division is brought about in connection with the purchase of such land by a public agency for public recreational use; change in the intensity of use of water, or of access thereto; construction, reconstruction, demolition or alteration of the size of any structure, including any facility of any private, public or municipal utility; and the removal of any major vegetation. As used in the municipal code, "structure" includes, but is not limited to, any building, road, pipe, flume, conduit, siphon, aqueduct, telephone line, and electrical power transmission and distribution line. A project, as defined in Cal. Gov't Code § 65931, is included within this definition.*

To further address and reduce impacts related to potential seismic activity and liquefaction, all grading, foundations, and structures for the proposed Project would be required to be engineered and designed in conformance with applicable geotechnical and soil stability standards as required by the California Building Code (CBC), as adopted by the City.

City of Fremont 2030 General Plan

The proposed Project would be subject to the land use policies of the City of Fremont's General Plan, as shown in Table 8 below:

Table 8: City of Fremont 2030 General Plan Policies

Policy	Description
Policy 10-1.2	• Require proposed development in areas of potential land instability to evaluate and sufficiently mitigate such hazards through site planning, appropriate construction techniques, building design and engineering
Policy 10.1-3	• Prohibit excessive and unnecessary grading activity, especially in areas of potential landslide risk as identified on State and local geologic hazard area maps or as identified during site reconnaissance.
Policy 10-2.1	• Regulate new development and redevelopment in a manner to minimize potential damage and hazards related to expected seismic activity.
Policy 10.2-4	• Locate critical facilities and systems vital to public health and safety (e.g., water, power and waste disposal systems, police and fire stations, hospitals, bridges and communication facilities) away from the areas of greatest seismic hazards and land instability and require that such facilities are designed to mitigate any hazards associated with their sites.

Environmental Setting

The Project area is located within the Coast Ranges geomorphic province which consists of northwest trending mountain ranges and valleys that extend from southern California to Oregon.[24] The bedrock within the Coast Ranges consists of a belt of sedimentary, volcanic and metamorphic rocks that have been deformed by stresses concentrated along the San Andreas fault zone. Valleys within the Coast Ranges are filled with Holocene age alluvium and older sedimentary deposits. According to the California Geological Survey, the Decoto Reservoir is located within the Niles 7.5-minute topographic quadrangle.

The reservoir is surrounded by an access road that is paved with asphalt. Surface pavements generally consist of two to four inches of asphalt concrete over five to eight inches of aggregate base. The ground surface slopes away from the reservoir at an inclination of 2.5:1 (horizontal: vertical) on the north and west sides, and 1.5:1 at the south and east sides of the reservoir. The perimeter access road has an elevation of approximately 210 feet.

[24] *California Department of Conservation, California Geological Survey, 2002. California Geomophic Provinces, Note 36.*

Seismicity

The San Francisco Bay Area is one of the most seismically active regions of the United States. An earthquake of moderate to high magnitude generated within the San Francisco Bay region could cause considerable ground shaking at the Project site. The degree of shaking is dependent on the magnitude of the event, the distance to its zone of rupture and local geologic conditions.

The faults considered capable of generating significant earthquakes are generally associated with the well-defined areas of crustal movement, which trend northwesterly. Table 9 below presents the state-considered active faults within 18 miles of the site.

Table 9: Approximate Fault Distances

Fault Name	Distance (Miles)
Hayward (total length)	0.13
Calaveras	6.1
San Andreas	18

The fault zones closest to the Project site are the Hayward Fault and the Calaveras Fault. The Hayward Fault runs north-south through the City of Fremont, bisecting the City generally along the I-680 corridor.[25] The Project site is located approximately 0.13 mile away from the Hayward fault. The Project site is not located within the mapped Alquist-Priolo Earthquake Fault Zone of the Hayward fault.[26]

Previous geologic mapping from 1960s indicated that an eastern trace of the Hayward Fault represented by a zone of gouge and nearby offset drainages crosses the Project site.[27] In 1983, Earth Sciences Associates (ESA) reviewed previous geologic mapping, previous subsurface investigations, current photogeologic investigation, and current trenching investigation, and concluded that there is no eastern trace of the Hayward Fault crossing the reservoir.[28] Cornerstone Earth Group reviewed new information gathered since 1983, including regulatory hazard maps by CGS and USGS, and concluded that these maps do not include an eastern trace of the Hayward Fault crossing the site.[29]

The reservoir upgrades are being specifically designed to strengthen the reservoir to withstand the forces of a predicted seismic event and therefore the reservoir would be more resilient to seismic events as a result of this Project.

[25] *City of Fremont. General Plan 2030 Safety Element. December 2011.*

[26] *John R. Dye. Email communication between John R. Dye, Senior Principal Engineer from Cornerstone Earth Group, Inc., and Richard Thow, S.E. from TJC and Associates, Inc., April 25, 2022.*

[27] *Cooper & Clark Consulting Engineers. Geologic Reconnaissance & Preliminary Soils Investigation Proposed Reservoir Site 3, Decoto Hills, Alameda County, California. October 21, 1963*

[28] *ESA. Engineering Geologic Report on the Potential for Fault Offset through the Decoto Reservoir Site. June 13, 1983.*

[29] *John R. Dye. Email communication between John R. Dye, Senior Principal Engineer from Cornerstone Earth Group, Inc., and Richard Thow, S.E. from TJC and Associates, Inc., April 25, 2022.*

Liquefaction

Soil liquefaction is a condition where saturated granular soils near the ground surface undergo a substantial loss of strength during a seismic event. Loose, water-saturated soils are transformed from a solid to a liquid state during ground shaking. Soils most susceptible to liquefaction are loose, uniformly saturated, fine-grained sands that lie close to the ground surface. Sample borings encountered stiff cohesive and medium dense to dense granular soils. Previous geotechnical investigation encountered stiff clays interbedded with dense sands and gravels. Screening of the site for liquefaction indicates low potential for liquefaction .[30]

Lateral Spreading

Lateral spreading is associated with liquefaction of one or more subsurface layers near the bottom of the exposed slope. As noted above, the potential for liquifiable soils at the site is low; therefore, the potential for lateral spreading is also considered low.[31]

Discussion of Impacts

a-i), ii) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: 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? Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Strong seismic ground shaking?

Less-Than-Signficant Impact. The Project is located within the San Francisco Bay Area, a seismically active area traversed by a wide array of faults with their attendant effects. The reservoirr is not located within an Alquist-Priolo Fault Rupture Hazard Zone.[32] Mission Fault and Hayward Fault are located approximatly 100 and 600 feet southwest of the reservoir, respectively.[33] Although the Project is not located within an Alquist-Priolo Earthquake Fault Zone, the Project area could experience very strong intensity ground shaking during a large earthquake due to its proximity to Mission Fault and Hayward Fault. Ground shaking associated with earthquakes could affect the reservoir by causing structure breakage or destablizing foundation. The proposed Project would seismically strengthen the existing Decoto Reservoir, a facility with no people at it except during brief daily checks and maintenance activities. The Project would involve seismic retrofit of the reservoir, including construction of a new lateral force-resisting system and replacement of 16 columns with new larger precast concrete columns and at least 22 additional lateral precast concrete tie-beams between them. Moreover, the

[30] *TJC and Associates, Inc. Decoto Reservoir Improvement Project Basic of Design Memorandum. September 19, 2022.*

[31] *Ibid.*

[32] *John R. Dye. Email communication between John R. Dye, Senior Principal Engineer from Cornerstone Earth Group, Inc., and Richard Thow, S.E. from TJC and Associates, Inc., April 25, 2022.*

[33] *USGS. U.S. Quaternary Faults Interactive Map. Available at: https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=5a6038b3a1684561a9b0aadf88412fcf. Accessed October 25, 2022.*

reservoir's structural modifications would be designed in accordance with applicable seismic provisions of the California Building Code (CBC). The Project would be beneficial and would not exacerbate existing seismic hazards. Impacts would be less than significant.

a-iii) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Seismic-related ground failure, including liquefaction?

Less-Than-Significant Impact. As discussed above, previous geotechnical investigation identified stiff clays interbedded with dense sands and gravels within the Project site. Screening of the site for liquefaction indicates low potential for liquefaction. Therefore, the impact of seismic-related ground failure, including liquefaction, is less than significant.

a-iv) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Landslides?

Less-Than-Significant Impact. The Project site is not located within a landslide hazard area, according to the City of Fremont General Plan.[34] Therefore, the proposed Project is not likely to adversely impact persons or structures due to landslides. Impacts would be less than significant.

b) Result in substantial soil erosion or the loss of topsoil?

Less-Than-Significant Impact. The potential for soil erosion exists during the period of earthwork activities and between the time when earthwork is completed and new vegetation is established or hardscape is installed. The Project site is mostly paved and developed with the existing Decoto Reservoir facility. The Project's improvements to Decoto Reservoir would not exacerbate substantial soil erosion or the loss of topsoil. Project construction activities, however, would expose soil to the erosive forces of wind and water. As discussed in Hydrology and Water Quality, the Project would employ BMPs during construction to reduce erosion and associated impacts to water quality to a less than significant level.

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?

Less-Than-Significant Impact. As discussed above in Impact a-iv), the Project site is not within a landslide hazard area. As noted above, the potential for liquifiable soils at the site is low; therefore, the potential for lateral spreading is also considered low. Subsidence is the deep-seated settlement of soils due to mining, dissolution of subsurface carbonate rocks, or fluid withdrawal (oil, natural gas, or groundwater). Soils at the Project site are stiff clays interbedded with dense sands and gravels with no underlaying aquifer; thus, the area has a low potential for subsidence.

Consistent with the requirements of the City of Fremont and existing regulations, the Project would conform to the standard engineering and building practices and techniques specified in the CBC. The Project would involve seismic retrofit to the reservoir in accordance with Seismic

[34] *City of Fremont. City of Fremont General Plan Diagram 10-4 Landslide Hazard Area. Adopted December 2011.*

Evaluation and Retrofit of Existing Buildings Standard ASCE 41-17.[35] The Project's reservoir improvements would not exacerbate on- or off-site landslides, lateral spreading, subsidence, or liquefaction. Impacts would be less than significant.

d) Be located on expansive soil, as defined in Table 18 1 B of the Uniform Building Code, creating substantial direct or indirect risks to life or property?

Less-Than-Significant Impact. Expansive soils generally occur when clay minerals expand during saturation and shrink in volume when dry. Sample borings encountered stiff cohesive and medium dense to dense granular soils. Previous geotechnical investigation encountered stiff clays interbeded with dense sands and gravels.[36] The clay soil encountered during previous geotechnical investigation are inorganic clays of low to medium plasticity (plasticity index of 20).[37] A platicity index of 15 or greater is consistent with the potential for swelling.[38] Therefore, the Project site contains soils with expansive potential. However, the proposed Project would be designed and constructed using standard construction methods and would be in compliance with the CBC. The seismic retrofit to the reservoir would also be designed in accordance with Seismic Evaluation and Retrofit of Existing Buildings Standard ASCE 41-17. Adherence to the CBC and Seismic Evaluation and Retrofit of Existing Buildings requirements would ensure that geotechnical design of the proposed Project would reduce potential impacts related to expansive soils to a less-than-significant level. Therefore, expansive soils would not pose a risk to life or property and this impact would be less than significant.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact. The proposed Project would seismically retrofit and upgrade the Decoto Reservoir. Septic tanks or alternative wastewater disposal systems are not proposed by the Project. Therefore, there would be no impact to soils and wastewater disposal.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less-Than-Significant Impact with Mitigation Incorporated. Paleontological resources are typically associated with bedrock formations which are not close to the surface of the Project area. In addition, subsurface soils on-site have been previously disturbed during construction of the existing facilities. For these reasons, the likelihood of encountering unknown paleontological resources or geological features on-site is low. However, construction activities may result in accidental destruction or disturbance of unknown paleontological resources or geologic

[35] *ASCE 41-17 is a primary reference for structural engineers addressing the seismic resilience of existing buildings and for building code officials reviewing such work.*

[36] *TJC and Associates, Inc. Decoto Reservoir Improvement Project Basic of Design Memorandum. September 19, 2022*

[37] *Robert S. Cooper & Associates. Soil Engineering Design Studies Proposed Earth Reservoir, Site 3 Decoto Hills, Alameda County, California. January 14, 2964.*

[38] *EDT. Expansive Soils and Construction Implications. January 23, 2018.*

features. The following measures shall be incorporated to address potential impacts to paleontological resources:

Impact GEO-1: The proposed Project may result in significant impacts to paleontological resources.

Mitigation Measure: The proposed Project would implement the following mitigation measure to reduce impacts to paleontological resources during Project construction activities to a less than significant level.

MM GEO-1.1: In the event that a fossil is discovered during construction of the Project, excavations within 50 feet of the find shall be temporarily halted or delayed until the discovery is examined by a qualified paleontologist, in accordance with Society of Vertebrate Paleontology standards. The District shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. If the find is determined to be significant and if avoidance is not feasible, the paleontologist shall design and carry out a data recovery plan consistent with the Society of Vertebrate Paleontology standards. The plan must include preparation, identification, cataloguing, and curation of any salvaged specimens.

With implementation of MM GEO-1, potential impacts to unique paleontological resources would be reduced to a less than significant level.

4.2.8 Greenhouse Gas Emissions

Would the Project:	*Potentially Significant Impact*	*Less than Significant Impact with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Regulatory Setting

State

In 2005, Governor Schwarzenegger issued Executive Order S-3-05, which states that California is vulnerable to the effects of climate change, including reduced snowpack in the Sierra Nevada Mountains, exacerbation of California's existing air quality problems, and sea level rise. To address these concerns, the executive order established the following statewide GHG emissions reduction targets:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

In 2006, Governor Schwarzenegger signed Assembly Bill (AB) 32, the California Global Warming Solutions Act, which requires California to reduce statewide GHG emissions to 1990 levels by 2020. In December 2008, the CARB adopted the Scoping Plan, which outlines a statewide strategy to achieve AB 32 goals.

In 2015, Governor Brown issued Executive Order B-30-15, which set a statewide GHG emissions reduction target of 40 percent below 1990 levels by 2030. This target is in addition to the previous GHG emissions reduction targets established in Executive Order S-3-05 for 2010, 2020, and 2050. In September 2016, Governor Brown signed Senate Bill (SB) 32, which codifies the GHG emissions reduction target in Executive Order B-30-15.

As required by Executive Order B-30-15 and SB 32, CARB updated the Scoping Plan to identify measures to meet the 2030 target. The revised scoping plan was adopted on December 14, 2017 and builds upon the initial scoping plan initiatives used for achieving 2020 targets, such as implementation of sustainable communities' strategies, low-carbon fuel standards, and the renewable portfolio standard. The Plan also supports policies that promote building efficiency; renewable power investment; clean and renewable fuels; vehicle emissions; walkable/bikeable communities with transit; cleaner freight and goods movement; reducing pollutants from dairies, landfills, and refrigerants; and capping emission from transportation, industry, natural gas, and electricity sources.

The State regulates energy consumption under Title 24 Building Standards Code, Part 6 of the California Code of Regulations (also known as the California Energy Code). The Title 24 Building Energy Efficiency Standards were developed by the California Energy Commission and apply to energy consumed for

heating, cooling, ventilation, water heating, and lighting in new residential and nonresidential buildings. The California Energy Code is updated every three years, with the most recent iteration (2019) effective as of January 1, 2020.

Title 24 Building Standards Code, Part 11 of the California Code of Regulations is referred to as the California Green Building Standards Code (CALGreen Code). The purpose of the CALGreen Code is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) planning and design; (2) energy efficiency; (3) water efficiency and conservation; (4) material conservation and resource efficiency; and (5) environmental air quality.

Local and Regional

2017 Clean Air Plan

To protect the climate, the 2017 CAP (prepared by BAAQMD) includes control measures designed 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.

CEQA Air Quality Guidelines

The BAAQMD CEQA Air Quality Guidelines are intended to serve as a guide for those who prepare or evaluate air quality impact analyses for projects and plans in the San Francisco Bay Area. The jurisdictions in the San Francisco Bay Area Air Basin utilize the thresholds and methodology for assessing GHG impacts developed by BAAQMD within the CEQA Air Quality Guidelines. The guidelines include information on legal requirements, BAAQMD rules, methods of analyzing impacts, and recommended mitigation measures.

City of Fremont Climate Action Plan

The City of Fremont passed its first Climate Action Plan (CAP) in 2012 with the goal of reducing municipal and community-wide greenhouse gas emissions 25 percent by 2020 from a 2005 baseline level. Some implementation successes include improving bike and pedestrian infrastructure, upgrading City streetlights with high-efficiency LEDs, requiring all businesses to recycle, and establishing mandatory solar requirements for new residential construction.

The City of Fremont is currently updating its Climate Action Plan for this decade of climate action. The City of Fremont's new carbon neutrality goal forms the basis of the CAP update, or "CAP 2.0," setting Fremont on the pathway to a sustainable, vibrant, and healthy community that supports the environment. On February 19, 2019, the City Council adopted a Carbon Neutrality Resolution (Resolution No. 2029-03) which set a 55 percent GHG emissions reduction target from 2005 levels by 2030 and a goal to achieve long term carbon neutrality by 2045.[39]

[39] *City of Fremont. Resolution No. 2019-03.*

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

Post 2020-Impact Thresholds

As described previously, BAAQMD has adopted GHG emissions thresholds of significance to assist in the review of projects under CEQA. These thresholds were designed to establish the level at which BAAQMD has determined that GHG emissions would cause significant environmental impacts. The GHG emissions thresholds identified by BAAQMD are 1,100 metric tons (MT) of CO_2 equivalents (CO_2e) per year or 4.6 MT CO_2e per service population per year. A project that is in compliance with the City of Fremont's Climate Action Plan (a qualified GHG Reduction Strategy) is considered to have a less than significant GHG impact regardless of its emissions.

The numeric thresholds set by BAAQMD and included within the City of Fremont's CAP were calculated to achieve the state's 2020 target for GHG emissions levels (and not the SB 32 specified target of 40 percent below the 1990 GHG emissions level). The Project would be constructed in six phases over a period of one year. Because the Project would be completed in the post-2020 timeframe, the Project would not be covered under the City of Fremont's Climate Action Plan.

CARB has completed a Scoping Plan, which will be utilized by BAAQMD to establish the 2030 GHG efficiency threshold. BAAQMD has yet to publish a quantified GHG efficiency threshold for 2030.

Environmental Setting

Gases that trap heat in the atmosphere, GHGs, regulate the earth's temperature. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate. In GHG emission inventories, the weight of each gas is multiplied by its global warming potential (GWP) and is measured in units of CO_2e. The most common GHGs are carbon dioxide (CO_2) and water vapor but there are also several others, most importantly methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). These are released into the earth's atmosphere through a variety of natural processes and human activities. Sources of GHGs are generally as follows:

- CO_2 and N_2O are byproducts of fossil fuel combustion.
- N_2O is associated with agricultural operations such as fertilization of crops.
- CH_4 is commonly created by off-gassing from agricultural practices (e.g., keeping livestock) and landfill operations.
- Chlorofluorocarbons (CFCs) were widely used as refrigerants, propellants, and cleaning solvents, but their production has been stopped by international treaty.
- HFCs are now used as a substitute for CFCs in refrigeration and cooling.
- PFCs and SF_6 emissions are commonly created by industries such as aluminum production and semiconductor manufacturing.

An expanding body of scientific research supports the theory that global climate change is currently causing changes in weather patterns, average sea level, ocean acidification, chemical reaction rates, and

precipitation rates, and that it will increasingly do so in the future. The climate and several naturally occurring resources within California are adversely affected by the global warming trend. Increased precipitation and sea level rise will increase coastal flooding, saltwater intrusion, and degradation of wetlands. Mass migration and/or loss of plant and animal species could also occur. Potential effects of global climate change that could adversely affect human health include more extreme heat waves and heat-related stress; an increase in climate-sensitive diseases; more frequent and intense natural disasters such as flooding, hurricanes, and drought; and increased levels of air pollution.

Unlike emissions of criteria and toxic air pollutants, which have regional and local impacts, emissions of GHGs have a broader, global impact. Global warming is a process whereby GHGs accumulating in the upper atmosphere contribute to an increase in the temperature of the earth and changes in weather patterns.

The main source of GHG emissions associated with the existing uses on-site is the electricity used for interior reservoir lighting and the ventilation system. Additional emissions also result from vehicle trips associated with maintenance and operation of the Decoto Reservoir.

Discussion of Impacts

a) *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*

Less-Than-Significant Impact. The proposed Project would rehabilitate the existing Decoto Reservoir by replacing the roof and roof framing system and seismically upgrading the reservoir. Project improvements would eliminate operational and maintenance issues with the reservoir while simultaneously providing the performance and reliability needed to meet the needs of a designated critical facility. GHG emissions would be generated during construction activities on the site, including demolition, hauling, excavation, concrete pouring and minor paving. Excavation would occur in the paved perimeter roadway surrounding the reservoir during the installation of the columns to support the reservoir roof structure walls and electrical infrastructure. Limited trenching may be required and would generally be associated with installation of the new reservoir roof structure walls and electrical infrastructure. The mechanical contractor and electricians would install the filtered ventilation system and interior lighting with associated wiring and buried electrical conduit. Electrical conduit would be routed and buried from the existing electrical panel to the reservoir roofing system. From there, electrical conduit would be routed along the existing perimeter walls or over the roof deck.

The BAAQMD does not have an adopted threshold of significance for construction-related GHG emissions. Construction equipment and trucks using diesel and other fuels would be the primary source of GHG emissions. The combustion of fossil-based fuels creates GHGs such as CO_2, CH_4, and N_2O. Furthermore, CH_4 is emitted during the fueling of heavy equipment. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change. These emissions would be temporary and would not represent an on-going source of GHG emissions in the area. Implementation of MM AIR-1.1 would further reduce GHG emissions from construction activities, although the impact is not significant.

The existing Decoto Reservoir operates on electrical power. The proposed Project would result in the continued operation of the reservoir, with a minor increase in electricity usage for the new ventilation system. The Project would not involve the addition of any stationary equipment

that would result in GHG emissions. The Project would not increase vehicle traffic to or from the Project site in comparison to the existing trips that are already occurring for maintenance of the reservoir. For these reasons, the proposed Project would result in a less than significant impact with respect to the generation of GHG emissions.

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

Less-Than-Significant Impact. The City of Fremont Climate Action Plan, adopted in 2012, identifies specific and achievable actions for reducing GHG emissions in Fremont. The actions are organized within a three-tier implementation time frame: short term; medium term; and long term, consistent with the goals and policies outlined in the City's General Plan. The CAP goals and actions relate to land use and mobility, energy, solid waste, water, and municipal services and operations. As described above, the proposed Project would not result in substantial GHG emissions during the construction or operation phase. The proposed Project would allow the continued operation of the existing Decoto Reservoir without increase in capacity. The proposed Project would, therefore, not conflict with any existing GHG laws, plans, policies, or regulations adopted by the California legislature, the CARB, BAAQMD, or the City of Fremont. Impacts would be less than significant.

4.2.9 Hazards and Hazardous Materials

Would the Project:	*Potentially Significant Impact*	*Less than Significant Impact with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
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) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒

Regulatory Setting

The storage, use, generation, transport, and disposal of hazardous materials and waste are highly regulated under federal and state laws. In California, the EPA has granted most enforcement authority over federal hazardous materials regulations to the California Environmental Protection Agency (CalEPA). In turn, local agencies have been granted responsibility for implementation and enforcement of many hazardous materials regulations under the Certified Unified Program Agency (CUPA) program.

Worker health and safety and public safety are key issues when dealing with hazardous materials. Proper handling and disposal of hazardous material is vital if it is disturbed during Project construction.

Cal/OSHA enforces state worker health and safety regulations related to construction activities. Regulations include exposure limits, requirements for protective clothing, and training requirements to prevent exposure to hazardous materials. Cal/OSHA also enforces occupational health and safety regulations specific to lead and asbestos investigations and abatement.

Federal and State

Federal Aviation Regulations Part 77

Federal Aviation Regulations, Part 77 Objects Affecting Navigable Airspace (FAR Part 77) sets forth standards and review requirements for protecting the airspace for safe aircraft operation, particularly by restricting the height of potential structures and minimizing other potential hazards (such as reflective surfaces, flashing lights, and electronic interference) to aircraft in flight. These regulations require that the Federal Aviation Administration (FAA) be notified of certain proposed construction projects located within an extended zone defined by an imaginary slope radiating outward for several miles from an airport's runways, or which would otherwise stand at least 200 feet in height above the ground.

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, was enacted by Congress on December 11, 1980. This law created a tax on the chemical and petroleum industries and provided broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. Over five years, $1.6 billion was collected and the tax went to a trust fund for cleaning up abandoned or uncontrolled hazardous waste sites. CERCLA accomplished the following objectives:

- Established prohibitions and requirements concerning closed and abandoned hazardous waste sites;
- Provided for liability of persons responsible for releases of hazardous waste at these sites; and
- Established a trust fund to provide for cleanup when no responsible party could be identified.

The law authorizes two kinds of response actions:

- Short-term removals, where actions may be taken to address releases or threatened releases requiring prompt response; and
- Long-term remedial response actions that permanently and significantly reduce the dangers associated with releases or threats of releases of hazardous substances that are serious, but not immediately life-threatening. These actions can be completed only at sites listed on the EPA's National Priorities List.

CERCLA also enabled the revision of the National Contingency Plan (NCP). The NCP provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The NCP also established the National Priorities List. CERCLA was amended by the Superfund Amendments and Reauthorization Act on October 17, 1986.[40]

[40] *United States Environmental Protection Agency. "Superfund: CERCLA Overview." Accessed August 3, 2021. https://www.epa.gov/superfund/superfund-cercla-overview.*

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA), enacted in 1976, is the principal federal law in the United States governing the disposal of solid waste and hazardous waste. RCRA gives the EPA the authority to control hazardous waste from the "cradle to the grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also sets forth a framework for the management of non-hazardous solid wastes.

The Federal Hazardous and Solid Waste Amendments (HSWA) are the 1984 amendments to RCRA that focused on waste minimization, phasing out land disposal of hazardous waste, and corrective action for releases. Some of the other mandates of this law include increased enforcement authority for the EPA, more stringent hazardous waste management standards, and a comprehensive underground storage tank program.[41]

Government Code Section 65962.5

Section 65962.5 of the Government Code requires CalEPA to develop and update a list of hazardous waste and substances sites, known as the Cortese List. The Cortese List is used by state and local agencies and developers to comply with CEQA requirements. The Cortese List includes hazardous substance release sites identified by the Department of Toxic Substances Control (DTSC) and State Water Resources Control Board (SWRCB).[42]

Toxic Substances Control Act

The Toxic Substances Control Act (TSCA) of 1976 provides the EPA with authority to require reporting, record-keeping and testing requirements, and restrictions relating to chemical substances and/or mixtures. Certain substances are generally excluded from TSCA, including, among others, food, drugs, cosmetics, and pesticides. The TSCA addresses the production, importation, use, and disposal of specific chemicals including polychlorinated biphenyls (PCBs), asbestos, radon, and lead-based paint.

California Accidental Release Prevention Program

The California Accidental Release Prevention (CalARP) Program aims to prevent accidental releases of regulated hazardous materials that represent a potential hazard beyond the boundaries of a property. Facilities that are required to participate in the CalARP Program use or store specified quantities of toxic and flammable substances (hazardous materials) that can have off-site consequences if accidentally released. The Alameda County Department of Environmental Health reviews CalARP risk management plans as the CUPA.

Asbestos-Containing Materials

[41] *United States Environmental Protection Agency. "Summary of the Resource Conservation and Recovery Act." Accessed January 31, 2024. https://www.epa.gov/laws-regulations/summary-resource-conservation-and-recovery-act*

[42] *California Environmental Protection Agency. "Cortese List Data Resources." Accessed August 3, 2021. https://calepa.ca.gov/sitecleanup/corteselist/.*

Friable asbestos is any asbestos-containing material (ACM) that, when dry, can easily be crumbled or pulverized to a powder by hand, allowing the asbestos particles to become airborne. Common examples of products that have been found to contain friable asbestos include acoustical ceilings, plaster, wallboard, and thermal insulation for water heaters and pipes. Common examples of non-friable ACMs are asphalt roofing shingles, vinyl floor tiles, and transited siding made with cement. The EPA phased out use of friable asbestos products between 1973 and 1978. National Emission Standards for Hazardous Air Pollutants (NESHAP) guidelines require that potentially friable ACMs be removed prior to building demolition or remodeling that may disturb the ACMs.

CCR Title 8, Section 1532.1

The United States Consumer Product Safety Commission banned the use of lead-based paint in 1978. Removal of older structures with lead-based paint is subject to requirements outlined by the Cal/OSHA Lead in Construction Standard, CCR Title 8, Section 1532.1 during demolition activities. Requirements include employee training, employee air monitoring, and dust control. If lead-based paint is peeling, flaking, or blistered, it is required to be removed prior to demolition.

Regional and Local

Municipal Regional Permit Provision C.12.f

Polychlorinated biphenyls (PCBs) were produced in the United States between 1955 and 1978 and used in hundreds of industrial and commercial applications, including building and structure materials such as plasticizers, paints, sealants, caulk, and wood floor finishes. In 1979, the EPA banned the production and use of PCBs due to their potential harmful health effects and persistence in the environment. PCBs can still be released to the environment today during demolition of buildings that contain legacy caulks, sealants, or other PCB-containing materials.

With the adoption of the San Francisco Bay Region Municipal Regional Stormwater National Pollutant Discharge Elimination System (NPDES) Permit (MRP) by the San Francisco Bay Regional Water Quality Control Board on November 19, 2015, Provision C.12.f requires that permittees develop an assessment methodology for applicable structures planned for demolition to ensure PCBs do not enter municipal storm drain systems. Municipalities throughout the Bay Area are currently modifying demolition permit processes and implementing PCB screening protocols to comply with Provision C.12.f. Buildings constructed between 1950 and 1980 that are proposed for demolition must be screened for the presence of PCBs prior to the issuance of a demolition permit. Single family homes and wood-frame structures are exempt from these requirements.

City of Fremont Municipal Code

The City of Fremont's Municipal Code provides measures to address the potential for new development projects to create a significant hazard to the public or the environment. The portions of the Municipal Code that are relevant for this Project are as follows:

> ***Chapter 18.218.050 Standard Development Requirements***. (f) Hazardous Materials
>
> (1) New development projects with the potential to 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, if so determined by a site-specific environmental site assessment prepared to the satisfaction of the fire marshal or planning manager, shall implement the following measures prior to or during Project construction, as applicable:

A. A soil management plan (SMP) shall be developed to provide guidelines for the appropriate handling and management of soil with known contaminants or recognized environmental condition (REC) concentrations above the applicable screening levels recommended in the California Department of Toxic Substances Control (DTSC) Office of Human and Ecological Risk (HERO) guidance document Human Health Risk Assessment or similar document provided by DTSC.

Prior to issuance of building and/or grading permits for site development, remediation work to remove known contaminants or RECs at the subject property shall be implemented to the satisfaction of the District, City of Fremont fire department, DTSC, or other appropriate agency having jurisdiction, depending on the location (e.g., depth) and the type of REC found and the jurisdictional purview of the agencies. Completion of the remediation work and procurement of an appropriate closure document or written statement that the remediation work has been satisfactorily completed and without further conditions or obligations shall be submitted to the satisfaction of the City of Fremont community development department. Compliance with this mitigation may require the District or their agent to complete a preliminary endangerment report, voluntary cleanup agreement or other documentation as determined by the appropriate agency and receive concurrence that the site's RECs have been resolved.

City of Fremont 2030 General Plan

The proposed Project would be subject to the land use policies of the City of Fremont's General Plan, as shown in Table 10.

Table 10: City of Fremont 2030 General Plan Policies

Policy	Description
Policy 10-6.1	• Maintain sufficient regulation of land use and construction to minimize potential health and safety risks associated with future, current or past use of hazardous materials in Fremont.
Policy 10-6.5	• Maintain sufficient oversight regarding the storage, transport and handling of hazardous materials within the City.

Environmental Setting

The Project would seismically retrofit the existing Decoto Reservoir and replace its roof. Decoto Reservoir was constructed in 1964. Because of the age of the structure, there is the potential that it contains ACMs or LBP.

The Project area is surrounded immediately by open spaces. There are no recorded hazardous sites located on the Project site.[43][44] The closest hazardous site to the Project site the Pine Property located at 35450 Mission Boulevard, approximately 1,000 feet southwest of the Project site. The cleanup status for the Pine Property was completed as of October 5, 1999, and no further action related to the pollutant release at the property is required.[45]

The Project site is not located within a Fire Hazard Severity Zone of State Responsibility Area (SRA) as mapped by CAL FIRE.[46] The closest Very High Fire Hazard Severity Zone in SRA is located approximately 2.8 miles east of the Project site. [47]

Discussion of Impacts

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less-Than-Significant Impact. Construction of the proposed Project would involve the use of potentially hazardous materials, including vehicle fuels, oils, and fluids. All hazardous materials would be transported, contained, stored, used, and disposed of in accordance with manufacturers' instructions and would be handled in compliance with all applicable standards and regulations. Construction-related hazardous materials use would be temporary, and does not constitute routine transport, use, or disposal.

Operation of the improved Decoto Reservoir would not involve the routine transport, use, or disposal of hazardous materials. Compliance with applicable federal, State, and local laws and regulations pertaining to the handling, storage, and disposal of hazardous materials would ensure that no significant hazards to the public or the environment result from the Project's minimal use of hazardous materials. Therefore, operation of the proposed Project would have a less than significant impact related to 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?

Less-Than-Significant Impact with Mitigation Incorporated. As described above, operation of the proposed Project would not require routine use of hazardous materials. Therefore, no hazards or hazardous materials impacts related to long term operation of the Project are anticipated. However, due to the age of the existing structures on-site, building materials may

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[43] *State Water Resources Control Board. "GeoTracker". Accessed February 23, 2022. https://geotracker.waterboards.ca.gov/map/?global_id=SL0600169059.*

[44] *Department of Toxic Substances Control. "EnviroStor Database". Accessed February 23, 2022. http://www.envirostor.dtsc.ca.gov/?surl=f5y18*

[45] *California Regional Water Quality Control Board. Case Closure Letter 01S0526.*

[46] *CAL FIRE. Fire Hazard Severity Zone Viewer. Available at:* http://egis.fire.ca.gov/FHSZ/*. Accessed February 23, 2022.*

[47] *Ibid.*

contain ACMs and/or LBP. If the existing structures are demolished, asbestos particles could be released and expose construction workers and nearby residential occupants to harmful levels of asbestos. If LBP is still bonded to the building materials, its removal is not required prior to demolition. If the LBP is flaking, peeling, or blistering, it shall be removed prior to demolition. It would be necessary to follow applicable California Occupational Safety and Health Administration (OSHA) regulations and any debris containing lead must be disposed of appropriately. Demolition of the existing structures on-site could expose construction workers or occupants of adjacent residences to harmful levels of ACMs or lead.

Impact HAZ-1: Due to its age, Decoto Reservoir may contain ACMs and/or LBP materials.

Mitigation Measure: The proposed Project would implement the following mitigation measure to reduce hazards from harmful levels of ACMs or lead to a less-than-significant level.

MM HAZ-1.1: In conformance with State and local laws, a visual inspection/pre-demolition survey, and possible sampling, shall be conducted prior to the demolition of on-site building(s) to determine the presence of ACMs and/or LBP.

- During demolition activities, all building materials containing LBP shall be removed in accordance with the California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA) Lead in Title 8, CCR, Section 1532.1, including employee training, employee air monitoring, and dust control. Any debris or soil containing LBP or coatings shall be disposed of at landfills that meet acceptance criteria for the type of lead being disposed.
- All potentially friable ACMs shall be removed in accordance with National Emission Standards for Air Pollution (NESHAP) guidelines prior to demolition or renovation activities that may disturb ACMs. All demolition activities shall be undertaken in accordance with Cal/OSHA standards contained in Title 8, CCR, Section 1529, to protect workers from asbestos exposure.
- A registered asbestos abatement contractor shall be retained to remove and dispose of ACMs identified in the asbestos survey performed for the site in accordance with the standards stated above.
- Materials containing more than one-percent asbestos are also subject to BAAQMD regulations. Removal of materials containing more than one-percent asbestos shall be completed in accordance with BAAQMD requirements and notifications.
- Based on Cal/OSHA rules and regulations, the following conditions are required to limit impacts from LBP to construction workers.
    - Prior to commencement of demolition activities, a building survey, including sampling and testing, shall be completed to identify and quantify building materials containing LBP.
    - During demolition activities, all building materials containing LBP shall be removed in accordance with Cal/OSHA Lead in Construction Standard, Title 8, CCR, Section 1532.1, including employee training, employee air monitoring and dust control.

- Any debris or soil containing LBP or lead-based coatings shall be disposed of at landfills that meet acceptance criteria for the type of waste being disposed.

Implementation of MM HAZ-1.1 would result in a less than significant impact from ACMs and LBP during the construction phase. Therefore, the Project would not 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?*

Less-Than-Significant Impact. The nearest school to the Project site is Free To Be Preschool, located approximately 0.28-mile northwest of the Project site. In addition, as described in Impact a) above, the Project would not involve routine transport, use, and/or disposal of hazardous materials during construction or operation of the Project. The Project would be required to comply with applicable federal, State, and local laws and regulations pertaining to handling hazardous materials. Complying with applicable regulations would ensure that impacts to schools would be less than significant.

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?*

Less-Than-Significant Impact. The Project site is not included on any list of hazardous material sites.[4849] The closest hazardous site to the Project site is the Pine Property located at 35450 Mission Boulevard, approximately 1,000 feet southwest of the Project site. The cleanup status for the Pine Property was completed as of October 5, 1999, and no further action related to the pollutant release at the property is required.[50] No hazardous material spill incidents have been reported in the site vicinity that would be likely to significantly impact soil or ground water quality at the site. Impacts would be less than significant.

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?*

No Impact. The Project site is not located within an airport land use plan, or within two miles of a public airport or public use airport. The closest airport is the Hayward Executive Airport located approximately eight miles northwest of the Project site. Therefore, the proposed Project would not result in a safety hazard for workers in the Project area. No impact would occur.

f) *Impair implementation of or physically interfere with an adopted emergency response plan or*

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[48] *State Water Resources Control Board. "GeoTracker". Accessed February 23, 2022. https://geotracker.waterboards.ca.gov/map/?global_id=SL0600169059*

[49] *Department of Toxic Substances Control. "EnviroStor Database". Accessed February 23, 2022. http://www.envirostor.dtsc.ca.gov/?surl=4b4m4*

[50] *California Regional Water Quality Control Board. Case Closure Letter 01S0526.*

emergency evacuation plan?

Less-Than-Significant Impact. The City of Fremont's Disaster Management Operations Plan was developed in compliance with State requirements. Fremont's Disaster Management Operations Plan provides policies and procedures for the evacuation, dispersal, or relocation of people from hazardous areas during natural disasters to less threatened areas. The plan also describes the organization and responsibilities for conducting movement operations. Evacuation routes suited for different types of potential disasters are shown in the City's Disaster Management Operations Plan.[51] Because the proposed Project would not alter or block adjacent roadways, implementation of the proposed Project would not be expected to impair the function of nearby emergency evacuation routes. Therefore, the proposed Project would have a less-than-significant impact on implementation of an adopted emergency response plan or emergency evacuation plan.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

No Impact. As stated above, the Project site is located in an urban, developed area of the City of Fremont, and is not located within a Fire Hazard Severity Zone of SRA as mapped by CAL FIRE.[52] The Project would, therefore, not expose people or structures to wildland risks. No impact would occur.

[51] *City of Fremont General Plan. 2011. Chapter 10 – Safety.*

[52] *CAL FIRE. Fire Hazard Severity Zone Viewer. Available at: http://egis.fire.ca.gov/FHSZ/. Accessed February 23, 2022.*

4.2.10 Hydrology and Water Quality

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

Regulatory Setting

Federal and State

The Federal Clean Water Act and California's Porter-Cologne Water Quality Control Act are the primary laws related to water quality in California. Regulations set forth by the EPA and the SWRCB have been developed to fulfill the requirements of this legislation. EPA regulations include the National Pollutant Discharge Elimination System (NPDES) permit program, which controls sources that discharge pollutants into the waters of the United States (e.g., streams, lakes, bays, etc.). These regulations are implemented

at the regional level by the Regional Water Quality Control Boards (RWQCBs). The Project site is within the jurisdiction of the San Francisco Bay RWQCB.

National Flood Insurance Program

The Federal Emergency Management Agency (FEMA) established the National Flood Insurance Program (NFIP) to reduce impacts of flooding on private and public properties. The program provides subsidized flood insurance to communities that comply with FEMA regulations protecting development in floodplains. As part of the program, FEMA publishes Flood Insurance Rate Maps (FIRMs) that identify Special Flood Hazard Areas (SFHAs). An SFHA is an area that would be inundated by the one-percent annual chance flood, which is also referred to as the base flood or 100-year flood.

Statewide Construction General Permit

The State Water Resources Control Board (SWRCB) has implemented an NPDES General Construction Permit for the State of California (Construction General Permit). For projects disturbing one acre or more of soil, a Notice of Intent (NOI) must be filed with the RWQCB by the Project sponsor, and a Storm Water Pollution Prevention Plan (SWPPP) must be prepared by a qualified professional prior to commencement of construction and filed with the RWQCB by the Project sponsor. The Construction General Permit includes requirements for training, inspections, record keeping, and, for projects of certain risk levels, monitoring. The general purpose of the requirements is to minimize the discharge of pollutants and to protect beneficial uses and receiving waters from the adverse effects of construction-related storm water discharges.

Regional and Local

San Francisco Bay Basin Plan

The San Francisco Bay RWQCB regulates water quality in accordance with the Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan). The Basin Plan lists the beneficial uses that the San Francisco Bay RWQCB has identified for local aquifers, streams, marshes, rivers, and the San Francisco Bay, as well as the water quality objectives and criteria that must be met to protect these uses. The San Francisco Bay RWQCB implements the Basin Plan by issuing and enforcing waste discharge requirements, including permits for nonpoint sources such as the urban runoff discharged by a City's stormwater drainage system. The Basin Plan also describes watershed management programs and water quality attainment strategies.

Municipal Regional Permit Provision C.3

The San Francisco Bay RWQCB re-issued the Municipal Regional Stormwater NPDES Permit (MRP) in 2015 to regulate stormwater discharges from municipalities and local agencies (co-permittees) in Alameda, Contra Costa, San Mateo, and Santa Clara Counties, and the cities of Fairfield, Suisun City, and Vallejo.[53] Under Provision C.3 of the MRP, new and redevelopment projects that create or replace 10,000 square feet or more of impervious surface area are required to implement site design, source

[53] *MRP Number CAS612008*

control, and Low Impact Development (LID)-based stormwater treatment controls to treat post-construction stormwater runoff. LID-based treatment controls are intended to maintain or restore the site's natural hydrologic functions, maximizing opportunities for infiltration and evapotranspiration, and using stormwater as a resource (e.g., rainwater harvesting for non-potable uses). The MRP also requires that stormwater treatment measures are properly installed, operated, and maintained.

In addition to water quality controls, the MRP requires new development and redevelopment projects that create or replace one acre or more of impervious surface to manage development-related increases in peak runoff flow, volume, and duration, where such hydromodification is likely to cause increased erosion, silt pollutant generation, or other impacts to local rivers, streams, and creeks.

Projects may be deemed exempt from these requirements if they do not meet the minimized size threshold, drain into tidally influenced areas or directly into the Bay, or drain into hardened channels, or if they are infill projects in subwatersheds or catchment areas that are greater than or equal to 65 percent impervious. The proposed Project is deemed exempt as it is a roof replacement Project.[54]

Municipal Regional Permit Provision C.12.f

Provision C.12.f of the MRP requires co-permittee agencies to implement a control program for PCBs that reduces PCB loads by a specified amount during the term of the permit, thereby making substantial progress toward achieving the urban runoff PCBs waste load allocation in the Basin Plan by March 2030.[55] Programs must include focused implementation of PCB control measures, such as source control, treatment control, and pollution prevention strategies. Municipalities throughout the Bay Area are updating their demolition permit processes to incorporate the management of PCBs in demolition building materials to ensure PCBs are not discharged to storm drains during demolition. Buildings constructed between 1955 and 1978 that are proposed for demolition must be screened for the presence of PCBs prior to the issuance of a demolition permit.

Alameda County Flood Control and Water Conservation District

The Alameda County Flood Control and Water Conservation District (ACFCWCD) operates as the flood control agency for Alameda County. The ACFCWCD plans, designs, constructs, and maintains flood control projects such as natural creeks, channels, levees, pump stations, dams, and reservoirs.

Sustainable Groundwater Management

The District is the Groundwater Sustainability Agency (GSA) for the Niles Cone Subbasin 2-09.01 which underlies the Project site. The District, as the GSA, has an adopted Alternative to a Groundwater Sustainability Plan for the basin which was approved in 2019 by the Department of Water Resources.

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[54] *Alameda Countywide Clean Water Program. "C.3 Technical Guidance Manual, Chapter 2 Background/Regulatory Requirements." Accessed November 4, 2021. https://cleanwaterprogram.org/wp-content/uploads/2023/03/C3TG-V8-Final-2023_03-Compiled.pdf.*

[55] *San Francisco Bay Regional Water Quality Control Board. Municipal Regional Stormwater Permit, Provision C.12. November 19, 2015.*

Environmental Setting

Surface Water Quality

The water quality of streams, creeks, ponds, and other surface water bodies can be greatly affected by pollution carried in contaminated surface runoff. Pollutants from unidentified sources, known as non-point source pollutants, are washed from streets, construction sites, parking lots, and other exposed surfaces into storm drains. Urban stormwater runoff often contains contaminants such as oil and grease, plant and animal debris, pesticides, litter, and heavy metals. In sufficient concentrations, these pollutants have been found to adversely affect the aquatic habitats to which they drain.

There are numerous watersheds within the City, which function as drainage basins of the west slope of the Diablo Range and the low lying, bay adjacent areas of the City.

Groundwater and Groundwater Management

The Project site is not located within a groundwater basin as defined by Department of Water Resources Bulletin 118.[56] Therefore, the Project site is not included in a groundwater management plan. A soil engineering investigation conducted in 1969 indicated that water was encountered at around 24 feet below ground surface.[57]

Flooding Hazards

The Project site is located not within a FEMA 100-year flood hazard area, according to the Flood Insurance Rate Map (FIRM) Panel No. 06001C0455G.[58] Due to the elevation of the site, and its distance from confined bodies of water, it is not subject to sea level rise or seiche hazards.

Seiches, Tsunamis, and Mudflows

A seiche is an oscillation of the surface of a lake or landlocked sea varying in period from a few minutes to several hours. There are no landlocked bodies of water near the Project site that will affect the site in the event of a seiche.

A tsunami or tidal wave is a series of water waves caused by displacement of a large volume of a body of water, such as an ocean or a large lake. Due to the immense volumes of water and energy involved, tsunamis can devastate coastal regions. There are no large bodies of water near the Project site. The site does not lie within a tsunami inundation hazard area.[59]

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[56] *Department of Water Resources. Groundwater Basin Boundary Assessment Tool. Available at https://gis.water.ca.gov/app/bbat/. Accessed November 2, 2022.*

[57] *Copper Clark & Associates. Supplementary Soil Engineering Services Decoto Hills Reservoir. December 10, 1969.*

[58] *Federal Emergency Management Agency. Flood Insurance Rate Map. Community Panel No. 06001C0455G.*

[59] *California Department of Conservation. "Alameda County Tsunami Inundation Quads". Accessed February 23, 2022. https://www.conservation.ca.gov/cgs/tsunami/maps/alameda.*

A mudflow is the rapid movement of a large mass of mud formed from loose soil and water. Slopes across the Project site are moderate and that the development of mudslide is unlikely.

Discussion of Impacts

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less-Than-Significant Impact. The purpose of the proposed Project is to replace the roof and roof framing system and seismically upgrade Decoto Reservoir. Construction would include ground disturbing activities, which has the potential to increase sediment runoff from the site. In addition, demolition and construction could result in the release of materials including paints, vehicle and equipment fuel, and other contaminants to the environment.

Construction of the proposed Project would disturb less than one acre. For this reason, the Project would not require the preparation of a SWPPP under the statewide Construction General Permit. Implementation of construction Best Management Practices (BMPs) during construction activities would be required. Construction BMPs would include, but not be limited to, erosion and sediment control BMPs which are designed to minimize erosion and retain sediment on site, and good housekeeping BMPs which would prevent spills, leaks, and discharge of construction debris and waste into receiving waters. Compliance with State and local regulations regarding stormwater during construction would ensure that the proposed Project would result in less-than-significant impacts to water quality during construction.

The proposed Project is a roof replacement project. All roof replacement projects are excluded from Provision C.3.[60] Therefore, the proposed Project would not be required to comply with the LID requirements of Provision C.3 of the Municipal Regional Permit. The improved reservoir would operate similarly to the existing facility, and no new potentially significant water quality impacts are expected to result from the operation of the proposed Project. Due to the overall size of the Project site (approximately 4.8 acres), and the similar nature of the operation of the improved reservoir to that of the existing structure, Project operation would not violate any water quality standards, waste discharge requirements, and would not otherwise substantially degrade surface or groundwater quality. Impacts would be less than significant.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less-Than-Significant Impact. Water needed for dust suppression during construction would be obtained from an existing water source. Groundwater may comprise a portion of the water used for dust suppression; however, the quantity of water required would be limited to only what is needed to suppress fugitive dust during Project construction. The Project site is not underlain by any groundwater basin.[61] And, the Project would not change the impervious surfaces within the

[60] *Alameda Countywide Clean Water Program. "C.3 Technical Guidance Manual, Chapter 2 Background/Regulatory Requirements." Accessed November 4, 2021. https://www.cleanwaterprogram.org/c3-guidance-table.html.*

[61] *California Department of Water Resources. SGMA Data Viewer. Available at: https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer#boundaries. Accessed October 24, 2022.*

Project site. Therefore, groundwater supplies and groundwater recharge would not be substantially impacted by the Project. The impact would be less than significant.

c) *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: (i) result in substantial erosion or siltation on- or off-site; (ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; (iii) create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff; or (iv) impede or redirect flood flows?*

Less-Than-Significant Impact. No streams or rivers would be affected by Project construction. The Project does not propose to alter the existing drainage pattern of the site or alter the course of a stream or river. Grading may be required in areas that require paving which would only be performed where existing pavement is removed. The Project would not alter the existing drainage pattern of the Project site during construction activities in a manner that would result in substantial erosion or siltation on- or off-site, increase surface runoff, result in flooding, or impede or redirect flood flows. Impact would be less than significant.

d) *In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?*

No Impact. As discussed above under Environmental Setting, the Project site is not within a hazard zone for flood, tsunami, or seiche. In addition, the Project site would not be subject to inundation in the event of a dam failure. Therefore, the proposed Project would not risk pollutant discharge due to site inundation. No impacts would occur.

e) *Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?*

Less-Than-Significant Impact. The Project would comply with all applicable local and State stormwater discharge requirements during construction and operation. The Project proposes the rehabilitation of structures and equipment associated with the District's Decoto Reservoir. The proposed Project would allow the continued operation of critical water supply infrastructure by the District, and is, as a result, consistent with the groundwater management activities of the District. For these reasons, the proposed Project would not conflict with or obstruct implementation of a water quality control plan or the District's Alternative to a Groundwater Sustainability Plan. Impacts would be less than significant.

4.2.11 Land Use and Planning

Would the Project:	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

Regulatory Setting

City of Fremont 2030 General Plan

The proposed Project would be subject to the land use policies of the City of Fremont's General Plan, as shown in Table 11 below.

Table 11: City of Fremont 2030 General Plan Policies

Policy	Description
Policy 9-1-2	• Ensure public safety facilities are added or expanded as necessary to keep pace with population growth and meet operational needs. Take into account the availability of both capital and operating funds when determining the timing of new and expanded facilities.
Policy 9-3.1	• Work with the Alameda County Water District, Union Sanitary District, and Alameda County Flood Control District to encourage their long-range plans are consistent with the Fremont General Plan.

City of Fremont Zoning Ordinance

The Project site falls within an OS zoning district. The OS designation permits limited but reasonable use of open lands while protecting the public health, safety and welfare from the dangers of seismic hazards and unstable soils. The designation includes city park, general open space, hillside, hill face, hill open space, private open space, and resource conservation and public open space. City and other government facilities and infrastructure including public utility or service facilities are permitted use or conditional uses may be permitted with a conditional use permit.

Environmental Setting

The Project site consists of the existing Decoto Reservoir which is operated by the District. The site is designated *Open Space-Hill Face* in the City's General Plan. This designation allows a density of one unit per 20 acres for existing parcels. Outdoor recreation and limited public and quasi-public uses are also

allowed. Land uses surrounding the Project site are *Open Space-Hill Face* to the north, east, and south. The Union City city-boundary is immediately to the northwest of the Project site.

Discussion of Impacts

a) Physically divide an established community?

No Impact. Examples of projects that have the potential to physically divide established communities include new freeways and highways, major arterial streets, and railroad lines. The Project site is located within open space in the City of Fremont and is surrounded by open space with two residences to the east and south of the reservoir. Other existing residential development is located approximately 700 feet to the southwest of the reservoir along Mission Boulevard. The purpose of the Project is to replace the roof and roof framing system and seismically upgrade the reservoir. Upon completion, the Project would occupy the same area as the current reservoir and would not result in the construction of dividing infrastructure within the surrounding residential neighborhood. For these reasons, the Project would not physically divide an established community. No impacts would occur.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. The Project site is designated in the General Plan as *Open Space-Hill Face* which allows limited public and quasi-public uses. The proposed seismic retrofit and roof replacement would be consistent with the permitted public and quasi-public uses of the Project site under the City of Fremont's General Plan. The Project would not conflict with the Open Space zoning district. The Project would not result in a change to the existing land use or zoning designations for the Project site. Therefore, the Project would not conflict with applicable land use plans in the Project area. No impacts would occur.

4.2.12 Mineral Resources

(USGS MRDS Map) Would the Project:	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
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?	☐	☐	☐	☒

Regulatory Setting

State

The Surface Mining Control and Reclamation Act

The Surface Mining and Reclamation Act (SMARA) was enacted by the California legislature in 1975 to address the need for a continuing supply of mineral resources, and to prevent or minimize the negative impacts of surface mining to public health, property, and the environment. As mandated under SMARA, the State Geologist has designated mineral land classifications in order to help identify and protect mineral resources in areas within the state subject to urban expansion or other irreversible land uses which would preclude mineral extraction. SMARA also allowed the State Mining and Geology Board (SMGB), after receiving classification information from the State Geologist, to designate lands containing mineral deposits of regional or statewide significance.

Local

City of Fremont 2030 General Plan

The proposed Project would be subject to the conservation policies of the City of Fremont's General Plan, as shown in Table 12 below:

Table 12: City of Fremont 2030 General Plan Policies

Policy	Description
Policy 7-5.1	• Protect identified state designated mineral resources from incompatible development whenever feasible consistent with the City's long-range development plans.
Policy 7-5.2	• Ensure mineral resource extraction activities do not create a significant impact to the character and long-term health of the City
Policy 7-5.3	• Enforce requirements for reclamation of mineral resource extraction areas, including salt ponds and quarries.
Policy 7-5.4	• Encourage preservation of former extraction areas (mineral and clay quarries and salt ponds) for open space, wildlife and recreation purposes when appropriate.

Environmental Setting

The Project site is situated in the northern section of Fremont. The site contains Decoto Reservoir and is surrounded by a single-family residence to the east and open space to the north, south, and west. There are no known mineral resources on-site, and the site is not a designated mineral resource recovery area of any kind. A State designated Regionally Significant Construction Aggregate site and the Former Bollini Quarry are located approximately 2,000 feet northeast and 5,000 feet southeast of the Project site, respectively.[62]

Discussion of Impacts

a, b) 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?

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?

No Impact. The Project site does not contain any known mineral resources. For this reason, the proposed Project would not result in the loss of availability of any known mineral resource. The Project site is not part of a locally important mineral resource recovery site designated by the City of Fremont's General Plan or any other policy.[63] As discussed under Environmental Setting above, a State designated Regionally Significant Construction Aggregate site and the Former Bollini Quarry are located in the vicinity of the Project. The development of the proposed Project would not result in the loss of availability of mineral resources from these sites. Therefore, no impacts would occur.

[62] *City of Fremont. General Plan Atlas and Diagram – General Plan Conservation Mineral Resources and Sites Subject to SMARA.*

[63] *City of Fremont General Plan. 2011. Chapter 7 – Conservation.*

4.2.13 Noise

Would the Project result in:	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Regulatory Setting

City of Fremont Municipal Code

The City of Fremont's Municipal Code provides limitations on construction hours. The portions of the Municipal Code that are relevant for this Project are as follows:

> ***Chapter 18.160.010 Construction hours – Limitations.*** The City Municipal code stipulates that construction activities within 500 feet of residences, lodging facilities, nursing homes or inpatient hospitals shall be limited to the hours of 7:00 a.m. to 7:00 p.m. Monday through Friday, and 9:00 a.m. to 6:00 p.m. on Saturday. Construction activities are not allowed within 500 feet of residences on Sundays.
>
> ***Chapter 18.218.050 Standard Development Requirements***. (g) Noise. (1) Construction Noise. To reduce the potential for noise impacts during construction, the following requirements shall be implemented:
>
> A. Construction equipment shall be well-maintained and used judiciously to be as quiet as practical.
>
> B. Construction, excavating, grading, and filling activities (including the loading and unloading of materials, truck movements, and warming of equipment motors) shall be limited as provided in Section 18.160.010.
>
> C. All internal combustion engine-driven equipment shall be equipped with mufflers, which are in good condition and appropriate for the equipment.
>
> D. The contractor shall utilize "quiet" models of air compressors and other stationary noise sources where technology exists.

E. Loading, staging areas, stationary noise generating equipment, etc., shall be located as far as feasible from sensitive receptors.

F. The contractor shall comply with Air Resource Board idling prohibitions of unnecessary idling of internal combustion engines.

G. Signs shall be posted at the construction site that include permitted construction days and hours, a day and evening contact number for the job site, and a contact number for the project sponsor in the event of noise complaints. The applicant shall designate an on-site complaint and enforcement manager to track and respond to noise complaints.

H. Temporary noise barriers, such as solid plywood fences shall be installed around construction sites adjacent to operational businesses, residences or noise-sensitive land uses, unless an existing wall or other barrier provides equivalent noise attenuation. (Ord. 27-2016 § 37, 12-6-16; Ord. 23-2018 § 41, 10-2-18; Ord. 05-2021 § 52, 4-20-21.)

I.

City of Fremont 2030 General Plan

The proposed Project would be subject to the noise and vibration policies of the City of Fremont's General Plan, as shown in Table 13 below:

Table 13: City of Fremont 2030 General Plan Policies

Policy	Description
Policy 10-8.3	• Protect existing residential neighborhoods from noise. In general, the City will require evaluation of mitigation measures for projects under the following circumstances: o The project would cause the L_{dn} to increase by 5 dB(A) or more but would remain below 60 dB(A), or; o The project would cause the L_{dn} to increase by 3 dB(A) or more and exceed 60 dB(A), or; o The project has the potential to generate significant adverse community response due to the unusual character of the noise.
Policy 10-8.5	• Control construction noise at its source to maintain existing noise levels, and in no case to exceed the acceptable noise levels. o **10-8.5. B: Construction Noise Mitigation** ▪ Continue to apply the construction hours ordinance to new development to limit noise exposure created by construction activity. Apply best practices to further limit noise in sensitive areas and long-term projects, such as maintaining construction equipment in good condition and use of mufflers on internal combustion engines, installation of temporary noise barriers, prohibiting extended idling time of internal combustion engines, locating staging areas away from sensitive receptors and other feasible best management practices.

Environmental Setting

Noise

Factors that influence sound as it is perceived by the human ear include the actual level of sound, period of exposure, frequencies involved, and fluctuation in the noise level during exposure. Noise is measured on a decibel scale, which serves as an index of loudness. The zero on the decibel scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Each 10 decibel increase in sound level is perceived as approximately a doubling of loudness. Because the human ear cannot hear all pitches or frequencies, sound levels are frequently adjusted or weighted to correspond to human hearing. This adjusted unit is known as the A-weighted decibel, or dBA.

Since excessive noise levels can adversely affect human activities and human health, federal, state, and local governmental agencies have set forth criteria or planning goals to minimize or avoid these effects. Noise guidelines are generally expressed using one of several noise averaging methods, including L_{eq}, DNL, or CNEL.[64] These descriptors are used to measure a location's overall noise exposure, given that there are times when noise levels are higher (e.g., when a jet is taking off from an airport or when a leaf blower is operating) and times when noise levels are lower (e.g., during lulls in traffic flows on freeways or in the middle of the night). L_{max} is the maximum A-weighted noise level during a measurement period.

Vibration

Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Vibration amplitude can be quantified using Peak Particle Velocity (PPV), which is defined as the maximum instantaneous positive or negative peak of the vibration wave. PPV has been routinely used to measure and assess ground-borne construction vibration. Studies have shown that the threshold of perception for average persons is in the range of 0.008 to 0.012 inches/second (in/sec) PPV.

The Project area is located within open space. The Project site is located approximately 1,000 feet northeast of the intersection of Mission Boulevard and East King Avenue in the City of Fremont. The Project area consists of open space. Existing noise levels in the environment result primarily from vehicular traffic on surrounding roadways. The nearest sensitive receptor to the site is a single-family residence located approximal 550 feet east of the Project. Other sensitive receptors within 1,000 feet of the Project site include single-family residences along Mission Boulevard. The Project would not introduce any new sensitive receptors to the Project area.

Discussion of Impacts

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

[64] *L_{eq} is a measurement of average energy level intensity of noise over a given period of time. Day-Night Level (DNL) is a 24-hour average of noise levels, with a 10 dB penalty applied to noise occurring between 10:00 PM and 7:00 AM. Community Noise Equivalent Level (CNEL) includes an additional five dB applied to noise occurring between 7:00 PM and 10:00 PM. Where traffic noise predominates, the CNEL and DNL are typically within two dBA of the peak-hour L_{eq}.*

Less-Than-Significant with Mitigation Incorporated.

Construction Noise

The construction of the Project could temporarily generate substantial noise and vibrations in the Project area. Noise impacts resulting from construction depend on the noise generated by various pieces of construction equipment, the timing and duration of noise generating activities, and the distance between construction noise sources and noise sensitive receptors.

Construction noise impacts primarily would occur when construction activities coincide with noise-sensitive times of the day (early morning, evening, or nighttime hours), the construction occurs in areas immediately adjoining noise sensitive land uses, or when construction durations last over extended periods of time. A significant temporary noise impact would result if Project construction or demolition activities increase noise levels at sensitive receptors to levels exceeding 60 dBA L_{eq} at residential uses, or 5 dBA for ambient levels, for a period greater than one year.

Construction noise would primarily result from the operation of heavy construction equipment and arrival and departure of heavy-duty trucks. The highest maximum noise levels generated by Project construction would typically range from about 80 to 90 dBA L_{max} at a distance of 50 feet from the noise source. As shown in Table 14, typical hourly average construction-generated noise levels for public works projects are about 75 to 84 dBA L_{eq} measured at a distance of 50 feet from the center of the site during busy construction periods (e.g., earth moving equipment, impact tools, etc.). This Project would involve roof replacement and a roof system seismic upgrade. The Project's construction would require fewer individual pieces of construction equipment operating simultaneously as compared to typical public works road and highway, sewer, and trench projects; therefore, the lower range of noise levels for public works projects from Table 14 assuming minimum equipment present at the site, was used for this analysis. Construction-generated noise levels drop off at a rate of about six (6) dBA per doubling of the distance between the source and receptor. Shielding by buildings or terrain can provide an additional 5 to 10 dBA noise reduction at distant receptors.

Table 14: Typical Ranges of Construction Noise Levels at 50 Feet, L_{eq} (dBA)

	Domestic Housing		**Office Building, Hotel, Hospital, *School*, Public Works**		**Industrial Parking, Garage, Religious Amusement & Recreations, Store, Service Station**		**Public Works Roads & Highways, Sewers,and Trenches**	
	I	**II**	**I**	**II**	**I**	**II**	**I**	**II**
Ground Clearing	83	83	84	84	84	83	84	84
Excavation	88	75	89	79	89	71	88	78

	Domestic Housing		Office Building, Hotel, Hospital, *School*, Public Works		Industrial Parking, Garage, Religious Amusement & Recreations, Store, Service Station		Public Works Roads & Highways, Sewers,and Trenches	
	I	**II**	**I**	**II**	**I**	**II**	**I**	**II**
Foundations	81	81	78	78	77	77	88	88
Erection	81	65	87	75	84	72	79	78
Finishing	88	72	89	75	89	74	84	84

I - All pertinent equipment present at site.

II - Minimum required equipment present at site.

Construction will occur in six phases spanning a total of approximately one year. Site preparation would take place during the first phase. The contractor would prepare the site for work by setting up staging areas and bringing heavy construction equipment on-site. The District would draw down the reservoir and temporarily take it out of service. Demolition and grading work would take place during the second phase. The third phase would include installation of lateral force resisting systems and concrete perimeter walls, and replacement of the valves (including drain valve, check valve, velocity valve, altitude vale, and inlet/outlet valve) and valve stem. Installation of new timber and metal roof structural members, and the new roof metal deck would occur during the fourth phase. The fifth phase of construction would include installation of the new ventilation units and interior lighting fixtures. During the final phase, the reservoir would be filled, disinfected, and placed back into service. The areas used for construction activities surrounding the reservoir would be restored, including replanting areas used for staging equipment, demobilizing construction equipment, and conducting final paving. While construction is anticipated to occur over a period of approximately one year, there would be substantial periods of inactivity where no construction is taking place and therefore the construction duration for the purpose of this analysis was assumed to not exceed one year.

Noise-sensitive receptors near the site include single-family residences, with property lines located as close as about 400 feet from the reservoir. At this distance, noise levels could reach 62 to 72 dBA L_{eq} during periods of heavy construction activity. Without considering shielding provided by surrounding structures and terrain, construction-generated noise would have the potential to temporarily exceed 60 dBA L_{eq} at residences located approximately 400 feet of the reservoir's property line.

Reasonable regulation of the hours of construction, as well as regulation of the arrival and operation of heavy equipment and the delivery of construction material, is necessary to protect the health and safety of persons, promote the general welfare of the community, and maintain quality of life.

Construction activities associated with the proposed Project would be conducted in accordance with the provisions of the City of Fremont's General Plan and the Municipal Code, which limits temporary construction work within 500 feet of residential land uses to between the hours of 7:00 a.m. and 7:00 p.m. Monday through Friday and between the hours of 9:00 a.m. to 6:00 p.m. on Saturdays and holidays. The City does not allow construction activities on Sundays for sites located within 500 feet of one or more residences. The Project would result in noise levels that could exceed City standards for noise at the nearest property line. Therefore, the Project would implement the following measures contained in section 18.218.050 of the City of Fremont's Municipal Code to reduce annoyance and disruption at the nearest residences.

Impact NOI-1: Project construction could result in noise levels exceeding City of Fremont standards at the nearest residential property line.

Mitigation Measure: The following mitigation measure shall be implemented to reduce noise levels during Project construction at nearby residential uses.

MM NOI-1.1: During construction of the Project, the District shall implement the following measures required by the City of Fremont to reduce construction noise:

- Construction equipment shall be well-maintained and used judiciously to be as quiet as practical.
- Construction, excavating, grading, and filling activities (including the loading and unloading of materials, truck movements, and warming of equipment motors) shall be limited as provided in City Code Section 18.160.010.
- All internal combustion engine-driven equipment shall be equipped with mufflers, which are in good condition and appropriate for the equipment.
- The contractor shall utilize "quiet" models of air compressors and other stationary noise sources where technology exists.
- Loading, staging areas, stationary noise generating equipment, etc., shall be located as far as feasible from sensitive receptors.
- The contractor shall comply with Air Resource Board idling prohibitions of unnecessary idling of internal combustion engines.
- Signs shall be posted at the construction site that include permitted construction days and hours (Monday through Friday 7 a.m. to 5 p.m.), a day and evening contact number for the job site, and a contact number for the District in the event of noise complaints. The District shall designate an on-site complaint and enforcement manager to track and respond to noise complaints.
- Temporary noise barriers, such as solid plywood fences, shall be installed around construction sites adjacent to operational business, residences or noise-sensitive land uses, unless an existing wall or other barrier provides equivalent noise attenuation. (City of Fremont Ord. 27-2016 § 37, 12-6-16; Ord. 23-2018 § 41, 10-2-18; Ord. 05-2021 § 52, 4-20-21.)

Implementation of MM NOI-1.1 would reduce construction noise levels emanating from the site, limit construction hours, and minimize disruption and annoyance. With the implementation of these measures and recognizing that noise generated by construction activities would occur over a temporary period, the temporary increase in ambient noise levels would be less than significant.

Operational Noise

The proposed Project would result in the improvement of the existing Decoto Reservoir. The purpose of this Project is to replace the roof and roof framing system and seismically upgrade the reservoir. Project improvements would neither change the capacity nor the operations of the Decoto Reservoir. A new active ventilation system would be installed at the reservoir to keep air flow moving and reduce the potential for condensation. The fans would add sound similar to a commercial air conditioning unit and would not generate audible noise at any nearby sensitive receptors.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less-Than-Significant Impact. The construction of the Project may generate perceptible vibration when heavy equipment or impact tools (e.g., jackhammers, hoe rams) are used. Construction activities would include demolition, excavation, installation of equipment, drilling, soil compaction, and installation of the new reservoir roof structure. See Table 3 in the Project Description for a full list of construction equipment and number of construction vehicle trips for the proposed Project. Pile driving equipment, which can cause excessive vibration, is not expected to be required for the proposed Project.

The nearest structure to the site is the single-family residence located to the east of the Project site, with property lines approximately 400 feet from the reservoir. There may be times when construction work may generate perceptible vibration levels at the nearest residential building. Other existing structures are located further away and would experience lower vibration levels. While vibration levels may be perceptible, this would not be considered significant, given the intermittent and short duration of the phases that have the highest potential of producing vibration (use of jackhammers and other high-power tools). Construction-generated vibration would not have the potential to result in damage to existing structures in the vicinity and impacts would be less than significant.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The Project site is not located within the vicinity of any airport land use plan and is not located within two miles of any public or public use airport. Unlike a residential project, the proposed Decoto Reservoir Seismic Improvements and Roof Replacement Project would not introduce sensitive receptors to the Project area. The nearest airport, Hayward Executive Airport, is approximately eight (8) miles to the northwest of the Project site. For these reasons, the proposed Project would not expose people to excessive noise levels from airport operations. No impacts would occur.

4.2.14 Population and Housing

Would the Project:	*Potentially Significant Impact*	*Less than Significant Impact with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Regulatory Setting

State

Housing-Element Law

State requirements mandating that housing be included as an element of each jurisdiction's general plan are known as housing-element law. The Regional Housing Need Allocation (RHNA) is the state-mandated process to identify the total number of housing units (by affordability level) that each jurisdiction must accommodate in its housing element. California housing-element law requires cities to: 1) zone adequate lands to accommodate its RHNA; 2) produce an inventory of sites that can accommodate its share of the RHNA; 3) identify governmental and non-governmental constraints to residential development; 4) develop strategies and a work plan to mitigate or eliminate those constraints; and 5) adopt a housing element and update it on a regular basis.[65] The City of Fremont Housing Element and related land use policies were last updated in 2015.

Regional and Local

Plan Bay Area 2040

Plan Bay Area 2040 is a long-range transportation, land-use, and housing plan intended to support a growing economy, provide more housing and transportation choices, and reduce transportation-related pollution and GHG emissions in the Bay Area. Plan Bay Area 2040 promotes compact, mixed-use

[65] *California Department of Housing and Community Development. "Regional Housing Needs Allocation and Housing Elements". Available at: https://www.hcd.ca.gov/community-development/housing-element/index.shtml. Accessed on: August 6, 2021.*

residential and commercial neighborhoods near transit, particularly within identified Priority Development Areas (PDAs).[66]

The Association of Bay Area Governments (ABAG) allocates regional housing needs to each city and county within the nine-county San Francisco Bay Area, based on statewide goals. ABAG also develops forecasts for population, households, and economic activity in the Bay Area. ABAG, the Metropolitan Transportation Commission (MTC), and local jurisdiction planning staff created the Regional Forecast of Jobs, Population, and Housing, which is an integrated land use and transportation plan through the year 2040 (upon which Plan Bay Area 2040 is based).

Environmental Setting

The population were estimated to be approximately 227,514 for the City of Fremont and 68,681 for Union City in July 2021.[67] From 2017 to 2021, an average of 3.08 persons were living in a household in the City of Fremont and an average of 3.37 persons were living in a household in Union City.[68] The County of Alameda's population was estimated to be 1,656,591 as of January 1, 2021.[69] Single-family residences surround the Project site on Shoshone Court and Curtner Road. The Project site is currently developed with Decoto Reservoir and there are no residents on-site.

Discussion of Impacts

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

No Impact. The purpose of the proposed Project is to replace the roof and roof framing system and seismically upgrade the reservoir. The Project would not add new homes, businesses, or roads or other infrastructure that would induce substantial population growth in an area either directly or indirectly. The proposed seismic retrofit and roof replacement project would serve existing and planned development within the urban envelope of Fremont. No impacts would occur.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact. The Project site does not contain any residential units, nor would the proposed Project result in the displacement of any existing people. Therefore, the Project would not necessitate the construction of replacement housing. No impacts would occur.

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[66] *Association of Bay Area Governments and Metropolitan Transportation Commission. "Plan Bay Area 2040" https://planbayarea.org/plan-bay-area-2040. Accessed on: January 31, 2024.*

[67] *U.S. Census Bureau. Quick Facts, Fremont and Union City, California. Accessed April 3, 2023. https://www.census.gov/quickfacts/fremontcitycalifornia and https://www.census.gov/quickfacts/unioncitycitycalifornia.*

[68] *Ibid.*

[69] *State of California – Department of Finance. E-1 "Population Estimates for Cities, Counties, and the State. January 1, 2020 and 2021". Available at: https://dof.ca.gov/forecasting/demographics/estimates-e1/ Accessed January 31, 2024.*

4.2.15 Public Services

Would the Project:	*Potentially Significant Impact*	*Less than Significant Impact with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☒	☐

Environmental Setting

Fire Protection

Fire protection to the Project site is provided by the City of Fremont Fire Department (FFD), which serves a population of over 230,000. The FFD provides fire suppression and rescue response, hazard prevention and education, and disaster preparedness. In 2021, FFD responded to 552 fire incidents, 10,592 medical emergencies and 271 incidents involving hazardous materials.[70] The nearest fire station to the Project site is Fire Station 2, located approximately 1.24 miles southeast of the Project site at 37299 Niles Boulevard.

Police Protection

Police protection services are provided to the Project site by the Fremont Police Department (FPD). The FPD consists of 320 full time employees, including 199 sworn employees.[71] FPD divides the City of Fremont into three zones for patrol services. The Project site is located in Zone 1.[72] Officers patrolling the area are dispatched from police headquarters, located at 2000 Stevenson Boulevard, approximately three (3) miles south of the Project site.

[70] *Fremont Fire Department. "Incident Summaries". Accessed February 23, 2022. https://www.fremont.gov/126/Incident-Summaries.*

[71] *Fremont Police Department. Fremont Police Department Table of Organization FY 2020-21. Accessed February 23, 2022. https://www.fremontpolice.gov/Home/ShowDocument?id=2*

[72] *Fremont Police Department. "Police Zone Map". Accessed February 23, 2022. https://www.fremontpolice.gov/about-us/about-fremont-police/police-zone-map.*

Schools

There are no schools located within 0.25-mile of the Project site. The nearest school to the Project site is Free To Be Preschool, located approximately 0.28-mile northwest of the Project site.

Parks and Open Space

The nearest park to the Project site is Seven Hills Park in Union City, located approximately 500 feet northwest of the Project site.

Discussion of Impacts

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

- Fire Protection?
- Police Protection?
- Schools?
- Parks?
- Other Public Facilities?

Less-Than-Significant Impact. The purpose of this Project is to replace the roof and roof framing system and seismically upgrade the reservoir. The proposed Project would not cause an increase in public service needs. The proposed Project would not require any road closures as the reservoir's perimeter road is both wide and long enough to accommodate any construction vehicle traffic. Incidents requiring law enforcement, fire protection, or emergency medical services could occur during construction. However, construction of the Decoto Reservoir Seismic Improvements and Roof Replacement Project is not expected to generate a substantial increase in demand for these services. The construction would not require construction of new or physically altered facilities to maintain service. For these reasons, the proposed Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities in the areas of fire protection, police protection, or other public facilities and impacts would be less than significant.

No Impact. The Project would not increase the number of residents or employees using recreational facilities or schools in the City of Fremont or Alameda County. For this reason, the Project would have no impact on the use of existing neighborhood or regional parks, recreational facilities, or schools, such that deterioration of any facility would occur or accelerate. There would be no impact to schools or park facilities.

4.2.16 Recreation

Would the Project:	*Potentially Significant Impact*	*Less than Significant Impact with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

Environmental Setting

The City of Fremont maintains approximately 1,148 acres of parkland, spread over 53 parks, which provides recreational facilities to the community. In addition, residents and community members also have access to parks and trail systems maintained by other agencies, including: The East Bay Regional Parks, the Don Edwards San Francisco Bay National Wildlife Refuge, the San Francisco Bay Trail, and other recreational trails. The City also operates other recreational facilities including five community centers, various sport facilities, a water park, and an art gallery.[73]

The nearest park to the Project site is Seven Hills Park in Union City, located approximately 500 feet northwest of the Project site.

Discussion of Impacts

a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact. The Project would not result in increased demands on any public services provided within the City. The reservoir is not located within the boundary of an identified recreation facility or area and therefore the temporary influx of construction workers and equipment would not increase park usage and would not result in the physical deterioration of park facilities. Therefore, no impacts would occur. Once the seismic retrofit and roof replacement are complete, the reservoir would be located within the footprint of the existing reservoir and would not conflict with use of any recreational facility. The Project would not increase the number of residents or employees using recreational facilities in the City of Fremont or Alameda County. For this reason, the Project would have no impact on the use of existing neighborhood or regional parks, or any other recreational facilities, such that deterioration of any facility would occur or accelerate.

[73] *City of Fremont General Plan. December 2011. Chapter 8 – Parks & Recreation.*

b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

No Impact. The proposed Project does not include recreational facilities and would not require the construction or expansion of recreational facilities. The purpose of the proposed Project is to replace the roof and roof framing system and seismically upgrade the reservoir. Maintenance of proposed Project components would be addressed by existing maintenance personnel and therefore the proposed Project would not induce population growth and no additional recreation facilities would be required. Therefore, no impact would occur.

4.2.17 Transportation

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

Regulatory Setting

Regional Transportation Planning

The Metropolitan Transportation Commission (MTC) is the transportation planning, coordinating, and financing agency for the nine-county San Francisco Bay Area, including Alameda County. MTC is charged with regularly updating the Regional Transportation Plan, a comprehensive blueprint for the development of mass transit, highway, airport, seaport, railroad, bicycle, and pedestrian facilities in the region. MTC and ABAG adopted Plan Bay Area 2040 in July 2017, which includes the region's Sustainable Communities Strategy (integrating transportation, land use, and housing to meet GHG reduction targets set by CARB) and Regional Transportation Plan (including a regional transportation investment strategy for revenues from federal, state, regional and local sources over the next 24 years).

Alameda County Transportation Commission

The Alameda County Transportation Commission (Alameda CTC), through its Congestion Management Program (CMP), oversees how roads of regional significance function, and requires local jurisdictions to evaluate the impact of proposed land use changes. The Alameda CTC coordinates countywide transportation planning efforts and delivers projects and programs. The purpose of the Alameda CTC's review is to assess impacts of individual development actions on the regional transportation system and ensure that significant impacts are appropriately mitigated.

Senate Bill 743

Senate Bill 743 (SB 743) was signed in 2013 and requires that vehicle miles traveled (VMT) per capita, employee, or net VMT be used to analyze transportation impacts of land use projects under CEQA instead of reduction in levels of service. In 2018, the CEQA Guidelines were updated to include Section

15064.3, which implements SB 743 and requires lead agencies to select a VMT methodology, choose significance thresholds, and determine feasible mitigation measures. Section 15064.3 became effective statewide in July 2020. VMT should be reduced to minimize the transportation impact a development has on a community. The goal of SB 743 is to encourage development that reduces VMT.

City of Fremont 2030 General Plan

The City of Fremont 2030 General Plan was adopted in December 2011 and includes a Mobility Element that addresses the movement of people and goods in and around Fremont. The following goal and policy are applicable to the Proposed project.

> **Goal 3-6: Goods Movement** – Safe, efficient movement of goods to support the local economy, with minimal impact.
>
> > **Policy 3-6.2: Truck Routes** – Protect residential neighborhoods from intrusion by truck traffic by maintaining and enforcing an efficient system of designated truck routes, as shown on Diagram 3-7.

City of Union City 2040 General Plan

The site access of the proposed Project is through Appian Way, Rivera Drive and Florence Street under the jurisdiction of the City of Union City. The City of Union City 2040 General Plan was adopted in December 2019.

> **Goal M-7**– Encourage the safe and efficient movement of goods to support the local economy while minimizing impacts on residential neighborhoods and local traffic patterns.
>
> > **Policy M 7.1: Designated Truck Routes**– The City shall protect residential neighborhoods from intrusion by truck traffic by establishing, maintaining, and enforcing an efficient system of designated truck routes.

Environmental Setting

Roadway Network

Regional access to the Project site is provided via CA-238/Mission Boulevard. Direct access to the site is provided via Florence Street, which can be accessed by Mission Boulevard, Appian Way, and Riviera Drive.

CA-238 is the segment of Mission Boulevard that is between the Interstate 680 Fremont and the Interstate 580-Interstate 238 interchange in Hayward. Mission Boulevard is classified as a Primary Arterial Street in the Fremont General Plan. It carries vehicular traffic north and south through most of Fremont and Union City. Mission Boulevard is a designated truck route in the Fremont 2030 General Plan and Union City 2040 General Plan.

Appian Way in Union City is classified as a Primary Collector Street that provides direct linkages to neighborhood shopping areas and direct access for low-density residential, commercial, and industrial uses. Appian Way can be accessed from CA-238. Rivera Drive and Florence Street in Union City are

residential streets that emphasize property access. Rivera Drive can be accessed from Appian Way. Florence Street can be accessed from Rivera Drive.

Pedestrian and Bicycle Facilities

Paved sidewalks are located on both sides of CA-238, Appian Way, Riviera Drive, and Florence Street. Class II (signed and striped) bicycle lanes are provided on CA-238/Mission Boulevard to the west of the Project site.[74]

Discussion of Impacts

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Less-Than-Significant Impact. The perimeter road around the reservoir would accommodate all construction traffic, including back-up concrete trucks. No construction vehicle traffic would spill into adjacent streets. Construction vehicles traveling to and from the Project area may cause a slight increase in traffic volumes during the overall construction period. On average, 20 vehicle trips per day would occur during demolition and 24 vehicle trips per day would occur during construction (Table 3). Trucks would travel via Mission Boulevard, Appian Way, Riviera Drive, and Florence Street during construction to access the site. Mission Boulevard is the designated truck route in the Fremont 2030 General Plan and Union City 2040 General Plan. The contraction contractor would provide flagmen, cones, and/or barricades during construction to control traffic per the California Department of Transportation Standard (latest edition). In addition, construction contractor would be required to prepare a project-specific Construction Management Plan which would include but not limited to the following information: proposed truck routes, traffic control plan, complaint management plan, and construction worker parking plan.[75] Complying with existing regulations would reduce construction traffic impacts to a less-than-significant level.

Once constructed, the improved reservoir roof and support system would be located within the existing footprint of the existing reservoir and would not impede or obstruct traffic on any surrounding roadways. As under current operating conditions, the reservoir would require routine maintenance and repair in emergency situations. Maintenance and repair would generally be similar to existing conditions except for operation of the new ventilation system. However, the maintenance of the ventilation system would occur during the reservoir's routine maintenance schedule and would not require additional workers or traffic trips as compared to existing conditions. For these reasons, the Project would not result in a substantial decrease in the effectiveness of the circulation system, and would not conflict with any plan, policy, or ordinance addressing the circulation system.

b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

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[74] *City of Fremont. "Fremont Bikeway Map". December 13, 2016.*

[75] *City of Fremont. Fremont Municipal Code Section 18.218.050 (c) Construction Management Plan. Available at: https://www.codepublishing.com/CA/Fremont/#!/html/Fremont18/Fremont18218.html. Accessed November 23, 2022.*

No Impact. The Project would involve improvements to the Decoto Reservoir with a replaced roof and roof framing system, and to seismically upgrade the existing reservoir. Implementation of the Project would not increase the capacity nor change the operations of the reservoir. Thus, there would be no change in vehicle miles traveled with implementation of the proposed Project and the Project would not conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). No impact would occur.

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No Impact. The proposed Project does not involve any design features or incompatible uses that would increase hazards within the Project area. All construction within existing roadways would be temporary and the roadways would be restored to their existing condition after construction is complete. The Project would not increase the capacity nor change the operations of the existing reservoir. Therefore, the proposed Project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). No impacts would occur.

d) Result in inadequate emergency access?

Less-Than-Significant Impact. Construction-related truck traffic has the potential to occur during weekday peak hours, and therefore it could temporarily impede traffic flow, including for emergency service providers. However, the Project would not result in inadequate emergency access because emergency vehicles would maintain ingress and egress access around the work area through construction. Therefore, the impact on emergency access would be less than significant.

4.2.18 Tribal Cultural Resources

Would the Project?	*Potentially Significant Impact*	*Less than Significant Impact with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?	☐	☒	☐	☐
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

Regulatory Setting

Assembly Bill 52

AB 52, effective July 2015, established a new category of resources for consideration by public agencies called Tribal Cultural Resources (TCRs). AB 52 requires lead agencies to provide notice of projects to tribes that are traditionally and culturally affiliated with the geographic area if they have requested to be notified. Where a project may have a significant impact on a tribal cultural resource, consultation is required until the parties agree to measures to mitigate or avoid a significant effect on a tribal cultural resource or until it is concluded that mutual agreement cannot be reached.

Under AB 52, TCRs are defined as follows:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are also either:
    - Included or determined to be eligible for inclusion in the California Register of Historic Resources, or
    - Included in a local register of historical resources as defined in Public Resources Code Section 5020.1(k).
- A resource determined by the lead agency to be a TCR.

City of Fremont Municipal Code

As discussed in the Section 4.3.5 Cultural Resources above, the City of Fremont's Municipal Code Chapter 18.218.050 Standard Development Requirements Section (d) specifies measures to protect cultural and tribal cultural resources prior to and during Project construction.

Environmental Setting

The Project site contains the existing Decoto Reservoir. Pacific Legacy, the archaeologists for the Project, submitted a request to the Native American Heritage Commission (NAHC) for a search of the Sacred Lands File for potential tribals sensitivity within the Project area on March 22, 2022. Cody Campagne, a Cultural Resources Analyst with the NAHC, responded in a letter dated April 19, 2022, to report that the search results were positive for Native American cultural resources within the vicinity of the Project area. Mr. Campagne suggested contact with the North Valley Yokuts Tribe for more information. In addition to this group, Mr. Campagne also provided contact information for nine additional Native American tribal representatives with potential knowledge of or interest in the Project vicinity. On May 27, 2022, Pacific Legacy sent certified contact letters to the following individuals on that list:

- Ms. Irene Zwierlein, Chairperson, of the Amah Mutsun Tribal Band of Mission San Juan Bautista;
- Mr. Tony Cerda, Chairperson, of the Costanoan Rumsen Carmel Tribe;
- Ms. Kanyon Sayers-Roods, Most Likely Descendent of the Indian Canyon Mutsun Band of Costanoan;
- Ms. Ann Marie Sayers, Chairperson, of the Indian Canyon Mutsun Band of Costanoan;
- Ms. Monica Arellano, Vice Chairwoman, of the Muwekma Ohlone Indian Tribe of the San Francisco Bay Area;
- Ms. Katherine Perez, Chairperson, of the North Valley Yokuts Tribe;
- Mr. Timothy Perez of the North Valley Yokuts Tribe;
- Mr. Andrew Galvan of the Ohlone Indian Tribe;
- Mr. Kenneth Woodrow, Chairperson, of the Wuksache Indian Tribe/Eshom Valley Band; and
- Ms. Corrina Gould, Chairperson, of The Confederated Villages of Lisjan.

The letters briefly described the proposed Project and requested any available information that those potential stakeholders might have regarding Native American cultural resources within or near the Project area. Four responses to these requests for contact have been received to date, from Ms. Ann Marie Sayers of the Indian Canyon Mutsun band of Costanoan, Ms. Katherine Perez of the North Valley Yokuts Tribe, Ms. Corrina Gould of the Confederated Villages of Lisjan, and Ms. Kanyon Sayers-Roods of the Indian Canyon Mutsun Band of Costanoan. Ms. Sayers-Roods and Ms. Perez indicated that due to the sensitive nature of the Project vicinity, the Tribes recommend that an archaeological monitor be present for any Project activities, while Ms. Gould stated that Fremont was known to have multiple culturally sensitive areas and requested due care be taken to preserve resources. Through a formal consultation meeting with the District, Ms. Sayers-Roods recommended that cultural sensitivity training be conducted prior to the start of construction, ideally in coordination with her, but did not recommend the presence of a Native American monitor on-site. No additional tribes have contacted the District requesting notification of projects or formal consultation under AB 52.

Discussion of Impacts

a) *Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:*

i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?

ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Less-Than-Significant Impact with Mitigation Incorporated. The archival and record search prepared by Pacific Legacy revealed that no cultural resources have been previously recorded in the Project area, and a prehistoric village site has been reported within a surrounding 0.25-mile radius. The Project would involve excavation and installation of concrete columns and beam foundations. Therefore, though unlikely, there is the possibility that tribal cultural resources could be uncovered during excavation activities. In response to the archival records search letters (described above), the Indian Canyon Mutsun Band of Costanoan and the North Valley Yokuts Tribe recommended an archaeological monitor and a Native American monitor be present during Project activities due to the sensitive nature of the Project vicinity. The Confederated Villages of Lisjan has requested that the Project site be treated with care and empathy. The City of Fremont Municipal Code Chapter 18.218.050 subsection (d) (4) requires project proponents to honor requests that made by the designated contract of a California Native American tribe and specifies measures to conduct tribal cultural monitoring and training. Therefore, the Project would implement the following measures contained in section 18.218.050 of the City of Fremont's Municipal Code to reduce or avoid Project impacts on tribal cultural resources. In addition, as described in Section 4.3.5 Cultural Resources, the Project would implement MM CUL-1.1 to reduce potential impacts to unknown subsurface cultural resources. These measures would be applicable to tribal cultural resources and would function to avoid impacts to such resources if they are discovered on-site.

Impact TCR-1: Project construction could result in potentially significant impacts to tribal cultural resources, if any are encountered during construction.

Mitigation Measure: The following mitigation measure shall be implemented to reduce or avoid impacts on tribal cultural resources.

MM TCR-1.1: A qualified archaeologist shall be present at the Project site during any ground-disturbing activities to monitor sites or objects of significance to Native Americans and to provide, in coordination with a tribal cultural representative, construction worker tribal cultural resources awareness

training including applicable regulations and protocols for avoidance, confidentiality, and culturally appropriate treatment.

The archaeological monitor shall have the ability to request that work be stopped, diverted, or slowed if sites or objects of significance to Native Americans are encountered within the direct impact area and shall be consulted for recommendations regarding the appropriate treatment of such sites or objects.

With implementation of MM TRC-1.1 and MM CUL-1.1, the proposed Project would have a less-than-significant impact on tribal cultural resources.

4.2.19 Utilities and Service Systems

Would the Project:	*Potentially Significant Impact*	*Less than Significant Impact with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

Regulatory Setting

State

State Water Code

Pursuant to the State Water Code, water suppliers providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet (approximately 980 million gallons) of water must prepare and adopt an urban water management plan (UWMP) and update it every five years. As part of a UWMP, water agencies are required to evaluate and describe their water resource supplies and projected needs over a 20-year planning horizon, water conservation, water service reliability, water

recycling, opportunities for water transfers, and contingency plans for drought events. The most recent UWMP was adopted by the District on May 13, 2021.[76]

Assembly Bill 939

The California Integrated Waste Management Act of 1989, or AB 939, established the Integrated Waste Management Board, required the implementation of integrated waste management plans, and mandated that local jurisdictions divert at least 50 percent of solid waste generated (from 1990 levels), beginning January 1, 2000, and divert at least 75 percent by 2010. Projects that would have an adverse effect on waste diversion goals are required to include waste diversion mitigation measures.

Assembly Bill 341

AB 341 sets forth the requirements of the statewide mandatory commercial recycling program. Businesses that generate four or more cubic yards of garbage per week and multi-family dwellings with five or more units in California are required to recycle. AB 341 sets a statewide goal for 75 percent disposal reduction by the year 2020.

Senate Bill 1383

SB 1383 establishes targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020 and a 75 percent reduction by 2025. The bill grants CalRecycle the regulatory authority required to achieve the organic waste disposal reduction targets and establishes an additional target that at least 20 percent of currently disposed edible food is recovered for human consumption by 2025.

California Green Building Standards Code

The 2019 California Green Building Standards Code (CCR Title 24, Part 11) establishes mandatory green building standards for all buildings in California[77]. The code covers five categories: planning and design, energy efficiency, water efficiency and conservation, material conservation and resources efficiency, and indoor environmental quality. These standards include the following mandatory set of measures for new construction projects to achieve specific green building performance levels:

- Reducing indoor water use by 20 percent;
- Reducing wastewater by 20 percent;
- Recycling and/or salvaging 65 percent of nonhazardous construction and demolition debris; and
- Providing readily accessible areas for recycling by occupants.

[76] *Alameda County Water District. Urban Water Management Plan 2020-2025. Available at:* https://www.acwd.org/365/Urban-Water-Management-Plan *Accessed on: August 9, 2021.*

[77] *California Building Standards Commission. 2019 California Green Building Standards Code. Available at https://calgreenenergyservices.com/wp/wp-content/uploads/2019_california_green_code.pdf. Accessed on: January 31, 2024.*

Local

City of Fremont 2030 General Plan

The proposed Project would be subject to the utilities and service system policies of the City of Fremont's General Plan, as shown in Table 15 below:

Table 15: City of Fremont 2030 General Plan Policies

Policy	Description
Policy 9-3.1	• Work with the Alameda County Water District, Union Sanitary District, and Alameda County Flood Control District to encourage their long-range plans are consistent with the Fremont General Plan.

City of Fremont Solid Waste Diversion Goal

The City Council adopted a diversion goal of 75 percent of solid waste from the landfill in 1999, in excess of the statewide required 50 percent. In 2009, the City diverted 71 percent of the community's solid waste from the landfill.

Environmental Setting

Water Services

Potable water is provided to the cities of Fremont, Newark, and Union City by Alameda County Water District. The District obtains its water from both the Niles Cone Groundwater Basin and the Del Valle Reservoir. The District supplies primarily urban costumers, with approximately 70 percent of use for residential customers, and the remaining 30 percent utilized by commercial, industrial, and institutional customers. System sources include the Bay-Delta via the State Water Project, the San Francisco Regional Water System, and local groundwater supplies. Total system distribution was approximately 38,500 acre-feet in fiscal year 2019-2020.[78]

Wastewater

The Union Sanitary District (USD) is responsible for collection and treatment of wastewater for a 60 square mile area including Union City, Fremont and Newark. The Alvarado Wastewater Treatment Plant (Alvarado WWTP) is located in Union City, just west of Union City Boulevard. Wastewater generated within the USD service area is collected and conveyed by gravity sewers to three major pump stations. The Irvington Pump Station serves the southern portion of the service area, the Newark Pump Station serves the central portion, and the Alvarado Pump Station serves the northern portion. Wastewater collected in the southern and central areas is transported to the Alvarado WWTP in Union City via dual 33-inch and 39-inch force mains prior to outfall in the San Francisco Bay after treatment. The northern area wastewater is pumped directly to the WWTP from the Alvarado Pump Station.

[78] *Alameda County Water District. Urban Water Management Plan 2020-2025. Available at: https://www.acwd.org/365/Urban-Water-Management-Plan Accessed February 23, 2022.*

Stormwater

The ACFCWCD oversees stormwater controls in the Project area, including creeks, channels, levees, pump stations, dams, and reservoirs. The City of Fremont manages the municipal stormwater system.

Gas, Electricity, and Telecommunications Services

PG&E provides natural gas and electricity in the City. Traditional telephone service is provided by AT&T and its various precursor companies. Comcast operates the fiber-optic cable communications network. Decoto Reservoir is served by an existing PG&E transformer. There is no gas service at the Project site.

Discussion of Impacts

a) *Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?*

Less-Than-Significant Impact. The Project would seismically upgrade the existing reservoir to enhance its safety and expand its lifespan. The Project would not increase the capacity of the reservoir, nor would it change site operations. The Project would not construct any new residential or commercial structures that would require water, wastewater, or other utilities. As a result, the Project would have a less-than-significant impact due to construction of new or expanded utility or service system facilities.

b) *Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?*

Less-Than-Significant Impact. The Project would replace the roof and roof framing system and seismically upgrade the reservoir and would not create new residential, commercial, industrial, or agricultural uses that would affect available water supplies or require new or expanded water supply resources or entitlements. No significant quantity of water would be required during Project construction, other than for routine dust suppression. The temporary increase in potable water demand by the construction workers would not be significant enough to require new or expanded water supply resources or entitlements. Impacts would be less than significant.

c) *Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*

Less-Than-Significant Impact. Implementation of the Project would not require or result in the relocation or construction of new or expanded wastewater treatment facilities. The Project would not result in the construction of new water treatment facilities or expansion of such facilities. During site preparation, the District would drain most of the reservoir except for approximately 4 feet on the bottom. The construction contractor would pump the remaining water and discharge to the on-site storm drain following dechlorination. Wastewater would be generated during construction from worker sanitary facilities and from process-related use (such as dust suppression, in which case the water percolates into the ground after use, requiring no wastewater treatment). The minimal amount of wastewater generated by workers

and process-related wastewater generated during construction and draining of the reservoir would not exceed the treatment capacity of the City's wastewater facilities at the Alvarado WWTP. Therefore, impacts would be less than significant.

d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Less-Than-Significant Impact. The proposed Project would not generate any solid waste during operation. Solid waste resulting from construction and demolition activities would be hauled off-site and would comply with all applicable standards, including the CBC, for solid waste management and the Project would not impair the attainment of solid waste reduction goals. The demolition materials would be loaded into approximately 20 dump trucks per day and hauled off-site for disposal over the 60-day demolition period. Approximately 320 cubic yards (assuming 16 cubic yards per dump truck) of cut soil and pavement from grading would be exported off-site.

The nearest landfill to the Project site is the Newby Island Landfill, which is located approximately 10 miles south. As of October 2014, the Newby Island Landfill had a remaining capacity of 21.2 million cubic yards, with a total capacity of 57.5 million cubic yards.[79] The ceased operation date for the landfill is estimated to be January 1, 2041.[80] The quantity of solid waste materials associated with construction would be limited to the construction period and would not pose a significant impact upon existing landfills. No additional solid waste would be generated by long-term operations of the proposed Project. Impacts related to solid waste disposal would be less than significant.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less-Than-Significant Impact. As described above, implementation of the Project would generate solid waste associated with construction activities. The demolition materials would be loaded into 20 dump trucks per day and hauled off-site for disposal over the 60-day demolition period. Approximately 320 cubic yards of cut soil and pavement would be exported off-site. A minimum of 65 percent nonhazardous construction and demolition debris would be recycled or salvaged for rescue as required by the 2019 California Green Building Standards Code (CCR Title 24, Part 11)[81]. To the extent possible, construction and demolition debris would be recycled either on-site or transported to a local disposal center for recycling. Solid waste generation would be limited to the construction period; no solid waste would be generated from long-term operation of the proposed Project. The proposed Project would comply with federal, State (including the CBC), and local statutes and regulations related to solid waste. Therefore, impacts would be less than significant.

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[79] *Cal Recycle, 2019. Facility/Site Summary Details: Newby Island Sanitary Landfill (43-AN-0003). Available at:* https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1362?siteID=3388 *Accessed February 25, 2022.*

[80] *Ibid.*

[81] *California Building Standards Commission. 2019 California Green Building Standards Code. Available at https://calgreenenergyservices.com/wp/wp-content/uploads/2019_california_green_code.pdf. Accessed January 31, 2024.*

4.2.20 Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:	*Potentially Significant Impact*	*Less than Significant Impact with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

Environmental Setting

CAL FIRE is responsible for the identification of very high fire hazard severity zones and transmission of these maps to local government agencies. Based on the Fire Hazard Severity Zone (FHSZ) Map Viewer, the Project site is not located within any FHSZ area.[82] The closest Very High Fire Hazard Severity Zone in a SRA is located approximately 2.8 miles east of the Project site. [83]

Discussion of Impacts

a-d) Substantially impair an adopted emergency response plan or emergency evacuation plan? Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire? Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment? Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

[82] *CAL FIRE. Fire Hazard Severity Zone Viewer. Available at:* http://egis.fire.ca.gov/FHSZ/. *Accessed on: February 22, 2022.*

[83] *Ibid.*

No Impact. The Project site is not located within any FHSZ areas. The closest Very High Fire Hazard Severity Zone is located approximately 2.8 miles away. Therefore, the Project would not result in wildfire impacts.

4.2.21 Mandatory Findings of Significance

Does the Project:	*Potentially Significant Impact*	*Less than Significant Impact with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
a) Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) 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) Have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Discussion of Impacts

a) *Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?*

Less-than-Significant Impact with Mitigation Incorporated. Implementation of the mitigation measures required in this Initial Study would ensure that the construction and operation of the Project would not substantially degrade the quality of the environment, substantially reduce the habitat of 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.

As described in Section 4.2.4 Biological Resources of this Initial Study, the Project would not result in significant impacts to biological resources, with the exception of potential significant impacts to nesting birds and special-status wildlife. Section 4.2.4 includes mitigation measures to reduce impacts to nesting birds and special-status wildlife to a less-than-significant level. Mitigation measures are provided in Sections 4.2.5 Cultural Resources and 4.2.18 Tribal Cultural

Resources in the event that unanticipated cultural or tribal cultural resources and human remains are identified in the Project area during construction. With implementation of mitigation measures, the Project would not substantially degrade the quality of the environment.

b) *Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?*

Less-Than-Significant Impact with Mitigation Incorporated. Under Section 15065(a)(3) of the CEQA Guidelines, a lead agency shall find that a project may have a significant effect on the environment where there is substantial evidence that the project has potential environmental effects "that are individually limited, but cumulatively considerable." As defined in Section 15065(a)(3) of the CEQA Guidelines, cumulatively considerable means "that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects."

There is one project within the Project vicinity: the Clean Energy Project Phase 2. The Clean Energy Project Phase 2 would involve the installation of solar arrays on the roof of Decoto Reservoir and would occur in 2024. The Solar Photovoltaic System Installation Project has been analyzed and deemed categorically exempt from CEQA as part of the Clean Energy Program and would occur with or without the seismic retrofit project and would result in less than significant cumulative impacts.

The Project would have no impact or less than significant impacts to aesthetics, agricultural and forestry resources, energy, greenhouse gas emissions, hydrology and water quality, land use and planning, mineral resources, population and housing, public services, recreation, transportation, utilities and service systems, and wildfire. Therefore, the Project would not contribute to cumulatively considerable impacts to these resources.

The Project would involve replacement of the roof and roof framing system and seismically upgrade the Decoto Reservoir. After Project completion, existing conditions in the Project area would remain unchanged. The potential environmental impacts from the Project are primarily limited to the construction period. As discussed throughout this Initial Study, operation of the Project would be similar to existing conditions and would not result in significant impacts to the environment. Construction of the Project could result in temporary significant impacts to air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, noise, and tribal cultural resources. Impacts to these resources would be less than significant with implementation of mitigation measures identified in this Initial Study. Therefore, the Project would not contribute to cumulative impacts upon these resources.

By their very nature, air pollution, greenhouse gas emissions, and energy, are largely cumulative environmental concerns. The project-level thresholds identified by BAAQMD (which the Project's impacts were compared to in Section 4.2.3 Air Quality) are the basis for determining whether a project's individual impact is cumulatively considerable. As discussed in this Initial Study, the Project would have a less-than-significant impact on greenhouse gas emissions and energy and would have less-than-significant impacts on air quality with implementation of MM

AIR-1.1 and MM AIR-1.2. Therefore, the Project would not produce a cumulatively considerable contribution to air quality emissions, greenhouse gas emissions, or energy impacts with implementation of mitigation measures.

Construction of the Project would result in temporary noise impacts during construction. However, the Project would implement mitigation measures and comply with adopted City of Fremont construction noise policies to reduce the Project's temporary construction noise impacts to a less-than-significant level. Cumulative projects, Clean Energy Project Phase 2, would also be subject to the City of Fremont construction noise policies which would reduce potential for cumulative noise impacts. For these reasons, the Project would not contribute to a significant cumulative construction noise impact with the implementation of mitigation measures.

c) *Have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?*

Less Than Significant Impact with Mitigation Incorporated. Consistent with Section 15065(a)(4) of the CEQA Guidelines, a lead agency shall find that a project may have a significant effect on the environment where there is substantial evidence that the project has the potential to cause substantial adverse effects on human beings, either directly or indirectly. Pursuant to this standard, a change to the physical environment that might otherwise be minor must be treated as significant if people would be significantly affected. This factor relates to adverse changes to the environment of human beings generally, and not to effects on particular individuals. While changes to the environment that could indirectly affect human beings would be represented by all of the designated CEQA issue areas, those that could directly affect human beings include air quality and noise. Implementation of mitigation measures, and adherence to General Plan, City Code, and State and federal regulations described in Section 4.2.3 Air Quality and Section 4.2.13 Noise of this Initial Study, would avoid significant impacts. No other direct or indirect adverse effects on human beings have been identified. The impacts on human beings would be less than significant with implementation of mitigation measures.

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5.1 LEAD AGENCY

Alameda County Water District

Carlos Sempere, SE

5.2 CONSULTANTS

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Pacific Legacy (Archaeology)

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Appendix A – Mitigation Monitoring or Reporting Program

MITIGATION MONITORING OR REPORTING PROGRAM

Decoto Reservoir Seismic Improvements and Roof Replacement Project

ALAMEDA COUNTY WATER DISTRICT

March 2024

PREFACE

Section 21081 of the California Environmental Quality Act (CEQA) requires a Lead Agency to adopt a Mitigation Monitoring or Reporting Program whenever it approves a project for which measures have been required to mitigate or avoid significant effects on the environment. The purpose of the monitoring or reporting program is to ensure compliance with the mitigation measures during projectimplementation.

The Initial Study for the *Decoto Reservoir Seismic Improvements and Roof Replacement Project* concluded that the implementation of the project will not result in significant effects on the environment and mitigation measures were incorporated into the proposed project or are required as a condition of project approval. This Mitigation Monitoring or Reporting Program addresses those measures in terms of how and when they will be implemented.

This document does *not* discuss those subjects for which the Initial Study concluded that the impacts from implementation of the project would be less than significant and for which no standard or mitigation measures would be required.

MITIGATION MONITORING OR REPORTING PROGRAM DECOTO RESERVOIR SEISMIC IMPROVEMENTS AND ROOF REPLACEMENT PROJECT				
Impact	**Mitigation**	**Timeframe for Implementation**	**Method for Compliance**	**Oversight of Implementation**
Impact AIR-1: The proposed project could result in potentially significant cancer risk impacts to sensitive receptors or increased annual $PM_{2.5}$ concentrations caused by construction equipment and traffic exhaust and fugitive dust. **(Significant Impact)**	**MM AIR-1.1:** • During any construction period requiring ground disturbance, the District shall ensure that the project contractor implements measures to control dust and exhaust. Implementation of the measures recommended by Bay Area Air Quality Management District (BAAQMD) and listed below would reduce the air quality impacts associated with grading and new construction to a less-than-significant level. In addition to the measures recommended by BAAQMD, the contractor shall implement the following best management practices that are required by the City of Fremont of all projects: • All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times daily. • All haul trucks transporting soil, sand, or other loose material off-site shall be covered. • All visible mud or dirt track-out onto	The measures shall be implemented by the contractors during all demolition and construction activities.	Incorporation of required measures on all project construction documents, contracts, and plans.	Alameda County Water District (ACWD) is responsible for incorporating this measure into contract specification and for ensuring compliance during construction.

MITIGATION MONITORING OR REPORTING PROGRAM DECOTO RESERVOIR SEISMIC IMPROVEMENTS AND ROOF REPLACEMENT PROJECT				
Impact	**Mitigation**	**Timeframe for Implementation**	**Method for Compliance**	**Oversight of Implementation**
	adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. • All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph). • Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points. • All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. • Post a publicly visible sign with the telephone number and person to contact at the District regarding dust complaints. This person shall respond and take corrective action			

MITIGATION MONITORING OR REPORTING PROGRAM DECOTO RESERVOIR SEISMIC IMPROVEMENTS AND ROOF REPLACEMENT PROJECT				
Impact	**Mitigation**	**Timeframe for Implementation**	**Method for Compliance**	**Oversight of Implementation**
	within 48 hours. BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations. **MM AIR-1.2:** The project shall use equipment that has low diesel particulate matter (DPM) or zero emissions as follows: • Mobile diesel-powered off-road equipment larger than 25 horsepower and operating on the site for more than two days shall meet U.S. Environmental Protection Agency (EPA) particulate matter emissions standards for Tier 4 or use engines that include particulate matter emissions control equivalent to California Air Resources Board (CARB) Level 3 verifiable diesel emission control devices (VDECs). Alternatively (or in combination), the use of alternatively fueled or electric equipment (i.e., non-diesel) would be consistent with this requirement. • Avoid diesel generator use by supplying line power to the construction site and limiting the use of diesel generators to no more than			

MITIGATION MONITORING OR REPORTING PROGRAM DECOTO RESERVOIR SEISMIC IMPROVEMENTS AND ROOF REPLACEMENT PROJECT				
Impact	**Mitigation**	**Timeframe for Implementation**	**Method for Compliance**	**Oversight of Implementation**
	50 total hours.			
Impact BIO-1: The proposed Project's construction activities may result in noise and vibration impacts that may result in: (1) nest abandonment; (2) loss of young; (3) reduced health and vigor of eggs and/or nestlings (resulting in reduced survival rates). **(Significant Impact)**	**MM BIO-1.1:** A survey shall be conducted prior to any construction activities on-site to verify the absence of burrowing owls in the vicinity of the Project site. One "Take avoidance (pre-construction) survey" shall be completed consistent with the California Department of Fish and Wildlife's 2012 Burrowing Owl Mitigation guidelines to detect the presence of burrowing owls in the vicinity of the Project site immediately prior to construction activities. If no owls are found during the survey, no further action is necessary**.**	Prior to issuance of any grading, demolition, and/or building permit or activities.	A qualified biologist is responsible for conducting a pre-construction survey of the site, determining an appropriate exclusion zone, and monitoring the exclusion fencing during construction.	ACWD is responsible for incorporating measures into contract specifications, and ensuring compliance and work is conducted outside of the nesting bird season, if possible.

MITIGATION MONITORING OR REPORTING PROGRAM DECOTO RESERVOIR SEISMIC IMPROVEMENTS AND ROOF REPLACEMENT PROJECT				
Impact	**Mitigation**	**Timeframe for Implementation**	**Method for Compliance**	**Oversight of Implementation**
	MM BIO-1.2: If nesting owls are encountered during the breeding season (February 1 – August 31), active nests shall be avoided by 250 feet either until the end of the breeding season or until the nests are determined to be inactive by a qualified biologist. If work must occur within this buffer, consultation with CDFW may be required. If owls are encountered during the non-breeding season (September 1 – January 1), the occupied burrow shall be avoided by 250 feet until such time as a qualified biologist can confirm that the owl is no longer utilizing the burrow site.	Prior to issuance of any grading, demolition, and/or building permit or activities.	A qualified biologist is responsible for conducting a pre-construction survey of the site, determining an appropriate exclusion zone, and monitoring the exclusion	ACWD is responsible for incorporating measures into contract specifications, and ensuring compliance and work is conducted outside of the nesting bird season, if possible.
Impact BIO-2: If construction of the proposed project begins during the avian nesting season, generally February 1 to August 31, nesting birds may be impacted through the removal of nest structures or through localized disturbance sufficient to	**MM BIO-2.1** If construction activities are initiated during the nesting season (February 1 – August 31), a nesting bird survey shall be conducted by a qualified biologist within 7 days prior to the start of construction within the Project site. The nesting bird survey shall include the Project site and the immediate surrounding area. If active nests are present, exclusion buffers	Prior to issuance of any grading, demolition, and/or building permit or activities.	A qualified biologist is responsible for conducting a pre-construction survey of the site, determining an appropriate exclusion zone, and monitoring the exclusion	ACWD is responsible for incorporating measures into contract specifications, and ensuring compliance and work is conducted outside of the nesting bird season, if possible.

MITIGATION MONITORING OR REPORTING PROGRAM DECOTO RESERVOIR SEISMIC IMPROVEMENTS AND ROOF REPLACEMENT PROJECT				
Impact	**Mitigation**	**Timeframe for Implementation**	**Method for Compliance**	**Oversight of Implementation**
cause nest abandonment. **(Significant Impact)**	appropriate to the species shall be established by the qualified biologist to prevent impacts to nesting birds. Buffers shall be maintained until the biologist determines that young have fledged, or the nest becomes inactive. If construction activities are initiated outside of the nesting season (September 1 – January 31), no pre-construction nesting bird surveys are necessary.		fencing during construction.	
Impact BIO-3: Equipment mobilization through the access road to the north of the Project site could result in impacts to mature riparian trees surrounding the ephemeral drainage. **(Significant Impact)**	**MM BIO-3.1** The construction foreman shall be responsible for overseeing all equipment mobilization to ensure that riparian vegetation is not impacted by the Project. If riparian vegetation could be impacted by the equipment and materials (e.g., long beams) that are transported to the Project site via long flatbed trucks through the access road, a biological monitor or arborist shall be present during the trimming of any small branches three inches in diameter or less to facilitate equipment access. No trees shall be removed.	Ongoing during project construction.	The measures shall be implemented by the contractors during all demolition and construction activities. A qualified biologist or arborist must be present during tree trimming.	ACWD is responsible for incorporating measures into contract specifications and ensuring compliance.

MITIGATION MONITORING OR REPORTING PROGRAM DECOTO RESERVOIR SEISMIC IMPROVEMENTS AND ROOF REPLACEMENT PROJECT				
Impact	**Mitigation**	**Timeframe for Implementation**	**Method for Compliance**	**Oversight of Implementation**
Impact BIO-4: Transportation equipment and materials through the access road to the north of the Project site could result in unintentional discharge of materials into the ephemeral drainage. **(Significant Impact)**	**MM BIO-4.1** Prior to the transport of materials into the Project site, silt fencing shall be installed on the east side of the culverted road crossing to prevent any discharge from entering the drainage.	Ongoing during project construction.	These measures shall be implemented by the contractors during all demolition and construction activities.	ACWD is responsible for incorporating measures into contract specifications and ensuring compliance.
Impact CUL1: Construction of the proposed project would involve some ground-disturbing activities such as drilling and excavation, which have the potential to unearth or adversely impact previously identified historical and/or archeological resources. **(Significant Impact)**	**MM CUL-1.1:** If any human remains are found during any field investigations, grading, or other construction activities, all provisions of California Health and Safety Code Sections 7054 and 7050.5 and Public Resources Code Sections 5097.9 through 5097.99, as amended per Assembly Bill 2641, shall be followed. In the event of the discovery of human remains during construction, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains. The District shall immediately notify the Alameda County Coroner/ Medical Examiner's Office (the Coroner). The Coroner will make a determination as to whether the remains are Native American.	Ongoing during project construction. In the event that human remains are found.	Stop all excavation or disturbance of the site and nearby area, and notify the Alameda County Coroner. Contact the NAHC within 24 hours of determining remains are Native American. Inspect the remains and	ACWD is responsible for incorporating measure into contract specifications, and ensuring compliance during construction if human remains are discovered.

MITIGATION MONITORING OR REPORTING PROGRAM DECOTO RESERVOIR SEISMIC IMPROVEMENTS AND ROOF REPLACEMENT PROJECT				
Impact	**Mitigation**	**Timeframe for Implementation**	**Method for Compliance**	**Oversight of Implementation**
	If the remains are believed to be Native American, the Coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours. The NAHC will then designate a Most Likely Descendant (MLD). The MLD will inspect the remains and make a recommendation on the treatment of the remains and associated artifacts. If the District concurs with the recommendation of the MLD, the District will work with the MLD and the Coroner to carry it out. If one of the following conditions occurs, the Alameda County Water District or their authorized representative shall work with the Coroner to reinter the Native American human remains and associated grave goods with appropriate dignity in a location not subject to further subsurface disturbance: • The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 48 hours after being notified by the Commission. • The descendant identified fails to make a recommendation; or • The District or their authorized		associated artifacts and make recommendation on treatment of artifacts.	

MITIGATION MONITORING OR REPORTING PROGRAM DECOTO RESERVOIR SEISMIC IMPROVEMENTS AND ROOF REPLACEMENT PROJECT				
Impact	**Mitigation**	**Timeframe for Implementation**	**Method for Compliance**	**Oversight of Implementation**
	representative rejects the recommendation of the descendant, and the meditation by the NAHC fails to provide measures acceptable to the District.			
Impact GEO-1: The proposed project may result in significant impacts to paleontological resources. **(Significant Impact)**	**MM GEO-1.1:** In the event that a fossil is discovered during construction of the project, excavations within 50 feet of the find shall be temporarily halted or delayed until the discovery is examined by a qualified paleontologist, in accordance with Society of Vertebrate Paleontology standards. The District shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. If the find is determined to be significant and if avoidance is not feasible, the paleontologist shall design and carry out a data recovery plan consistent with the Society of Vertebrate Paleontology standards. The plan must include preparation, identification, cataloguing, and curation of any salvaged specimens.	Ongoing during project construction.	Stop work within 50 feet of the find and notify a qualified paleontologist. The paleontologist shall design and carry out a data recovery plan.	ACWD is responsible for incorporating the standard inadvertent discovery clause in every construction contract and informing contractors of this requirement.
Impact HAZ-1: Due to its age, Decoto Reservoir may contain ACMs and/or LBP materials.	**MM HAZ-1.1:** The project would be required to implement the following measures to reduce impacts due to the presence of asbestos-containing	Prior to demolition of on-site buildings. During	Conduct a visual inspection/pre-demolition survey, and	ACWD is responsible for retaining a qualified hazardous materials firm to conduct visual

MITIGATION MONITORING OR REPORTING PROGRAM DECOTO RESERVOIR SEISMIC IMPROVEMENTS AND ROOF REPLACEMENT PROJECT				
Impact	**Mitigation**	**Timeframe for Implementation**	**Method for Compliance**	**Oversight of Implementation**
(Significant Impact)	materials (ACMs) and/or lead-based paint (LBP): • In conformance with State and local laws, a visual inspection/pre-demolition survey, and possible sampling, shall be conducted prior to the demolition of on-site building(s) to determine the presence of ACMs and/or LBP. • During demolition activities, all building materials containing lead-based paint shall be removed in accordance with the California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA) Lead in Title 8, CCR, Section 1532.1, including employee training, employee air monitoring, and dust control. Any debris or soil containing lead-based paint or coatings shall be disposed of at landfills that meet acceptance criteria for the type of lead being disposed. • All potentially friable ACMs shall be removed in accordance with National Emission Standards for Air Pollution (NESHAP) guidelines prior to	demolition activities.	possible sampling of on-site buildings to determine the presence of asbestos-containing materials and or lead based-paint. Remove all building materials containing lead-based paint and all potentially friable ACMs Retain a registered asbestos abatement contractor to remove and dispose of ACMs identified in the asbestos survey. Any debris or soil	inspections/pre-demolition surveys for ACMs and LBP, remove all building materials containing LBP per Cal/OSHA regulations, retain a registered asbestos abatement contractor to remove and dispose of ACMs identified.

MITIGATION MONITORING OR REPORTING PROGRAM DECOTO RESERVOIR SEISMIC IMPROVEMENTS AND ROOF REPLACEMENT PROJECT				
Impact	**Mitigation**	**Timeframe for Implementation**	**Method for Compliance**	**Oversight of Implementation**
	demolition or renovation activities that may disturb ACMs. All demolition activities shall be undertaken in accordance with Cal/OSHAstandards contained in Title 8, CCR, Section 1529, to protect workers from asbestos exposure. • A registered asbestos abatement contractor shall be retained to remove and dispose of ACMs identified in the asbestos survey performed for the site in accordance with the standards stated above. • Materials containing more than one-percent asbestos are also subject to BAAQMD regulations. Removal of materials containing more than one-percent asbestos shall be completed in accordance with BAAQMD requirements and notifications. • Based on Cal/OSHA rules and regulations, the following conditions are required to limit impacts to construction workers. o Prior to commencement of demolition activities, a building survey,including sampling and testing, shall be completed to		containing lead-based paint or coatings shall be disposed of at a landfill that meets acceptance criteria for the waste being disposed.	

MITIGATION MONITORING OR REPORTING PROGRAM DECOTO RESERVOIR SEISMIC IMPROVEMENTS AND ROOF REPLACEMENT PROJECT				
Impact	**Mitigation**	**Timeframe for Implementation**	**Method for Compliance**	**Oversight of Implementation**
	identify and quantify building materials containing lead-based paint. o During demolition activities, all building materials containing lead-based paint shall be removed in accordance with Cal/OSHA Lead in Construction Standard, Title 8, CCR, Section 1532.1, including employee training, employee air monitoring and dust control. o Any debris or soil containing lead-based paint or coatings shall be disposed of at landfills that meet acceptance criteria for the type of waste being disposed.			
Impact NOI-1: Project construction could result in noise levels exceeding City of Fremont standards at the nearest residential property line. **(Significant Impact)**	**MM NOI-1.1:** During construction of the project, the District shall implement the following measures required by the City of Fremont to reduce construction noise: • Construction equipment shall be well-maintained and used judiciously to be as quiet as practical. • Construction, excavating, grading, and filling activities (including the	Ongoing during project construction.	Ensure that construction equipment is well maintained, equipped with mufflers, and utilize "quiet mode." Ensure that loading, staging areas, and noise	ACWD is responsible for incorporating the measure into contract specifications and ensuring compliance during construction.

MITIGATION MONITORING OR REPORTING PROGRAM DECOTO RESERVOIR SEISMIC IMPROVEMENTS AND ROOF REPLACEMENT PROJECT				
Impact	**Mitigation**	**Timeframe for Implementation**	**Method for Compliance**	**Oversight of Implementation**
	loading and unloading of materials, truck movements, and warming of equipment motors) shall be limited as provided in City Code Section 18.160.010. • All internal combustion engine-driven equipment shall be equipped withmufflers, which are in good condition and appropriate for the equipment. • The contractor shall utilize "quiet" models of air compressors and other stationary noise sources where technology exists. • Loading, staging areas, stationary noise generating equipment, etc., shall be located as far as feasible from sensitive receptors. • The contractor shall comply with Air Resource Board idling prohibitions of unnecessary idling of internal combustion engines. • Signs shall be posted at the construction site that include permitted construction days and hours (Monday through Friday 7 a.m. to 5 p.m., Saturday and holidays 9 a.m. to 6 p.m.), a day and evening		generating equipment are located as far as feasible from sensitive receptors and signs are posted at the construction site identifying the construction days, hours, contact information for noise complaints. Construct a temporary noise barrier which blocks line of sight between the project and nearest residential land uses.	

MITIGATION MONITORING OR REPORTING PROGRAM DECOTO RESERVOIR SEISMIC IMPROVEMENTS AND ROOF REPLACEMENT PROJECT				
Impact	**Mitigation**	**Timeframe for Implementation**	**Method for Compliance**	**Oversight of Implementation**
	contact number for the job site, and a contact number for the District in the event of noise complaints. The District shall designate an on-site complaint and enforcement manager to track and respond to noise complaints. • Temporary noise barriers, such as solid plywood fences, shall be installed around construction sites adjacent to operational business, residences or noise-sensitive land uses, unless an existing wall or other barrier provides equivalent noise attenuation. (City of Fremont Ord. 27- 2016 § 37, 12-6-16; Ord. 23-2018 § 41, 10-2-18; Ord. 05-2021 § 52, 4-20-21.)			
Impact TCR-1: Project construction could result in potentially significant impacts to tribal cultural resources, if any are encountered during construction. **(Significant Impact)**	**MM TCR-1.1:** A qualified archaeologist shall be present at the project site during any ground-disturbing activities to monitor sites or objects of significance to Native Americans and to provide construction worker tribal cultural resources awareness training including applicable regulations and protocols for avoidance, confidentiality, and culturally appropriate treatment.	Ongoing during project construction.	Conduct tribal cultural monitoring; stop, divert, or slow work.	ACWD is responsible for incorporating the measure into contract specifications and ensuring compliance during construction if sites or objects of significance to Native Americans are discovered.

MITIGATION MONITORING OR REPORTING PROGRAM DECOTO RESERVOIR SEISMIC IMPROVEMENTS AND ROOF REPLACEMENT PROJECT				
Impact	**Mitigation**	**Timeframe for Implementation**	**Method for Compliance**	**Oversight of Implementation**
	The archaeological monitor shall have the ability to request that work be stopped, diverted, or slowed if sites or objects of significance to Native Americans are encountered within the direct impact area and shall be consulted for recommendations regarding the appropriate treatment of such sites or objects.			

Appendix B – Air Quality and Greenhouse Gas Emissions Data

Alameda Reservoir Improvements Project

CalEEMod Results for Estimating Construction Emissions of

Criteria Air Pollutants

Note: CalEEMod calculations for a similar project at Alameda Reservoir are included herein as directly applicable to the Decoto Reservoir Seismic Improvements and Roof Replacement Project.
See discussion on page 36 of the IS/MND.

CalEEMod Results

CONSTRUCTION - Total Emissions

Emissions Scenario	ROG	NO_x	Exhaust PM_{10}	Exhaust $PM_{2.5}$		Fugitive Dust PM_{10}	Fugitive Dust $PM_{2.5}$
Units	Tons	Tons	Tons	Tons		Tons	Tons
Emissions Without Tier 4 Engine Requirements	0.092	1.012	0.040	0.037		Best Management Practice	
Emissions With Tier 4 Engine Requirements	0.026	0.191	0.003	0.003			

Total Construction Days =	220

CONSTRUCTION - Average Daily Emissions

Emissions Scenario	ROG	NO_x	Exhaust PM_{10}	Exhaust $PM_{2.5}$		Fugitive Dust PM_{10}	Fugitive Dust $PM_{2.5}$
Units	lb/day	lb/day	lb/day	lb/day		lb/day	lb/day
Emissions Without Tier 4 Engine Requirements	0.8	9.2	0.37	0.34		Best Management Practice	
Emissions With Tier 4 Engine Requirements	0.2	1.7	0.03	0.03			
BAAQMD's Thresholds	54	54	82	54		---	---
Exceed Thresholds?	No						

CalEEMod Assumptions

1. Construction input for CalEEMod was based on Table 3. Construction Equipment and Number of Vehicle Trips.
2. Dump truck, concrete pump truck, concrete truck trips were grouped together for haul trips and assumed to use heavy-heavy duty trucks.
3. It was conservatively assumed that the construction phase would have one vendor truck trip per day on average.
4. 20 worker vehicles would access the site daily throughout project construction.
5. In CalEEMod, boom truck and material handling crane were both input as "cranes".
6. Two construction scenarios were modeled, one with CalEEMod default off-road equipment tiers, and the other with all Tier 4 Final off-road equipment.
7. All other model parameters, such as trip length and work hours per day, are CalEEMod defaults.

Alameda Reservoir Improvements Construction Emissions.v1 - Alameda County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Alameda Reservoir Improvements Construction Emissions.v1

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	3.27	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2023
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Land use selection is arbitrary and does not affect model output.

Construction Phase - Construction phases and duration updated according to Table 3.

Off-road Equipment - Off-road equipment during demolition consists of one boom truck (crane as CalEEMod equipment)

Off-road Equipment - Off-road equipment during construction phase includes crane, boom truck (input as crane), and 2 backhoes.

Demolition - demolition size is left blank to allow manual input of truck trips in 'Trips and VMT'.

Trips and VMT - 20 worker vehicles throughout construction. Dump Truck during demolition is 1,200 total (haul). Concrete pump truck and concrete truck trip are 3+95=98 haul trips. Vendor truck trips total 75 trips over 160 days.

Construction Off-road Equipment Mitigation - Assume all off-road equipment are Tier 4.

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

Alameda Reservoir Improvements Construction Emissions.v1 - Alameda County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	230.00	160.00
tblConstructionPhase	NumDays	20.00	60.00
tblConstructionPhase	PhaseEndDate	7/14/2023	6/2/2023
tblConstructionPhase	PhaseEndDate	8/26/2022	10/21/2022
tblConstructionPhase	PhaseStartDate	8/27/2022	10/24/2022
tblLandUse	LotAcreage	0.00	3.27
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,200.00
tblTripsAndVMT	HaulingTripNumber	0.00	98.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	WorkerTripNumber	3.00	20.00
tblTripsAndVMT	WorkerTripNumber	0.00	20.00

2.0 Emissions Summary

Alameda Reservoir Improvements Construction Emissions.v1 - Alameda County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					
2022	0.0406	0.4876	0.2851	1.0300e-003	0.0193	0.0177	0.0370	5.2300e-003	0.0164	0.0216	0.0000	94.4117	94.4117	0.0170	6.2300e-003	96.6927
2023	0.0514	0.5239	0.4175	9.6000e-004	9.6300e-003	0.0227	0.0324	2.5800e-003	0.0209	0.0235	0.0000	84.9258	84.9258	0.0246	6.6000e-004	85.7363
Maximum	**0.0514**	**0.5239**	**0.4175**	**1.0300e-003**	**0.0193**	**0.0227**	**0.0370**	**5.2300e-003**	**0.0209**	**0.0235**	**0.0000**	**94.4117**	**94.4117**	**0.0246**	**6.2300e-003**	**96.6927**

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					
2022	0.0129	0.1363	0.3416	1.0300e-003	0.0193	1.9300e-003	0.0212	5.2300e-003	1.8800e-003	7.1100e-003	0.0000	94.4116	94.4116	0.0170	6.2300e-003	96.6926
2023	0.0135	0.0542	0.5018	9.6000e-004	9.6300e-003	1.4900e-003	0.0111	2.5800e-003	1.4900e-003	4.0600e-003	0.0000	84.9257	84.9257	0.0246	6.6000e-004	85.7362
Maximum	**0.0135**	**0.1363**	**0.5018**	**1.0300e-003**	**0.0193**	**1.9300e-003**	**0.0212**	**5.2300e-003**	**1.8800e-003**	**7.1100e-003**	**0.0000**	**94.4116**	**94.4116**	**0.0246**	**6.2300e-003**	**96.6926**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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	**71.38**	**81.17**	**-20.04**	**0.00**	**0.00**	**91.55**	**53.39**	**0.00**	**90.96**	**75.22**	**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)
1	**8-1-2022**	**10-31-2022**	0.2667	0.1160
2	**11-1-2022**	**1-31-2023**	0.3657	0.0418
3	**2-1-2023**	**4-30-2023**	0.3326	0.0393
4	**5-1-2023**	**7-31-2023**	0.1232	0.0144
		Highest	0.3657	0.1160

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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						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**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						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**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

	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

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	8/1/2022	10/21/2022	5	60	
2	Building Construction	Building Construction	10/24/2022	6/2/2023	5	160	

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Excavators	0	8.00	158	0.38
Demolition	Cranes	1	8.00	231	0.29
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Building Construction	Cranes	2	7.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	7.00	97	0.37

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
Demolition	1	20.00	0.00	1,200.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	4	20.00	1.00	98.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2022

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	0.0111	0.1247	0.0564	1.7000e-004		5.1800e-003	5.1800e-003		4.7600e-003	4.7600e-003	0.0000	15.1092	15.1092	4.8900e-003	0.0000	15.2314
Total	**0.0111**	**0.1247**	**0.0564**	**1.7000e-004**		**5.1800e-003**	**5.1800e-003**		**4.7600e-003**	**4.7600e-003**	**0.0000**	**15.1092**	**15.1092**	**4.8900e-003**	**0.0000**	**15.2314**

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	2.7600e-003	0.1003	0.0206	3.8000e-004	0.0102	9.3000e-004	0.0111	2.8000e-003	8.9000e-004	3.6800e-003	0.0000	36.7340	36.7340	8.0000e-004	5.8000e-003	38.4828
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	1.6900e-003	1.2100e-003	0.0144	4.0000e-005	4.7400e-003	3.0000e-005	4.7700e-003	1.2600e-003	2.0000e-005	1.2900e-003	0.0000	3.8131	3.8131	1.2000e-004	1.1000e-004	3.8495
Total	**4.4500e-003**	**0.1016**	**0.0350**	**4.2000e-004**	**0.0149**	**9.6000e-004**	**0.0159**	**4.0600e-003**	**9.1000e-004**	**4.9700e-003**	**0.0000**	**40.5471**	**40.5471**	**9.2000e-004**	**5.9100e-003**	**42.3322**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2022

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	2.1100e-003	9.1600e-003	0.0775	1.7000e-004		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	15.1092	15.1092	4.8900e-003	0.0000	15.2314
Total	**2.1100e-003**	**9.1600e-003**	**0.0775**	**1.7000e-004**		**2.8000e-004**	**2.8000e-004**		**2.8000e-004**	**2.8000e-004**	**0.0000**	**15.1092**	**15.1092**	**4.8900e-003**	**0.0000**	**15.2314**

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	2.7600e-003	0.1003	0.0206	3.8000e-004	0.0102	9.3000e-004	0.0111	2.8000e-003	8.9000e-004	3.6800e-003	0.0000	36.7340	36.7340	8.0000e-004	5.8000e-003	38.4828
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	1.6900e-003	1.2100e-003	0.0144	4.0000e-005	4.7400e-003	3.0000e-005	4.7700e-003	1.2600e-003	2.0000e-005	1.2900e-003	0.0000	3.8131	3.8131	1.2000e-004	1.1000e-004	3.8495
Total	**4.4500e-003**	**0.1016**	**0.0350**	**4.2000e-004**	**0.0149**	**9.6000e-004**	**0.0159**	**4.0600e-003**	**9.1000e-004**	**4.9700e-003**	**0.0000**	**40.5471**	**40.5471**	**9.2000e-004**	**5.9100e-003**	**42.3322**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Building Construction - 2022

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	0.0235	0.2564	0.1807	3.9000e-004		0.0115	0.0115		0.0106	0.0106	0.0000	34.1356	34.1356	0.0110	0.0000	34.4116
Total	**0.0235**	**0.2564**	**0.1807**	**3.9000e-004**		**0.0115**	**0.0115**		**0.0106**	**0.0106**	**0.0000**	**34.1356**	**34.1356**	**0.0110**	**0.0000**	**34.4116**

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	7.0000e-005	2.5600e-003	5.3000e-004	1.0000e-005	2.6000e-004	2.0000e-005	2.8000e-004	7.0000e-005	2.0000e-005	9.0000e-005	0.0000	0.9375	0.9375	2.0000e-005	1.5000e-004	0.9821
Vendor	5.0000e-005	1.3700e-003	3.8000e-004	1.0000e-005	1.6000e-004	1.0000e-005	1.8000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.5048	0.5048	1.0000e-005	8.0000e-005	0.5275
Worker	1.4100e-003	1.0100e-003	0.0120	3.0000e-005	3.9500e-003	2.0000e-005	3.9800e-003	1.0500e-003	2.0000e-005	1.0700e-003	0.0000	3.1776	3.1776	1.0000e-004	9.0000e-005	3.2079
Total	**1.5300e-003**	**4.9400e-003**	**0.0129**	**5.0000e-005**	**4.3700e-003**	**5.0000e-005**	**4.4400e-003**	**1.1700e-003**	**5.0000e-005**	**1.2200e-003**	**0.0000**	**4.6198**	**4.6198**	**1.3000e-004**	**3.2000e-004**	**4.7175**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Building Construction - 2022

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	4.7600e-003	0.0206	0.2162	3.9000e-004		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004	0.0000	34.1355	34.1355	0.0110	0.0000	34.4115
Total	**4.7600e-003**	**0.0206**	**0.2162**	**3.9000e-004**		**6.4000e-004**	**6.4000e-004**		**6.4000e-004**	**6.4000e-004**	**0.0000**	**34.1355**	**34.1355**	**0.0110**	**0.0000**	**34.4115**

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	7.0000e-005	2.5600e-003	5.3000e-004	1.0000e-005	2.6000e-004	2.0000e-005	2.8000e-004	7.0000e-005	2.0000e-005	9.0000e-005	0.0000	0.9375	0.9375	2.0000e-005	1.5000e-004	0.9821
Vendor	5.0000e-005	1.3700e-003	3.8000e-004	1.0000e-005	1.6000e-004	1.0000e-005	1.8000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.5048	0.5048	1.0000e-005	8.0000e-005	0.5275
Worker	1.4100e-003	1.0100e-003	0.0120	3.0000e-005	3.9500e-003	2.0000e-005	3.9800e-003	1.0500e-003	2.0000e-005	1.0700e-003	0.0000	3.1776	3.1776	1.0000e-004	9.0000e-005	3.2079
Total	**1.5300e-003**	**4.9400e-003**	**0.0129**	**5.0000e-005**	**4.3700e-003**	**5.0000e-005**	**4.4400e-003**	**1.1700e-003**	**5.0000e-005**	**1.2200e-003**	**0.0000**	**4.6198**	**4.6198**	**1.3000e-004**	**3.2000e-004**	**4.7175**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Building Construction - 2023

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	0.0484	0.5151	0.3913	8.6000e-004		0.0226	0.0226		0.0208	0.0208	0.0000	75.1268	75.1268	0.0243	0.0000	75.7342
Total	**0.0484**	**0.5151**	**0.3913**	**8.6000e-004**		**0.0226**	**0.0226**		**0.0208**	**0.0208**	**0.0000**	**75.1268**	**75.1268**	**0.0243**	**0.0000**	**75.7342**

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	7.0000e-005	4.4300e-003	1.0000e-003	2.0000e-005	5.7000e-004	4.0000e-005	6.1000e-004	1.6000e-004	4.0000e-005	1.9000e-004	0.0000	1.9630	1.9630	4.0000e-005	3.1000e-004	2.0564
Vendor	6.0000e-005	2.4000e-003	7.3000e-004	1.0000e-005	3.6000e-004	1.0000e-005	3.8000e-004	1.0000e-004	1.0000e-005	1.2000e-004	0.0000	1.0639	1.0639	1.0000e-005	1.6000e-004	1.1118
Worker	2.8800e-003	1.9700e-003	0.0245	7.0000e-005	8.7000e-003	5.0000e-005	8.7400e-003	2.3100e-003	4.0000e-005	2.3600e-003	0.0000	6.7721	6.7721	2.0000e-004	1.9000e-004	6.8339
Total	**3.0100e-003**	**8.8000e-003**	**0.0262**	**1.0000e-004**	**9.6300e-003**	**1.0000e-004**	**9.7300e-003**	**2.5700e-003**	**9.0000e-005**	**2.6700e-003**	**0.0000**	**9.7990**	**9.7990**	**2.5000e-004**	**6.6000e-004**	**10.0021**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Building Construction - 2023

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	0.0105	0.0454	0.4756	8.6000e-004		1.4000e-003	1.4000e-003		1.4000e-003	1.4000e-003	0.0000	75.1267	75.1267	0.0243	0.0000	75.7341
Total	**0.0105**	**0.0454**	**0.4756**	**8.6000e-004**		**1.4000e-003**	**1.4000e-003**		**1.4000e-003**	**1.4000e-003**	**0.0000**	**75.1267**	**75.1267**	**0.0243**	**0.0000**	**75.7341**

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	7.0000e-005	4.4300e-003	1.0000e-003	2.0000e-005	5.7000e-004	4.0000e-005	6.1000e-004	1.6000e-004	4.0000e-005	1.9000e-004	0.0000	1.9630	1.9630	4.0000e-005	3.1000e-004	2.0564
Vendor	6.0000e-005	2.4000e-003	7.3000e-004	1.0000e-005	3.6000e-004	1.0000e-005	3.8000e-004	1.0000e-004	1.0000e-005	1.2000e-004	0.0000	1.0639	1.0639	1.0000e-005	1.6000e-004	1.1118
Worker	2.8800e-003	1.9700e-003	0.0245	7.0000e-005	8.7000e-003	5.0000e-005	8.7400e-003	2.3100e-003	4.0000e-005	2.3600e-003	0.0000	6.7721	6.7721	2.0000e-004	1.9000e-004	6.8339
Total	**3.0100e-003**	**8.8000e-003**	**0.0262**	**1.0000e-004**	**9.6300e-003**	**1.0000e-004**	**9.7300e-003**	**2.5700e-003**	**9.0000e-005**	**2.6700e-003**	**0.0000**	**9.7990**	**9.7990**	**2.5000e-004**	**6.6000e-004**	**10.0021**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
User Defined Industrial	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.569121	0.056513	0.180870	0.112593	0.021111	0.005121	0.013190	0.012692	0.000800	0.000580	0.024593	0.000331	0.002484

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					
User Defined Industrial	0	0.0000	0.0000	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**

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					
User Defined Industrial	0	0.0000	0.0000	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**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

Alameda Reservoir Improvements Construction Emissions.v1 - Alameda County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					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	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

Alameda Reservoir Improvements Construction Emissions.v1 - Alameda County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					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	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

Alameda Reservoir Improvements Construction Emissions.v1 - Alameda County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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 – Biological Resources Technical Report

BIOLOGICAL RESOURCES TECHNICAL REPORT

DECOTO RESERVOIR IMPROVEMENT PROJECT

FREMONT, ALAMEDA COUNTY, CALIFORNIA

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LIST OF ACRONYMS

AWS	Alameda whipsnake
BIOS	Biogeographic Information and Observation System
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
Corps	U.S. Army Corps of Engineers
CRLF	California Red-legged Frog
CSRL	California Soils Resources Lab
CTS	California Tiger Salamander
CWA	Clean Water Act
EFH	Essential Fish Habitat
ESA	Federal Endangered Species Act
Magnuson-Stevens Act	Magnuson-Stevens Fishery Conservation & Management
MBTA	Migratory Bird Treaty Act
NMFS	National Marine Fisheries Service
NWI	National Wetland Inventory
OHWM	Ordinary High Water Mark
Rank	California Rare Plant Ranks
RWQCB	Regional Water Quality Control Board
SSC	Species of Special Concern
SWRCB	State Water Resource Control Board
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WBWG	Western Bat Working Group
WRA	WRA, Inc.

1.0 INTRODUCTION

This Biological Resources Technical Report evaluates existing biological resources, potential impacts, and mitigation measures for the proposed Decoto Reservoir Improvement Project (Project) located in Fremont, Alameda County, California (Figure 1, Appendix A). The purpose of the Project is to replace the roof and roof framing system and seismically upgrade Decoto Reservoir (Figure 2).

1.1 Overview and Purpose

This report provides an assessment of biological resources within the Project Site and immediate vicinity. Figure 3 illustrates the Project Site boundaries and the limits of the Study Area. The purpose of the assessment was to develop and gather information on sensitive biological communities and special-status plant and wildlife species to support an evaluation of the Project under the California Environmental Quality Act (CEQA). This report describes the results of the site visit, which assessed the Project Site for (1) the presence of sensitive biological communities, special-status plant species, and special-status wildlife species, and (2) the potential for the site to support special-status plant and wildlife species. Based on the results of the site assessment, potential impacts to sensitive biological communities and special-status species resulting from the proposed project were evaluated. If the project has the potential to result in significant impacts to these biological resources, measures to avoid, minimize, or mitigate for those significant impacts are described.

A biological resources assessment provides general information on the presence, or potential presence, of sensitive species and habitats. Additional focused studies (such as protocol level species surveys) may be required to support regulatory permit applications or to implement mitigation measures included in this report. This assessment is based on information available at the time of the study and on-site conditions that were observed on the dates the site was visited. Conclusions are based on currently available information used in combination with the professional judgement of the biologists completing this study.

1.2 Project Description

Decoto Reservoir is a 14.55 million-gallon reservoir constructed in 1964 with earthen levees, perimeter concrete walls, precast concrete columns on spread-footings, and asphalt slab-on-grade floor. Several elements of the reservoir exhibit visual signs of degradation (e.g., cracking) and/or are due for a replacement as a result of age. The Alameda County Water District (District) is proposing to upgrade the Decoto Reservoir for increased reliability, maintainability, and earthquake safety. These upgrades will include:

- Replacement of the corrugated galvanized steel over timber framing roof system;
- Seismic upgrade of the reservoir;
- Installation of new CSPE reservoir liner.

All construction will occur within the perimeter fencing that encloses the reservoir facility. All equipment operation and staging will be restricted to asphalt surfaces. The site will be accessed through a gated entrance that occurs at the north end of the reservoir facility. Flatbed trucks will need to transport 40-foot beams and other materials through the entrance and continue along a paved path that connects the entrance to the reservoir. Mature trees that occur adjacent to the

entrance and path may need to be trimmed to allow for equipment access. No tree removal is anticipated to occur in conjunction with equipment access or other construction activities.

TABLE 1. SUMMARY OF BIOLOGICAL RESOURCES EVALUATION

CEQA ASSESSMENT CATEGORY[1] IV. -BIOLOGICAL RESOURCES	BIOLOGICAL RESOURCES CONSIDERED	RELEVANT LAWS AND REGULATIONS	RESPONSIBLE REGULATORY AGENCY	SUMMARY OF FINDINGS & REPORT SECTION[2]
Question A. Special-status species	Special-status Plants Special-status Wildlife Designated Critical Habitat	Federal Endangered Species Act California Endangered Species Act California Native Plant Protection Act Migratory Bird Treaty Act Bald and Golden Eagle Protection Act	U.S. Fish and Wildlife Service National Marine Fisheries Service California Department of Fish and Wildlife	Potentially significant impacts were identified and mitigation measures are included that reduce those impacts to a level that is less than significant. **See Section 6.2 for more information**
Question B. Sensitive natural communities and riparian habitat	Sensitive Natural Communities Streams, Lakes, & Riparian Habitat	California Fish and Game Code Oak Woodland Conservation Act Porter-Cologne Act Clean Water Act	California Department of Fish and Wildlife U.S. Army Corps of Engineers U.S. Environmental Protection Agency State Water Resources Control Board Regional Water Quality Control Board	Potentially significant impacts were identified and mitigation measures are included that reduce those impacts to a level that is less than significant. **See Section 6.2 for more information**
Question C. State and federally protected wetlands	Wetlands Unvegetated surface waters	Clean Water Act Sections 404/401 Rivers and Harbors Act Section 10 Porter Cologne Act	U.S. Army Corps of Engineers U.S. Environmental Protection Agency State Water Resources Control Board Regional Water Quality Control Board	Potentially significant impacts were identified and mitigation measures are included that reduce those impacts to a level that is less than significant. **See Section 6.3 for more information.**

[1] CEQA Questions have been summarized here; see Section 6.2 for details.

[2] As given in this report; see Section 5.0 subheadings

CEQA Assessment Category[1] IV. -Biological Resources	Biological Resources Considered	Relevant Laws and Regulations	Responsible Regulatory Agency	Summary of Findings & Report Section[2]
Question D. Fish and wildlife corridors	Essential Fish Habitat Wildlife Corridors	California Fish and Game Code Magnuson-Stevens Fishery Conservation & Management Act	California Department of Fish and Wildlife National Marine Fisheries Service	No potentially significant impacts were identified.
Question E. Local policies	Protected Trees Coastal zone resources Other biological protections	Local Tree Ordinance General Plan (e.g., Stream & Wetland Setbacks) Local ordinances	Local and regional agencies California Coastal Commission San Francisco Bay Conservation and Development Commission	No potentially significant impacts were identified.
Question F. Local, state, federal conservation plans	Habitat Conservation Plans Natural Community Conservation Plans	Federal Endangered Species Act Natural Community Conservation Planning Act	U.S. Fish and Wildlife Service California Department of Fish and Wildlife	No potentially significant impacts were identified.

2.0 REGULATORY BACKGROUND

The following sections explain the regulatory context of the biological assessment, including applicable laws and regulations that were applied to the field investigations and analysis of potential project impacts. Table 1 shows the correlation between these regulations and each Biological Resources question in the Environmental Checklist Form (Appendix G) of the CEQA guidelines.

2.1 Federal and State Regulatory Setting

2.1.1 Vegetation and Aquatic Communities

CEQA provides protections for particular vegetation types defined as sensitive by the California Department of Fish and Game (CDFW), and aquatic communities protected by laws and regulations administered by the U.S Army Corps of Engineers (Corps), State Water Resources Control Board (SWRCB), and Regional Water Quality Control Boards (RWQCB). The laws and regulations that provide protection for these resources are summarized below.

Sensitive Natural Communities: Sensitive natural communities include habitats that fulfill special functions or have special values. Natural communities considered sensitive are those identified in local or regional plans, policies, regulations, or by the CDFW. CDFW ranks sensitive communities as "threatened" or "very threatened" (CDFW 2022a) and keeps records of their occurrences in its California Natural Diversity Database (CNDDB; CDFW 2022b). Vegetation alliances are ranked 1 through 5 in the CNDDB based on NatureServe's (2020) methodology, with those alliances ranked globally (G) or statewide (S) as 1 through 3 considered sensitive. Impacts to sensitive natural communities identified in local or regional plans, policies, or regulations or those identified by the CDFW or U.S. Fish and Wildlife Service (USFWS) must be considered and evaluated under CEQA (CCR Title 14, Div. 6, Chap. 3, Appendix G). In addition, this general class includes oak woodlands that are protected by local ordinances under the Oak Woodlands Protection Act and Section 21083.4 of California Public Resources Code.

Waters of the United States, Including Wetlands: The Corps regulates “Waters of the United States” under Section 404 of the Clean Water Act (CWA). Waters of the United States are defined in the Code of Federal Regulations (CFR) as including the territorial seas, and waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, such as tributaries, lakes and ponds, impoundments of waters of the U.S., and wetlands that are hydrologically connected with these navigable features (33 CFR 328.3). Potential wetland areas, according to the three criteria used to delineate wetlands as defined in the *U.S. Army Corps of Engineers Wetlands Delineation Manual* (Corps Manual; Environmental Laboratory 1987), are identified by the presence of (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. Unvegetated waters including lakes, rivers, and streams may also be subject to Section 404 jurisdiction and are characterized by an ordinary high water mark (OHWM) identified based on field indicators such as the lack of vegetation, sorting of sediments, and other indicators of flowing or standing water. The placement of fill material into Waters of the United States generally requires a permit from the Corps under Section 404 of the CWA.

Waters of the State, Including Wetlands: The term “Waters of the State” is defined by the Porter-Cologne Act as “any surface water or groundwater, including saline waters, within the boundaries of the state.” The SWRCB and nine RWQCB protect waters within this broad regulatory scope through many different regulatory programs. Waters of the State in the context of a CEQA Biological Resources evaluation include wetlands and other surface waters protected by the *State Wetland Definition and Procedures for*

Discharges of Dredged or Fill Material to Waters of the State (SWRCB 2019). The SWRCB and RWQCB issue permits for the discharge of fill material into surface waters through the State Water Quality Certification Program, which fulfills requirements of Section 401 of the CWA and the Porter-Cologne Water Quality Control Act. Projects that require a Clean Water Act permit are also required to obtain a Water Quality Certification. If a project does not require a federal permit but does involve discharge of dredge or fill material into surface waters of the State, the SWRCB and RWQCB may issue a permit in the form of Waste Discharge Requirements.

Sections 1600-1616 of California Fish and Game Code: Streams and lakes, as habitat for fish and wildlife species, are regulated by CDFW under Sections 1600-1616 of California Fish and Game Code (CFGC). Alterations to or work within or adjacent to streambeds or lakes generally require a 1602 Lake and Streambed Alteration Agreement. The term "stream," which includes creeks and rivers, is defined in the California Code of Regulations (CCR) as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life [including] watercourses having a surface or subsurface flow that supports or has supported riparian vegetation" (14 CCR 1.72). The term "stream" can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife (CDFG 1994). Riparian vegetation has been defined as "vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself" (CDFG 1994). Removal of riparian vegetation also requires a Section 1602 Lake and Streambed Alteration Agreement from CDFW.

2.1.2 Special-status Species

Endangered and Threatened Plants, Fish, and Wildlife. Specific species of plants, fish, and wildlife species may be designated as threatened or endangered by the federal Endangered Species Act (ESA), or the California Endangered Species Act (CESA). Specific protections and permitting mechanisms for these species differ under each of these acts, and a species' designation under one law does not automatically provide protection under the other.

The ESA (16 USC 1531 et seq.) is implemented by the USFWS and the National Marine Fisheries Service (NMFS). The USFWS and NMFS maintain lists of endangered and threatened plant and animal species (referred to as "listed species"). "Proposed" or "candidate" species are those that are being considered for listing and are not protected until they are formally listed as threatened or endangered. Under the ESA, authorization must be obtained from the USFWS or NMFS prior to take of any listed species. "Take" under the ESA is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Take under the ESA includes direct injury or mortality to individuals, disruptions in normal behavioral patterns resulting from factors such as noise and visual disturbance, and impacts to habitat for listed species. Actions that may result in take of an ESA-listed species may obtain a permit under ESA Section 10, or via the interagency consultation described in ESA Section 7. Federally listed plant species are only protected when take occurs on federal land.

The ESA also provides for designation of critical habitat, which are specific geographic areas containing physical or biological features "essential to the conservation of the species." Protections afforded to designated critical habitat apply only to actions that are funded, permitted, or carried out by federal agencies. Critical habitat designations do not affect activities by private landowners if there is no other federal agency involvement.

The CESA (CFGC 2050 et seq.) prohibits the take of any plant and animal species that the CFGC determines to be an endangered or threatened species in California. CESA regulations include take protection for threatened and endangered plants on private lands, as well as extending this protection to candidate species that are proposed for listing as threatened or endangered under CESA. The definition of a "take" under CESA ("hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill") only applies to direct impact to individuals, and does not extend to habitat impacts or harassment. CDFW may issue an Incidental Take Permit under CESA to authorize take if it is incidental to otherwise lawful activity and if specific criteria are met. Take of these species is also authorized if the geographic area is covered by a Natural Community Conservation Plan (NCCP), as long as the NCCP covers that activity.

Fully Protected Species and Designated Rare Plant Species. This category includes specific plant and wildlife species that are designated in the CFGC as protected even if not listed under CESA or ESA. Fully Protected Species includes specific lists of birds, mammals, reptiles, amphibians, and fish designated in CFGC. Fully protected species may not be taken or possessed at any time. No licenses or permits may be issued for take of fully protected species, except for necessary scientific research and conservation purposes. The definition of "take" is the same under the California Fish and Game Code and the CESA. By law, CDFW may not issue an Incidental Take Permit for Fully Protected Species. Under the California Native Plant Protection Act (NPPA), CDFW has listed 64 “rare” or “endangered” plant species, and prevents “take”, with few exceptions, of these species. CDFW may authorize take of species protected by the NPPA through the Incidental Take Permit process, or under a NCCP.

Special Protections for Nesting Birds and Bats. The federal Bald and Golden Eagle Protection Act provides relatively broad protections to both of North America’s eagle species (bald eagle [*Haliaeetus leucocephalus*] and golden eagle [*Aquila chrysaetos*)] that in some regards are similar to those provided by the ESA. In addition to regulations for special-status species, most native birds in the United States, including non-status species, have baseline legal protections under the Migratory Bird Treaty Act of 1918 and CFGC, i.e., sections 3503, 3503.5 and 3513. Under these laws/codes, the intentional harm or collection of adult birds as well as the intentional collection or destruction of active nests, eggs, and young is illegal. For bat species, the Western Bat Working Group (WBWG) designates conservation status for species of bats, and those with a high or medium-high priority are typically given special consideration under CEQA.

Essential Fish Habitat. The Magnuson-Stevens Fishery Conservation and Management Act provides for conservation and management of fishery resources in the U.S., administered by NMFS. This Act establishes a national program intended to prevent overfishing, rebuild overfished stocks, ensure conservation, and facilitate long-term protection through the establishment of Essential Fish Habitat (EFH). EFH consists of aquatic areas that contain habitat essential to the long-term survival and health of fisheries, which may include the water column, certain bottom types, vegetation (e.g., eelgrass (*Zostera* spp.)), or complex structures such as oyster beds. Any federal agency that authorizes, funds, or undertakes action that may adversely affect EFH is required to consult with NMFS.

Species of Special Concern, Movement Corridors, and Other Special-status Species under CEQA. To address additional species protections afforded under CEQA, CDFW has developed a list of special species as “a general term that refers to all of the taxa the CNDDB is interested in tracking, regardless of their legal or protection status.” This list includes lists developed by other organizations, including for example, the Audubon Watch List Species, the Bureau of Land Management Sensitive Species, and USFWS Birds of Special Concern. Plant species on the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (Inventory) with California Rare Plant Ranks (Rank) of 1 and 2, as well as some with a Rank of 3, are also considered special-status plant species and must be considered under CEQA. Some

Rank 3 species and all Rank 4 species are typically only afforded protection under CEQA when such species are particularly unique to the locale (e.g., range limit, low abundance/low frequency, limited habitat) or are otherwise considered locally rare. Additionally, any species listed as sensitive within local plans, policies and ordinances are likewise considered sensitive. Movement and migratory corridors for native wildlife (including aquatic corridors) as well as wildlife nursery sites are given special consideration under CEQA.

2.2 Local Plans and Policies

City of Fremont General Plan. The City of Fremont General Plan contains policies and implementations pertaining to the following biological resources categories:

- Wetlands, streams, riparian, and aquatic areas (Policy 7-1.1, Implementations 7-1.1A, 7-1.1.B, and 7-1.1.C; Policy 7-2.1: Preservation of Water Resources.)
- Vegetation communities (Policy 7-1.1, Implementation 7-1.1.D)
- Plant Species (Policy 7-1.2, Implementations 7-1.2.A and 7-1.2.D)
- Wildlife Species (Policy 7-1.2, Implementations 7-1.2.A and 7-1.2.D)

Fremont Municipal Code. Chapter 18.55, "O-S Open Space District" of the City of Fremont Municipal Code outlines development standards for the Open Space District within the City. Section 18.55.040(b)(7) states that no development shall be located within a riparian corridor[3], except for otherwise permitted flood control, erosion control, water supply, transportation facilities, fences or hiking or equestrian trails. This is a water supply project that would upgrade the Decoto Reservoir for increased reliability, maintainability, and earthquake safety. As such, the Project would be exempt from Section 18.55.040(b)(7).

Fremont Tree Preservation Ordinance. Chapter 18.215, "Tree Preservation" of the City of Fremont Municipal Code provides regulations designed to preserve and protect trees within the City of Fremont. Protected trees subject to permit requirements include:

- A tree having a "diameter-at-breast-height" (DBH) of 6 inches or more, and located on vacant or undeveloped lot
- A tree having a DBH of 6 inches or more, and located on a developed lot which is the subject of a contemplated or pending application for a development project
- A native tree or tree of exceptional adaptability to the Fremont area having a DBH of 10 inches or more
- A tree having a DBH of 18 inches or more
- A tree that was required by the City to be planted or retained as mitigation for the removal of a tree
- A tree planted or retained as a condition of any City-conferred development project approval
- One of six or more trees of the same species that are located on the same lot that measure at least 6 inches DBH

Anyone who proposes to damage or remove a protected tree is required to acquire a tree removal permit from the City of Fremont. In addition to protected trees, any tree designated as a landmark tree by

[3] *Riparian corridors are the areas within 200 feet from the center of a permanent or intermittent streambed.*

resolution of the Fremont City Council, as well as any tree that has been designated in the General Plan as a primary historic resource may not be damaged or removed without a permit. Native trees protected in the Tree Ordinance include oak, redwood, buckeye, madrone, sycamore, big-leaf maple, red-bud, and bay. Mitigation in the form of tree replacement is required as a condition of removal authorization in accordance with specifications listed in Chapter 18.215.080 of the City's Tree Ordinance.

Private trees exempt from permit requirements include (Fremont Municipal Code Chapter 18.215.050(c):

1) A tree on a developed lot not greater than 10,000 square feet in area and zoned either R- 1 or single-family detached planned district, when the tree is behind the forward-most face of the front of the principal building
2) A container tree
3) A fruit or nut tree of a species grown for commercial food production, except a black walnut or olive tree
4) A private tree or a landmark tree removed or damaged under emergency circumstances
5) A tree, other than a landmark tree, removed or damaged by a public utility to the extent that such removal or damage is necessary for building or maintaining the public utility's facilities

Private trees exempt from permit requirements do not require authorization through a tree removal permit and do not require mitigation for damage, removal, or relocation.

No landmark trees exist on the Project Site. Mature trees within the Project Site that might be impacted are potentially exempt from protection per the Fremont Tree Preservation Ordinance (Fremont Municipal Code Chapter 18.215.050). Exemptions listed above in 18.215.050 (c)(5) (City of Fremont 2021).

3.0 ASSESSMENT METHODOLOGY

On June 22, 2022, WRA, Inc. (WRA) biologists visited the Project Site and surrounding area to map vegetation, aquatic communities, unvegetated land cover types, document plant and wildlife species present, and evaluate on-site habitat for the potential to support special-status species as defined by CEQA. Prior to the site visit, WRA biologists reviewed literature resources and performed database searches to assess the potential for sensitive biological communities (e.g., wetlands) and special-status species (e.g., endangered plants) to occur on the Project Site, including:

- Soil Survey of 2022, California (USDA 1978)
- Niles 7.5-minute U.S. Geological Survey (USGS) quadrangle (USGS 2022)
- Contemporary aerial photographs (Google Earth 2022)
- Historical aerial photographs (NETR 2022)
- National Wetlands Inventory (USFWS 2022a)
- California Aquatic Resources Inventory (SFEI 2017)
- CNDDB (CDFW 2022b)
- CNPS Inventory (CNPS 2022)
- USFWS List of Federal Endangered and Threatened Species (USFWS 2022b)
- eBird Online Database (eBird 2022)
- California Bird Species of Special Concern in California (Shuford and Gardali 2008)
- California Amphibian and Reptile Species of Special Concern (Thomson et al. 2016)
- A Field Guide to Western Reptiles and Amphibians (Stebbins 2003)
- A Manual of California Vegetation, Online Edition (CNPS 2022)
- Preliminary Descriptions of the Terrestrial Natural Communities (Holland 1986)
- California Natural Community List (CDFW 2022a)
- Database searches (i.e., CNDDB, CNPS) for special-status species focused on the *Niles* and eight surrounding USGS 7.5-minute quadrangles.

Following the remote assessment, WRA biologists completed a field review to document: (1) land cover types (e.g., terrestrial communities, aquatic resources), (2) existing conditions and to determine if such provide suitable habitat for any special-status plant or wildlife species, (3) if and what type of aquatic natural communities (e.g., streams) are present, and (4) if special-status species are present.

3.1 Vegetation Communities and Other Land Cover Types

During the site visit, WRA evaluated the species composition and area occupied by distinct vegetation communities, aquatic communities, and other land cover types within the Project Site boundaries and the greater Study Area (Figures 3 and 4). Mapping of these classifications utilized a combination of aerial imagery and ground surveys. In most instances, communities are characterized and mapped based on distinct shifts in plant assemblage (vegetation) and follow the California Natural Community List (CDFW 2022a) and A Manual of California Vegetation, Online Edition (CNPS 2022). These resources cannot anticipate every component of every potential vegetation assemblage in California, and so in some cases, it is necessary to identify other appropriate vegetative classifications based on best professional judgment of WRA biologists. When undescribed variants are used, it is noted in the description. Vegetation alliances (natural communities) with a CDFW Rank of 1 through 3 (globally critically imperiled [S1/G1], imperiled [S2/G2], or vulnerable [S3/G3]) (CDFW 2021a), were concluded to be sensitive as part of this evaluation.

The Study Area was reviewed for the presence of wetlands and other aquatic resources according to the methods described in the Corps Manual (Environmental Laboratory 1987), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West* (Arid West; Corps 2008), and *A Field Guide to the Identification of the Ordinary High Water Mark* (OHWM) in the Arid West Region of the Western United States (Lichvar and McColley 2008). Areas meeting these indicators were mapped as aquatic resources and categorized using the vegetation community classification methods described above. The presence of riparian habitat was evaluated based on woody plant species meeting the definition of riparian provided in *A Field Guide to Lake and Streambed Alteration Agreements, Section 1600-1607, California Fish and Game Code* (CDFG 1994) and based on best professional judgement of biologists completing the field surveys.

3.2 Special-status Species

Potential occurrence of special-status species in the Project Site was evaluated by first determining which special-status species occur in the vicinity of the Project Site through a literature and database review as described above. Presence of suitable habitat for special-status species was evaluated during the site visit based on physical and biological conditions of the site as well as the professional expertise of the investigating biologists. The potential for each special-status species to occur in the Project Site was then determined according to the following criteria:

- **No Potential.** Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).

- **Unlikely.** Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.

- **Moderate Potential.** Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.

- **High Potential.** All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.

- **Present.** Species is observed on the site or has been recorded (i.e., CNDDB, other reports) on the site in the recent past.

If a special-status species was observed during the site visit, its presence was recorded and discussed below in Section 4.2. If designated critical habitat is present for a species, the extent of critical habitat present and an evaluation of critical habitat elements is provided as part of the species discussions below.

3.3 Wildlife Corridors and Native Wildlife Nursery Sites

To account for potential impacts to wildlife movement/migratory corridors, biologists reviewed maps from the California Essential Connectivity Project (CalTrans 2010), and habitat connectivity data available through the CDFW Biogeographic Information and Observation System (BIOS; CDFW 2022). Additionally, aerial imagery (Google 2022) for the local area was referenced to assess if local core habitat areas were

present within, or connected to the Project Site. This assessment was refined based on observations of on-site physical and/or biological conditions, including topographic and vegetative factors that can facilitate wildlife movement, as well as on-site and off-site barriers to connectivity.

The potential presence of native wildlife nursery sites is evaluated as part of the site visit and discussion of individual wildlife species below. Examples of native wildlife nursery sites include nesting sites for native bird species (particularly colonial nesting sites) and colonial roosting sites for other species (such as for monarch butterfly [*Danaus plexippus*]).

4.0 ECOLOGICAL SETTING

The approximately 5-acre Project Site is located immediately southeast of Seven Hills Park in Fremont, California (Figure 1 - Appendix A). The Project Site is dominated by the covered reservoir and an enclosed valve structure, surrounded by an asphalt access road and ruderal/landscaped areas around the reservoir, which is all enclosed by a chain-link fence around the perimeter. Outside of the developed portion of the reservoir facility, there are private undeveloped lands and a neighborhood park. There is an ephemeral drainage immediately to the north of the reservoir facility, as illustrated in Figures 3 and 4, Appendix A.

4.1 Topography

The overall topography of the Project Site is flat with elevations ranging from approximately 185 to 222 feet above sea level. The reservoir facility was constructed on a hillside, with berms surrounding the reservoir facility. The reservoir is at least 30 feet below grade and the structure is approximately 15 above the surrounding level asphalt perimeter road.

4.2 Land-use

The entirety of the Project Site is developed and consists of the reservoir, ruderal/landscaped areas around the reservoir, the asphalt access perimeter road and the driveway access road off Florence Street. Surrounding land use includes a neighborhood park and private undeveloped lands that are subject to grazing (Google Earth 2022)(Figures 3 and 4). Detailed community descriptions are included in Section 4.1 below, and all observed plant species are included in Appendix B. Appendix C provides representative photographs of the Project Site and the surrounding land uses.

5.0 ASSESSMENT RESULTS

5.1 Vegetation Communities and Other Land Cover

WRA observed four land cover types within the Study Area: developed, ruderal/landscaped, non-native grassland surrounding the developed reservoir facility, and an ephemeral drainage that occurs in the northern portion of the Study Area, outside of the developed reservoir facility. Land cover types within the Study Area are illustrated in Figure 4. No sensitive land cover types occur in the developed reservoir facility.

TABLE 2. VEGETATION COMMUNITY AND LAND COVER TYPES WITHIN STUDY AREA

COMMUNITY/LAND COVERS	SENSITIVE STATUS	ACRES WITHIN STUDY AREA
Terrestrial Community/Land Cover		
Developed	Non-sensitive	4.01
Ruderal/Landscaped	Non-sensitive	7.15
Aquatic Resources		
Off-Site Ephemeral Drainage/Riparian	Sensitive	1.42

5.1.1 Terrestrial Land Cover

Non-sensitive Communities

Developed

Developed areas comprise the majority of the Project Site, including the reservoir, the asphalt access perimeter road and the driveway access road off Florence Street. These areas are comprised entirely of asphalt and do not support vegetation aside from the overlapping canopy of large adjacent trees. Developed areas do not constitute a sensitive community, although wooden utility poles may provide potential nesting habitat for common cavity nesting birds.

Ruderal/Landscaped

Ruderal/landscaped areas comprised a portion of the Project Site and majority of the Study Area. These areas are dominated by mature ornamental and planted trees as well as ornamental shrubs including pine (*Pinus sp.*), coast live oak (*Quercus agrifolia*), olive (*Olea europaea*), date palm (*Phoenix dactylifera*), California pepper tree (*Schinus molle*), firethorn (*Pyracantha* sp.), prickly pear (*Opuntia* sp.), and juniper shrubs (*Juniperus* sp.). Ground vegetation in these areas is heavily grazed and dominated by ruderal (weedy) species, including ripgut brome (*Bromus diandrus*), foxtail barley (*Hordeum murinum leporinum*), wild oat (*Avena barbata*), cheeseweed (*Malva parviflora*), Mediterranean mustard (*Hirschfeldia incana*), Italian thistle (*Carduus pycnocephalus*), fennel (*Foeniculum vulgare*), tall willowherb (*Epilobium brachycarpum*), purple starthistle (*Centaurea calcitrapa*), and California poppy (*Eschscholzia californica*). Ruderal/landscaped areas do not constitute a sensitive community, although several trees and shrubs provide potential nesting habitat for common nesting bird species.

Aquatic Resources – Sensitive Communities

Ephemeral Drainage and Riparian Community

An ephemeral drainage occurs north of the Project Site, outside of the developed reservoir facility. The drainage is dominated by riparian and wetland vegetation, including willows (*Salix* sp.), California sycamore (*Platanus racemosa*), tall flatsedge (*Cyperus eragrostis*), Himalayan blackberry (*Rubus armeniacus*), rabbitsfoot grass (*Polypogon monspeliensis*), creeping bentgrass (*Agrostis stolonifera*), and bristly oxtongue (*Helminthotheca echioides*), among others. Although the drainage and associated riparian vegetation constitute a sensitive biological resource, those features are outside of the limit of disturbance of the project and impacts to those features will be avoided.

5.2 Special-status Species

5.2.1 Special-status Plants

Based upon a review of the resource databases listed in Section 3.0, 52 special-status plant species have been documented in the vicinity of the Project Site (see Appendix D). None of these species have the potential to occur in the Project Site for one or more of the following reasons:

- Hydrologic conditions (e.g., tidal, riverine) necessary to support the special-status plant species are not present in the Project Site;
- Edaphic (soil) conditions (e.g., volcanic tuff, serpentine) necessary to support the special-status plant species are not present in the Project Site;
- Topographic conditions (e.g., north-facing slope, montane) necessary to support the special-status plant species are not present in the Project Site;
- Unique pH conditions (e.g., alkali scalds, acidic bogs) necessary to support the special-status plant species are not present in the Project Site;
- Associated natural communities (e.g., interior chaparral, tidal marsh) necessary to support the special-status plant species are not present in the Project Site;
- The Project Site is geographically isolated (e.g. below elevation, coastal environ) from the documented range of the special-status plant species;
- Land use history and contemporary management (e.g., grading, intensive grazing) has degraded the localized habitat necessary to support the special-status plant species.

No special-status plants were identified during the site survey conducted by WRA biologists on June 22, 2022. Based on the highly developed nature of the site, and lack of associated natural vegetation communities within the reservoir facility, the Project Site does not provide suitable habitat for special-status plant species. No impacts to special-status plant species are anticipated as a result of the proposed Project, and no further actions are recommended for special-status plant species.

5.2.2 Special-status Wildlife

Of the 37 special-status wildlife species documented in the vicinity of the Project Site, most are excluded from the Project Site based on a lack of habitat features (see Appendix D). Features not found within the Project Site that are required to support special-status wildlife species include:

- Vernal pools
- Perennial aquatic habitat (e.g., streams, rivers or ponds)
- Tidal marsh areas
- Old growth redwood or fir forest
- Serpentine soils to support host plants
- Sandy beaches or alkaline flats
- Presence of specific host plants
- Caves, mine shafts, or abandoned buildings

The absence of such habitat features eliminates components critical to the survival or movement of most special-status species found in the vicinity. Species like California red-legged frog (*Rana draytonii*; CRLF) and California tiger salamander (*Ambystoma californiense;* CTS) are known to occur in open spaces in the greater vicinity; however, the fully developed Project Site and surrounding area do not contain suitable

aquatic breeding habitat and provide little to no habitat value for these species. Given the absence of suitable habitat and distance from potential source populations, it is unlikely that either species would disperse into the Project Site. It should be noted that a single occurrence of CRLF was documented 0.4 miles west in 1999 (CDFW 2022). However, the individual was collected from this location at the time of the discovery, and the immediate area has since been developed. As such, this occurrence record is considered extirpated.

Other species that are known to occur in the vicinity, like Alameda whipsnake (*Masticophis lateralis euryxanhus;* AWS), have potential to disperse into the surrounding grasslands; however, the Project Site primarily consists of the reservoir facility surrounded by asphalt, which would preclude this species from entering the Project Site.

Two special-status species have potential to occur in the immediate vicinity of the Project Site: western burrowing owl (*Athene cunicularia*) and white-tailed kite (*Elanus leucurus*). These species are discussed in greater detail below.

Western burrowing owl (*Athene cunicularis*). CDFW Species of Special Concern, USFWS Bird of Conservation Concern. Moderate Potential. The burrowing owl occurs as a year-round resident and winter visitor in much of California's lowlands, inhabiting open areas with sparse or non-existent tree or shrub canopies. Typical habitat is annual or perennial grassland, although human-modified areas such as agricultural lands and airports are also used (Poulin et al. 1993). This species is dependent on burrowing mammals to provide the burrows that are characteristically used for shelter and nesting, and in northern California is typically found in close association with California ground squirrels (*Otospermophilus beecheyi*). Manmade substrates such as pipes or debris piles may also be occupied in place of burrows. Prey consists of insects and small vertebrates. Breeding typically takes place from March to July.

PHOTO 1. CALIFORNIA GROUND SQUIRREL BURROWS OBSERVED WITHIN THE PROJECT SITE.

Western burrowing owl is known to occur within 3 to 5 miles of the Project Site (eBird 2022, CNDDB 2022). No signs of owl occupancy were detected by biologists during the site visit on June 22, 2022. However, there is a high degree of California ground squirrel activity within the surrounding area. Several burrow clusters were observed on the berms around the perimeter of the Project Site, and in adjacent grassland. Due to the presence of suitable burrows, this species has potential to occur immediately adjacent to the Project Site.

White-tailed kite (*Elanus leucurus*). CDFW Fully Protected Species. Moderate Potential. The white-tailed kite is resident in open to semi-open habitats throughout the lower elevations of California, including grasslands, savannahs, woodlands, agricultural areas and wetlands. Vegetative structure and prey availability seem to be more important habitat elements than associations with specific plants or vegetative communities (Dunk 1995). Nests are constructed mostly of twigs and placed in trees, often at habitat edges. Nest trees are highly variable in size, structure, and immediate surroundings, ranging from shrubs to trees greater than 150 feet tall (Dunk 1995). This species preys upon a variety of small mammals, as well as other vertebrates and invertebrates. White-tailed kite has potential to nest in the trees within

the Project Site and the immediate vicinity. In addition, non-special-status native birds and raptors may nest on the ground, in trees, and in vegetation within the Project or the surrounding area.

In addition, the Project Site contains two artificial nest boxes that have potential to support cavity-nesting birds. The nest boxes were intended to recruit barn owls (*Tyto alba*) to the facility in an effort to control local California ground squirrel populations. Due to variability in size, WRA biologists determined that only one provides a cavity diameter large enough to support nesting barn owls (i.e. greater than 3 inches). The smaller of the two nest boxes is suitable for smaller cavity-nesting raptors, such as American kestrel (*Falco sparverius*) and western screech owl (*Megascops asio*). During the site visit on June 22, 2022, the smaller nest box contained an active western bluebird (*Sialia mexicana*) nest. The larger nest box was unoccupied at the time of the site visit and no indications of owl presence (i.e. pellets, white wash) were observed. The installation of raptor perches may promote the recruitment of red-tailed hawks and better facilitate ground squirrel control at this facility in the future.

5.3 Wildlife Corridors and Native Wildlife Nursery Sites

No native wildlife nursery sites are present in the Project Site.

PHOTO 2. OVER-GRAZED HILLSIDES SURROUNDING THE PROJECT SITE.

Wildlife movement between suitable habitat areas can occur via open space areas lacking substantial barriers. The terms "landscape linkage" and "wildlife corridor" are often used when referring to these areas. The key to a functioning corridor or linkage is that it connects two larger habitat blocks, also referred to as core habitat areas (Beier and Loe 1992; Soulé and Terbough 1999). It is useful to think of a "landscape linkage" as being valuable in a regional planning context, a broad scale mapping of natural habitat that functions to join two larger habitat blocks. The term "wildlife corridor" is useful in the context of smaller, local area planning, where wildlife movement may be facilitated by specific local biological habitats or passages and/or may be restricted by barriers to movement. Above all, wildlife corridors must link two areas of core habitat and should not direct wildlife to developed areas or areas that are otherwise void of core habitat (Hilty et al. 2019).

The Project Site does not function as a wildlife movement corridor. The Project Site is primarily asphalt, enclosed by fencing, and is relatively small in the context of the surrounding landscape. The overgrazed hillsides that surround the Project Site substantially reduces its value as a "stepping stone" corridor for avian or terrestrial species which could originate from nearby open space areas. Although common urban-adapted species may utilize the surrounding grasslands and the ephemeral drainage north of the Project Site to some degree for movement at a local scale, the proposed project would not change the current characteristics of the surrounding landscape.

6.0 ANALYTICAL METHODOLOGY AND SIGNIFICANCE THRESHOLD CRITERIA

Pursuant to Appendix G, Section IV of the State CEQA Guidelines, a project would have a significant impact on biological resources if it would:

1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;

2. 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 Wildlife or U.S. Fish and Wildlife Service;

3. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means

4. 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;

5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and/or,

6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

These thresholds were utilized in completing the analysis of potential project impacts for CEQA purposes. For the purposes of this analysis, a "substantial adverse effect" is generally interpreted to mean that a potential impact could directly or indirectly affect the resiliency or presence of a local biological community or species population. Potential impacts to natural processes that support biological communities and special-status species populations that can produce similar effects are also considered potentially significant. Impacts to individuals of a species or small areas of existing biological communities may be considered less than significant if those impacts are speculative, beneficial, de minimis, and/or would not affect the resiliency of a local population.

7.0 IMPACTS AND MITIGATION EVALUATION

Using the CEQA analysis methodology outlined above, the following section describes potential significant impacts to sensitive resources within the Project Site as well as suggested mitigation measures which are expected to reduce impacts to less than significant.

7.1 Special-status Species

This section analyzes the Project's potential impacts and mitigation for special-status species in reference to the significance threshold outlined in CEQA Appendix G, Part IV (a):

Does the project have the 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?

Potential impacts and mitigation for potentially significant impacts are discussed below.

Western burrowing owl

No indications of western burrowing owl occupancy were detected by biologists within the Study Area during the site visit; however, suitable burrows and burrow surrogates for this species were observed within and in the immediate vicinity of the Project Site. Although construction activities will be limited to the asphalt access roads that surround the reservoir facility, impacts to burrowing owls may occur during construction activities. These impacts are considered **potentially significant** under CEQA.

> **Potential Impact BIO-1:** The proposed Project's construction activities may result in noise and vibration impacts that may result in: (1) nest abandonment; (2) loss of young; (3) reduced health and vigor of eggs and/or nestlings (resulting in reduced survival rates).

To reduce potential impacts to western burrowing owl to a less-than-significant level, the following measures shall be implemented:

> **Mitigation Measure BIO-1:** A survey shall be conducted prior to any construction activities on-site to verify the absence of burrowing owls in the vicinity of the Project Site. One "Take avoidance (pre-construction) survey" shall be completed consistent with the California Department of Fish and Wildlife's 2012 Burrowing Owl Mitigation guidelines to detect the presence of burrowing owls in the vicinity of the Project Site immediately prior to construction activities. If no owls are found during the survey, no further action is necessary**.**
>
> **Mitigation Measure BIO-2:** If nesting owls are encountered during the breeding season (February 1 – August 31), active nests shall be avoided by 250 feet either until the end of the breeding season or until the nests are determined to be inactive by a qualified biologist. If work must occur within this buffer, consultation with CDFW may be required.
>
> If owls are encountered during the non-breeding season (September 1 – January 1), the occupied burrow shall be avoided by 250 feet until such time as a qualified biologist can confirm that the owl is no longer utilizing the burrow site.

Implementation of these mitigation measures will reduce potential impacts to western burrowing owl to a level that is less than significant.

Special-status and Non-Special-status Nesting Birds

White-tailed kite, a CDFW fully protected species, has the potential to nest within the immediate vicinity of the Project Site. Non-special-status native birds (e.g., passerines, raptors) may also nest on the ground, in trees, and in vegetation within and immediately surrounding the Project Site. The active nests of such birds are protected under the federal Migratory Bird Treaty Act (MBTA) and California Fish and Game Codes (CFGC). If construction is scheduled to begin during the avian nesting season, generally February 1

to August 31, nesting birds may be impacted by construction-related disturbance sufficient to cause nest abandonment. These impacts are considered **potentially significant** under CEQA.

> **Potential Impact BIO-2:** Construction activities associated with the proposed Project could result in construction-related disturbance sufficient to cause nest abandonment of special-status or non-special-status bird species protected under the MBTA, CFGC, and CEQA.

To reduce potential impacts to white-tailed kite and native nesting birds to a less-than-significant level, the following measures shall be implemented:

> **Mitigation Measure BIO-3:** If construction activities are initiated during the nesting season (February 1 – August 31), a nesting bird survey should be conducted by a qualified biologist within 7 days prior to the start of construction within the Project Site. The nesting bird survey should include the Project Site and the immediately surrounding area.
>
> If active nests are present, exclusion buffers appropriate to the species should be established by the qualified biologist to prevent impacts to nesting birds. Buffers should be maintained until the biologist determines that young have fledged, or the nest becomes inactive.
>
> If construction activities are initiated outside of the nesting season (September 1 – January 31), no pre-construction nesting bird surveys are necessary.

Implementation of this mitigation measure will reduce potential impacts to nesting birds to a level that is less than significant.

7.2 Sensitive Natural Communities and Land Cover Types

This section addresses the question:

> *b) Does the Project 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;*

All construction activities will occur in the developed/landscaped portion of the Project Site. However, the transportation of long beams and other materials into the Project Site via long flatbed trucks may result in impacts to mature riparian trees growing within the drainage channel immediately outside the facility entrance. These impacts are considered **potentially significant** under CEQA.

> **Potential Impact BIO-3:** The transportation of equipment and materials through the entrance to the Project Site could result in impacts to mature riparian trees growing within the drainage channel immediately outside the facility entrance.

To reduce potential impacts to riparian vegetation to a less-than-significant level, the following measures shall be implemented:

> **Mitigation Measure BIO-4:** A biological monitor or arborist shall be present during equipment mobilization to ensure that riparian vegetation is not impacted by the project. Small branches 4

inches in diameter or less can be trimmed to facilitate equipment access. No trees shall be removed.

Implementation of this mitigation measure will reduce potential impacts to riparian vegetation to a level that is less than significant.

7.3 Aquatic Resources

This section analyzes the Project's potential impacts and mitigation for wetlands and other areas presumed or determined to be within the jurisdiction of the Corps in reference to the significance threshold outlined in CEQA Appendix G, Part IV (c):

> *c) Does the Project have the potential to have a substantial adverse effect on state or 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;*

All construction activities will occur in the developed/landscaped portion of the Project Site; however, the transportation of equipment and materials could result in indirect impacts to the ephemeral drainage at the entrance to the facility. These impacts are considered **potentially significant** under CEQA.

> **Potential Impact BIO-4:** The transportation of equipment and materials through the entrance to the Project Site could result in unintentional discharge of sediment into the adjacent drainage.

To reduce potential impacts to aquatic resources to a less-than-significant level, the following measure should be implemented:

> **Mitigation Measure BIO-5:** Prior to the transportation of materials into the facility, silt fencing should be installed on the east side of the culverted road crossing to prevent any sediment from entering the channel.

Implementation of this mitigation measure will reduce potential impacts to aquatic resources to a level that is less than significant

7.4 Wildlife Corridors and Native Wildlife Nursery Sites

This section analyzes the Project's potential impacts and mitigation for habitat corridors and linkages in reference to the significance threshold outlined in CEQA Appendix G, Part IV (d):

> *d) Does the Project have the potential 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;*

As noted in Section 4.3, the Project Site consists primarily of the reservoir surrounded by asphalt, enclosed by fencing, and is relatively small in the context of the surrounding landscape. As such the Project Site does not provide connectivity between areas of suitable habitat. Although common urban-adapted species may utilize the surrounding grasslands and the ephemeral drainage north of the Project Site to some degree for movement at a local scale, the proposed Project would not change the current

characteristics of the surrounding landscape. Considering these factors, no impacts will occur to habitat corridors and linkages for terrestrial and aquatic species.

7.5 Local Policies and Ordinances

This section analyzes the Project's potential impacts and mitigation based on conflicts with local policies and ordinances in reference to the significance threshold outlined in CEQA Appendix G, Part IV (e):

> *e) Does the Project have the potential to conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;*

Local plans and policies related to biological resources examined in this analysis are detailed in Section 2.2. The Project will comply with all City of Fremont policies and ordinances, and no trees will be removed by the Project. Therefore, the Project would have no impact with respect to conflicts with local policies or ordinances protecting biological resources.

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APPENDIX A – FIGURES

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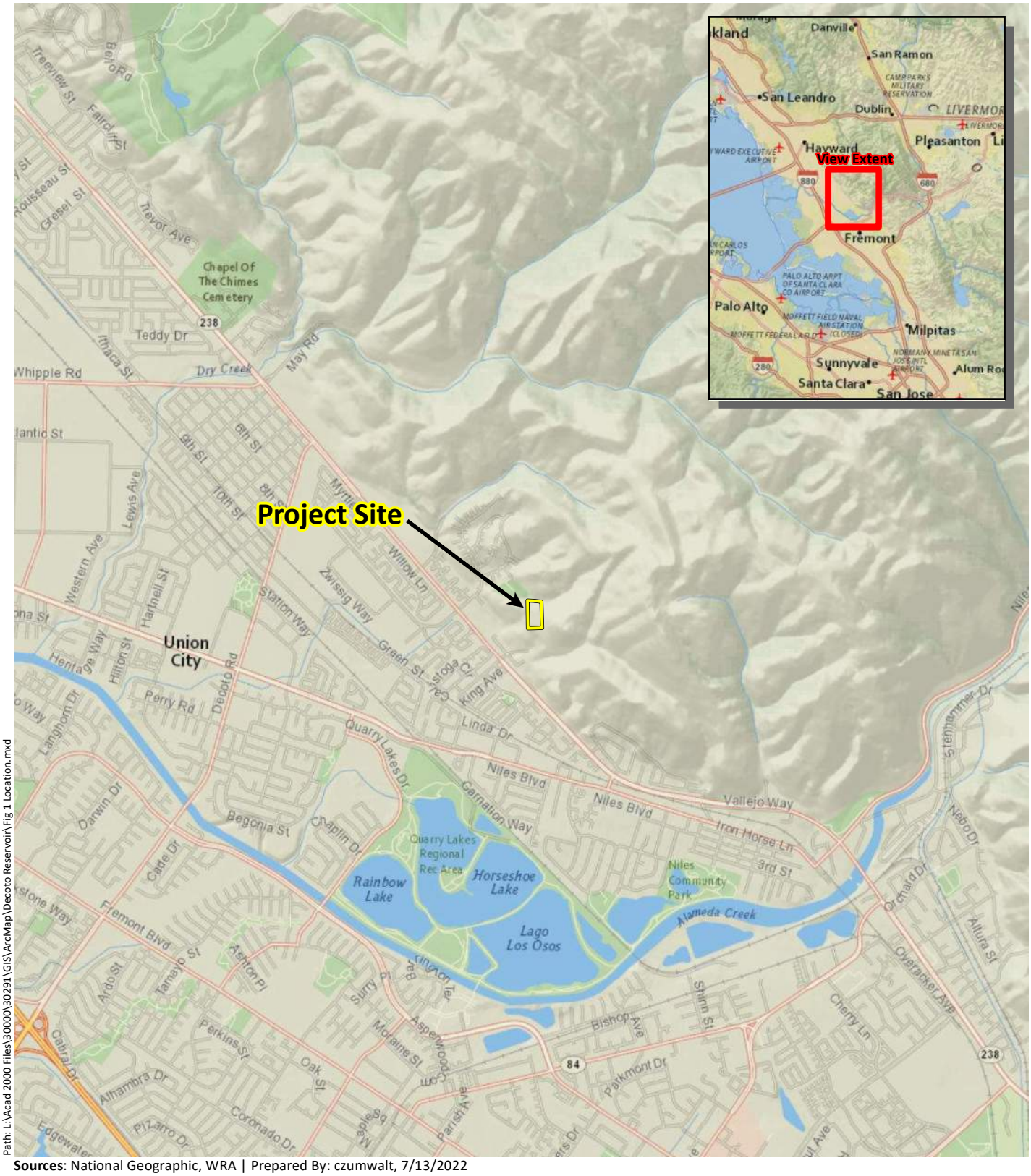

Sources: National Geographic, WRA | Prepared By: czumwalt, 7/13/2022

Figure 1. Regional Location Map

Decoto Reservoir Improvement Project
Fremont, California

0 0.5 1 Miles

N

ENVIRONMENTAL CONSULTANTS

Path: L:\Acad 2000 Files\30000\30291\GIS\ArcMap\Decoto Reservoir\Fig 2 Aerail.mxd

Sources: DigitalGlobe 2016 Aerial, WRA | Prepared By: czumwalt, 7/13/2022

Figure 2. Vicinity Map of Project Site

Decoto Reservoir Imporvement Project
Union City, California

ENVIRONMENTAL CONSULTANTS

Sources: DigitalGlobe 2016 Aerial, WRA | Prepared By: czumwalt, 7/15/2022

Figure 3. Aerial Map of the Project SIte and Surrounding Land Use

Decoto Reservoir Imporvement Project
Union City, California

0 145 290 Feet N

ENVIRONMENTAL CONSULTANTS

Sources: DigitalGlobe 2016 Aerial, WRA | Prepared By: czumwalt, 7/18/2022

Figure 4. Biological Communities within the Study Area

Decoto Reservoir Imporvement Project
Union City, California

0 150 300 Feet

N

ENVIRONMENTAL CONSULTANTS

APPENDIX B – SPECIES OBSERVED IN AND AROUND THE PROJECT SITE

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Plant and wildlife species observed in the Study Area on June 22, 2022.

Wildlife	
Scientific Name	**Common Name**
Mammals	
Otospermophilus beecheyi	California ground squirrel
Thomomys bottae	Botta's pocket gopher
Reptiles	
Sceloporus occidentalis	Western fence lizard
Birds	
Melozone crissalis	California towhee
Dryobates nuttallii	Nuttall's woodpecker
Sayornis nigricans	Black Phoebe
Spinus psaltria	Lesser goldfinch
Mimus polyglottus	Northern mockingbird
Colaptes auratus	Northern flicker
Aphelocoma californica	California scrub-jay
Psaltriparus minimus	Bushtit
Sturnus vulgaris	European starling
Zenaida macroura	Mourning dove
Sitta canadensis	Red-breasted nuthatch
Thryomanes bewickii	Bewick's wren
Melanerpes fromicivorus	Acorn woodpecker
Certhia americana	Brown creeper
Sialia mexicana	Western bluebird
Cathartes aura	Wild turkey
Calypte anna	Anna's hummingbird
Streptophelia decaocto	Eurasian-collared dove
Haemorhous mexicanus	House finch
Baeolophus inornatus	Oak titmouse
Junco hyemalis	Dark-eyed junco

Corvus brachyrhynchos	American crow
Turdus migratorius	American robin

Plants	
Scientific Name	**Common Name**
Pinus sp.	Pine
Platanus racemosa	California sycamore
Quercus agrifolia	Coast live oak
Olea europaea	Olive
Phoenix dactylifera	Date palm
Schinus molle	California pepper tree
Pyracantha sp.	Firethorn
Opuntia sp.	Prickly pear
Juniperus sp.	Juniper
Bromus diandrus	Ripgut brome
Hordeum murinum leporinum	Foxtail barley
Avena barbata	Wild oat
Malva parviflora	Cheeseweed
Hirschfeldia incana	Mediterannean mustard
Carduus pycnocephalus	Italian thistle
Foeniculum vulgare	Fennel
Epilobium brachycarpum	Tall willowherb
Centaurea calcitrapa	Purple starthistle
Eschscholzia californica	California poppy
Salix sp.	Willow
Rubus armeniacus	Himalayan blackberry
Agrostis sp.	Bent grass
Helminthotheca echioides	Bristly oxtongue
Polypogon monspeliensis	Annual beard-grass
Stipa sp.	Rice grass

Lotus corniculatus	Bird's foot trefoil
Paspalum dilatatum	Dallis grass
Conium maculatum	Poison hemlock
Phalaris aquatica	Harding grass

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APPENDIX C – REPRESENTATIVE PROJECT SITE PHOTOGRAPHS

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Photograph 1. Entrance to the facility, with mature riparian trees growing in drainage adjacent to the road immediately outside of the Project Site. Photo taken on June 22, 2022.

Photograph 2. Culvert and drainage channel located immediately outside the facility entrance. Photo taken on March 25, 2022.

Photograph 3. Paved access road within the Project Area leading to the reservoir. Photo taken on June 22, 2022.

Photograph 4. Reservoir, surrounding asphalt, perimeter fence, and adjacent grassland. Photo taken on June 22, 2022.

Photograph 5. Mature pine trees located within the landscaped portion of the developed Project Site. Photo taken on March 25, 2022.

Photograph 6. Over-grazed grassland outside of the developed reservoir facility. Photo taken on June 22, 2022.

Photograph 7. Large raptor nest structure located on a transmission tower that occurs northeast of the Project Site, outside of the developed reservoir facility. Photo taken on June 22, 2022.

Photograph 8. The smaller of two nest boxes located within the Project Site. Nest box was occupied by a western bluebird at the time the photo was taken on June 22, 2022.

Photograph 9. Ephemeral drainage that occurs north of the Project Site, outside of the developed reservoir facility. Photo taken June 22, 2022.

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APPENDIX D – SPECIAL-STATUS SPECIES POTENTIAL TABLE

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Appendix D. Potential for Special-status Species to occur within the Project Site.

List compiled from the California Department of Fish and Wildlife Natural Diversity Database (CDFW 2022), U.S. Fish and Wildlife Service Information for Planning and Conservation Database (USFWS 2022), U.S. Fish and Wildlife Service Threatened and Endangered Species Lists, and California Native Plant Society Electronic Inventory of Rare and Endangered Plants (CNPS 2022) for the *Niles* and eight surrounding U.S. Geological Survey (USGS) 7.5-minute quadrangles, as well as a review of historical and current satellite imagery via Google Earth (2022) and Historic Aerials (NETR 2022).

SPECIES	STATUS	HABITAT	POTENTIAL TO OCCUR
PLANTS			
Santa Clara thorn-mint *Acanthomintha lanceolata*	Rank 4.2	Chaparral, cismontane woodland, coastal scrub. Elevation ranges from 260 to 3935 feet (80 to 1200 meters). Blooms Mar-Jun.	**No Potential.** No suitable habitat occurs within the Project Site.
bent-flowered fiddleneck *Amsinckia lunaris*	Rank 1B.2	Cismontane woodland, coastal bluff scrub, valley and foothill grassland. Elevation ranges from 10 to 1640 feet (3 to 500 meters). Blooms Mar-Jun.	**No Potential.** No suitable habitat occurs within the Project Site.
California androsace *Androsace elongata ssp. acuta*	Rank 4.2	Chaparral, cismontane woodland, coastal scrub, meadows and seeps, pinyon and juniper woodland, valley and foothill grassland. Elevation ranges from 490 to 4280 feet (150 to 1305 meters). Blooms Mar-Jun.	**No Potential.** No suitable habitat occurs within the Project Site.
alkali milk-vetch *Astragalus tener var. tener*	Rank 1B.2	Playas, valley and foothill grassland, vernal pools. Elevation ranges from 5 to 195 feet (1 to 60 meters). Blooms Mar-Jun.	**No Potential.** No suitable habitat occurs within the Project Site.

Species	Status	Habitat	Potential to Occur
crownscale *Atriplex coronata var. coronata*	Rank 4.2	Chenopod scrub, valley and foothill grassland, vernal pools. Elevation ranges from 5 to 1935 feet (1 to 590 meters). Blooms Mar-Oct.	**No Potential.** No suitable habitat occurs within the Project Site.
brittlescale *Atriplex depressa*	Rank 1B.2	Chenopod scrub, meadows and seeps, playas, valley and foothill grassland, vernal pools. Elevation ranges from 5 to 1050 feet (1 to 320 meters). Blooms Apr-Oct.	**No Potential.** No suitable habitat occurs within the Project Site.
lesser saltscale *Atriplex minuscula*	Rank 1B.1	Chenopod scrub, playas, valley and foothill grassland. Elevation ranges from 50 to 655 feet (15 to 200 meters). Blooms May-Oct.	**No Potential.** No suitable habitat occurs within the Project Site.
big-scale balsamroot *Balsamorhiza macrolepis*	Rank 1B.2	Chaparral, cismontane woodland, valley and foothill grassland. Elevation ranges from 150 to 5100 feet (45 to 1555 meters). Blooms Mar-Jun.	**No Potential.** No suitable habitat occurs within the Project Site.
Oakland star-tulip *Calochortus umbellatus*	Rank 4.2	Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland. Elevation ranges from 330 to 2295 feet (100 to 700 meters). Blooms Mar-May.	**No Potential.** No suitable habitat occurs within the Project Site.

Species	Status	Habitat	Potential to Occur
chaparral harebell *Campanula exigua*	Rank 1B.2	Chaparral. Elevation ranges from 900 to 4100 feet (275 to 1250 meters). Blooms May-Jun.	**No Potential.** No suitable habitat occurs within the Project Site.
Congdon's tarplant *Centromadia parryi ssp. congdonii*	Rank 1B.1	Valley and foothill grassland. Elevation ranges from 0 to 755 feet (0 to 230 meters). Blooms May-Oct(Nov).	**No Potential.** No suitable habitat occurs within the Project Site.
Point Reyes salty bird's-beak *Chloropyron maritimum ssp. palustre*	Rank 1B.2	Marshes and swamps. Elevation ranges from 0 to 35 feet (0 to 10 meters). Blooms Jun-Oct.	**No Potential.** No suitable habitat occurs within the Project Site.
palmate-bracted bird's-beak *Chloropyron palmatum*	FE, SE, Rank 1B.1	Chenopod scrub, valley and foothill grassland. Elevation ranges from 15 to 510 feet (5 to 155 meters). Blooms May-Oct.	**No Potential.** No suitable habitat occurs within the Project Site.
robust spineflower *Chorizanthe robusta var. robusta*	FE, Rank 1B.1	Chaparral, cismontane woodland, coastal dunes, coastal scrub. Elevation ranges from 10 to 985 feet (3 to 300 meters). Blooms Apr-Sep.	**No Potential.** No suitable habitat occurs within the Project Site.
Santa Clara red ribbons *Clarkia concinna ssp. automixa*	Rank 4.3	Chaparral, cismontane woodland. Elevation ranges from 295 to 4920 feet (90 to 1500 meters). Blooms (Apr)May-Jun(Jul).	**No Potential.** No suitable habitat occurs within the Project Site.
Hospital Canyon larkspur *Delphinium californicum ssp. interius*	Rank 1B.2	Chaparral, cismontane woodland, coastal scrub. Elevation ranges from 640 to 3595 feet (195 to 1095 meters). Blooms Apr-Jun.	**No Potential.** No suitable habitat occurs within the Project Site.

Species	Status	Habitat	Potential to Occur
small spikerush *Eleocharis parvula*	Rank 4.3	Marshes and swamps. Elevation ranges from 5 to 9910 feet (1 to 3020 meters). Blooms (Apr)Jun-Aug(Sep).	**No Potential.** No suitable habitat occurs within the Project Site.
bay buckwheat *Eriogonum umbellatum var. bahiiforme*	Rank 4.2	Cismontane woodland, lower montane coniferous forest. Elevation ranges from 2295 to 7220 feet (700 to 2200 meters). Blooms Jul-Sep.	**No Potential.** No suitable habitat occurs within the Project Site.
Jepson's woolly sunflower *Eriophyllum jepsonii*	Rank 4.3	Chaparral, cismontane woodland, coastal scrub. Elevation ranges from 655 to 3365 feet (200 to 1025 meters). Blooms Apr-Jun.	**No Potential.** No suitable habitat occurs within the Project Site.
Hoover's button-celery *Eryngium aristulatum var. hooveri*	Rank 1B.1	Vernal pools. Elevation ranges from 10 to 150 feet (3 to 45 meters). Blooms (Jun)Jul(Aug).	**No Potential.** No suitable habitat occurs within the Project Site.
Jepson's coyote-thistle *Eryngium jepsonii*	Rank 1B.2	Valley and foothill grassland, vernal pools. Elevation ranges from 10 to 985 feet (3 to 300 meters). Blooms Apr-Aug.	**No Potential.** No suitable habitat occurs within the Project Site.
San Joaquin spearscale *Extriplex joaquinana*	Rank 1B.2	Chenopod scrub, meadows and seeps, playas, valley and foothill grassland. Elevation ranges from 5 to 2740 feet (1 to 835 meters). Blooms Apr-Oct.	**No Potential.** No suitable habitat occurs within the Project Site.
stinkbells *Fritillaria agrestis*	Rank 4.2	Chaparral, cismontane woodland, pinyon and juniper woodland, valley and foothill grassland. Elevation ranges from 35 to 5100 feet. Blooms Mar-Jun.	**No Potential.** No suitable habitat occurs within the Project Site.

Species	Status	Habitat	Potential to Occur
fragrant fritillary *Fritillaria liliacea*	Rank 1B.2	Cismontane woodland, coastal prairie, coastal scrub, valley and foothill grassland. Elevation ranges from 10 to 1345 feet (3 to 410 meters). Blooms Feb-Apr.	**No Potential.** No suitable habitat occurs within the Project Site.
Diablo helianthella *Helianthella castanea*	Rank 1B.2	Broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland. Elevation ranges from 195 to 4265 feet (60 to 1300 meters). Blooms Mar-Jun.	**No Potential.** No suitable habitat occurs within the Project Site.
Loma Prieta hoita *Hoita strobilina*	Rank 1B.1	Chaparral, cismontane woodland, riparian woodland. Elevation ranges from 100 to 2820 feet (30 to 860 meters). Blooms May-Jul(Aug-Oct).	**No Potential.** No suitable habitat occurs within the Project Site.
Santa Cruz tarplant *Holocarpha macradenia*	FT, SE, Rank 1B.1	Coastal prairie, coastal scrub, valley and foothill grassland. Elevation ranges from 35 to 720 feet (10 to 220 meters). Blooms Jun-Oct.	**No Potential.** No suitable habitat occurs within the Project Site.
Satan's goldenbush *Isocoma menziesii var. diabolica*	Rank 4.2	Cismontane woodland. Elevation ranges from 50 to 1310 feet (15 to 400 meters). Blooms Aug-Oct.	**No Potential.** No suitable habitat occurs within the Project Site.
Contra Costa goldfields *Lasthenia conjugens*	FE, Rank 1B.1	Cismontane woodland, playas, valley and foothill grassland, vernal pools. Elevation ranges from 0 to 1540 feet (0 to 470 meters). Blooms Mar-Jun.	**No Potential.** No suitable habitat occurs within the Project Site.

Species	Status	Habitat	Potential to Occur
Ferris' goldfields *Lasthenia ferrisiae*	Rank 4.2	Vernal pools. Elevation ranges from 65 to 2295 feet (20 to 700 meters). Blooms Feb-May.	**No Potential.** No suitable habitat occurs within the Project Site.
bristly leptosiphon *Leptosiphon acicularis*	Rank 4.2	Chaparral, cismontane woodland, coastal prairie, valley and foothill grassland. Elevation ranges from 180 to 4920 feet (55 to 1500 meters). Blooms Apr-Jul.	**No Potential.** No suitable habitat occurs within the Project Site.
serpentine leptosiphon *Leptosiphon ambiguus*	Rank 4.2	Cismontane woodland, coastal scrub, valley and foothill grassland. Elevation ranges from 395 to 3710 feet (120 to 1130 meters). Blooms Mar-Jun.	**No Potential.** No suitable habitat occurs within the Project Site.
large-flowered leptosiphon *Leptosiphon grandiflorus*	Rank 4.2	Cismontane woodland, closed-cone coniferous forest, coastal bluff scrub, coastal dunes, coastal prairie, coastal scrub, valley and foothill grassland. Elevation ranges from 15 to 4005 feet (5 to 1220 meters). Blooms Apr-Aug.	**No Potential.** No suitable habitat occurs within the Project Site.
woolly-headed lessingia *Lessingia hololeuca*	Rank 3	Broadleafed upland forest, coastal scrub, lower montane coniferous forest, valley and foothill grassland. Elevation ranges from 50 to 1000 feet (15 to 305 meters). Blooms Jun-Oct.	**No Potential.** No suitable habitat occurs within the Project Site.

Species	Status	Habitat	Potential to Occur
arcuate bush-mallow *Malacothamnus arcuatus*	Rank 1B.2	Chaparral, cismontane woodland. Elevation ranges from 50 to 1165 feet (15 to 355 meters). Blooms Apr-Sep.	**No Potential.** No suitable habitat occurs within the Project Site.
Hall's bush-mallow *Malacothamnus hallii*	Rank 1B.2	Chaparral, coastal scrub. Elevation ranges from 35 to 2495 feet (10 to 760 meters). Blooms (Apr)May-Sep(Oct).	**No Potential.** No suitable habitat occurs within the Project Site.
elongate copper moss *Mielichhoferia elongata*	Rank 4.3	Broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, subalpine coniferous forest. Elevation ranges from 0 to 6430 feet (0 to 1960 meters).	**No Potential.** No suitable habitat occurs within the Project Site.
woodland woollythreads *Monolopia gracilens*	Rank 1B.2	Broadleafed upland forest, chaparral, cismontane woodland, north coast coniferous forest, valley and foothill grassland. Elevation ranges from 330 to 3935 feet (100 to 1200 meters). Blooms (Feb)Mar-Jul.	**No Potential.** No suitable habitat occurs within the Project Site.
prostrate vernal pool navarretia *Navarretia prostrata*	Rank 1B.2	Coastal scrub, meadows and seeps, valley and foothill grassland, vernal pools. Elevation ranges from 10 to 3970 feet (3 to 1210 meters). Blooms Apr-Jul.	**No Potential.** No suitable habitat occurs within the Project Site.
Michael's rein orchid *Piperia michaelii*	Rank 4.2	Chaparral, cismontane woodland, closed-cone coniferous forest, coastal bluff scrub, coastal scrub, lower montane coniferous forest. Elevation ranges from 10 to 3000 feet. Blooms Apr-Aug.	**No Potential.** No suitable habitat occurs within the Project Site.

Species	Status	Habitat	Potential to Occur
hairless popcornflower *Plagiobothrys glaber*	Rank 1A	Marshes and swamps, meadows and seeps. Elevation ranges from 50 to 590 feet (15 to 180 meters). Blooms Mar-May.	**No Potential.** No suitable habitat occurs within the Project Site.
Oregon polemonium *Polemonium carneum*	Rank 2B.2	Coastal prairie, coastal scrub, lower montane coniferous forest. Elevation ranges from 0 to 6005 feet (0 to 1830 meters). Blooms Apr-Sep.	**No Potential.** No suitable habitat occurs within the Project Site.
California alkali grass *Puccinellia simplex*	Rank 1B.2	Chenopod scrub, meadows and seeps, valley and foothill grassland, vernal pools. Elevation ranges from 5 to 3050 feet (2 to 930 meters). Blooms Mar-May.	**No Potential.** No suitable habitat occurs within the Project Site.
Lobb's aquatic buttercup *Ranunculus lobbii*	Rank 4.2	Cismontane woodland, north coast coniferous forest, valley and foothill grassland, vernal pools. Elevation ranges from 50 to 1540 feet (15 to 470 meters). Blooms Feb-May.	**No Potential.** No suitable habitat occurs within the Project Site.
chaparral ragwort *Senecio aphanactis*	Rank 2B.2	Chaparral, cismontane woodland, coastal scrub. Elevation ranges from 50 to 2625 feet (15 to 800 meters). Blooms Jan-Apr (May).	**No Potential.** No suitable habitat occurs within the Project Site.

Species	Status	Habitat	Potential to Occur
maple-leaved checkerbloom *Sidalcea malachroides*	Rank 4.2	Broadleafed upland forest, coastal prairie, coastal scrub, north coast coniferous forest, riparian woodland. Elevation ranges from 0 to 2395 feet (0 to 730 meters). Blooms (Mar)Apr-Aug.	**No Potential.** No suitable habitat occurs within the Project Site.
long-styled sand-spurrey *Spergularia macrotheca var. longistyla*	Rank 1B.2	Marshes and swamps, meadows and seeps. Elevation ranges from 0 to 835 feet (0 to 255 meters). Blooms Feb-May.	**No Potential.** No suitable habitat occurs within the Project Site.
most beautiful jewelflower *Streptanthus albidus ssp. peramoenus*	Rank 1B.2	Chaparral, cismontane woodland, valley and foothill grassland. Elevation ranges from 310 to 3280 feet (95 to 1000 meters). Blooms (Mar)Apr-Sep(Oct).	**No Potential.** No suitable habitat occurs within the Project Site.
northern slender pondweed *Stuckenia filiformis ssp. alpina*	Rank 2B.2	Marshes and swamps. Elevation ranges from 985 to 7055 feet (300 to 2150 meters). Blooms May-Jul.	**No Potential.** No suitable habitat occurs within the Project Site.
California seablite *Suaeda californica*	FE, Rank 1B.1	Marshes and swamps. Elevation ranges from 0 to 50 feet (0 to 15 meters). Blooms Jul-Oct.	**No Potential.** No suitable habitat occurs within the Project Site.

Species	Status	Habitat	Potential to Occur
saline clover *Trifolium hydrophilum*	Rank 1B.2	Marshes and swamps, valley and foothill grassland, vernal pools. Elevation ranges from 0 to 985 feet (0 to 300 meters). Blooms Apr-Jun.	**No Potential.** No suitable habitat occurs within the Project Site.
caper-fruited tropidocarpum *Tropidocarpum capparideum*	Rank 1B.1	Valley and foothill grassland. Elevation ranges from 5 to 1495 feet (1 to 455 meters). Blooms Mar-Apr.	**No Potential.** No suitable habitat occurs within the Project Site.
MAMMALS			
Pallid bat *Antrozous pallidus*	CDFW Species of Special Concern WBWG High Priority	Found in a variety of habitats ranging from grasslands to mixed forests, favoring open and dry, rocky areas. Roost sites include crevices in rock outcrops and cliffs, caves, mines, and also hollow trees and various manmade structures such as bridges, barns, and buildings (including occupied buildings). Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	**No Potential**. No potential roosting sites are present within the Project Site. No hollow trees, crevices, snags, or suitable manmade structures were observed.
Townsend's big-eared bat *Corynorhinus townsendii*	CDFW Species of Special Concern WBWG High Priority	Associated with a wide variety of habitats from deserts to higher-elevation mixed and coniferous forests. Females form maternity colonies in buildings, caves and mines, and males roost singly or in small groups. Foraging typically occurs at edge habitats near wooded areas, e.g. along streams.	**No Potential**. No potential roosting sites are present within the Project Site. The Project Site does not contain suitable building features, caves, or mines.

Species	Status	Habitat	Potential to Occur
Western mastiff bat *Eumops perotis californicus*	CDFW Species of Special Concern WBWG High Priority	Found in a wide variety of open, arid and semi-arid habitats. Distribution appears to be tied to large rock structures which provide suitable roosting sites, including cliff crevices and cracks in boulders.	**No Potential**. The Project Site does not contain large rock structures or provide suitable roosting sites.
Hoary bat *Lasiurus cinereus*	WBWG Medium Priority	Prefers open forested habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths.	**No Potential**. No suitable roosting trees were observed within the Project Site.
San Francisco dusky-footed woodrat *Neotoma fuscipes annectens*	CDFW Species of Special Concern	Forest habitats of moderate canopy and moderate to dense understory. Also in chaparral habitats. Constructs nests of shredded grass, leaves, and other material. May be limited by availability of nest-building materials.	**No Potential.** The Project Site does not contain suitable habitat or provide a sufficient source of nest building materials.
Salt-marsh harvest mouse *Reithrodontomys raviventris*	Federal Endangered California Endangered CDFW Fully Protected	Endemic to emergent salt and brackish wetlands of the San Francisco Bay Estuary. Pickleweed marshes are primary habitat; also occurs in various other wetland communities with dense vegetation. Does not burrow, builds loosely organized nests. Requires higher areas for flood escape.	**No Potential.** No marsh habitat is present within or adjacent to the Project Site.
Salt-marsh wandering shrew *Sorex vagrans halicoetes*	CDFW Species of Special Concern	Salt marshes of the south arm of San Francisco Bay. Medium high marsh 6 to 8 feet above sea level where abundant driftwood is scattered among Salicornia.	**No Potential.** No marsh habitat is present within or adjacent to the Project Site.

Species	Status	Habitat	Potential to Occur
American badger *Taxidea taxus*	CDFW Species of Special Concern	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Requires friable soils and open, uncultivated ground. Preys on burrowing rodents.	**No Potential.** The Project Site is fenced and does not provide any potential habitat. The surrounding area consists of highly disturbed, over-grazed grassland which is unsuitable for this species. No suitably sized mammal burrows were observed within or adjacent to the Project Site. The nearest documented occurrence is approximately 11 miles northeast and is from 1930 (CNDDB 2022).
San Joaquin kit fox *Vulpes macrotis mutica*	Federal Endangered California Threatened	Annual grasslands or grassy open stages with scattered shrubby vegetation. Need loose-textured sandy soils for burrowing, and suitable prey base.	**No Potential.** The Project Site is adjacent to open grassland but the area is subject to a high degree of anthropogenic disturbance. The nearest documented occurrence is approximately 11.5 miles northeast and is from 1975 (CNDDB 2022).
BIRDS			
Tricolored blackbird *Agelaius tricolor*	California Threatened CDFW Species of Special Concern	Nearly endemic to California, where it is most numerous in the Central Valley and vicinity. Highly colonial, nesting in dense aggregations over or near freshwater in emergent growth or riparian thickets. Also uses flooded agricultural fields. Abundant insect prey near breeding areas essential.	**No Potential.** Suitable nesting habitat is not present within or adjacent to the Project Site.
Golden eagle *Aquila chrysaetos*	CDFW Fully Protected	Occurs year-round in rolling foothills, mountain areas, sage-juniper flats, and deserts. Cliff-walled canyons provide nesting habitat in most parts of range; also nests in large trees, usually within otherwise open areas.	**No Potential.** Suitable nesting habitat is not present within or adjacent to the Project Site.

Species	Status	Habitat	Potential to Occur
Burrowing owl *Athene cunicularia*	CDFW Species of Special Concern	Year-round resident and winter visitor. Occurs in open, dry grasslands and scrub habitats with low-growing vegetation, perches and abundant mammal burrows. Preys upon insects and small vertebrates. Nests and roosts in old mammal burrows, most commonly those of ground squirrels.	**Moderate.** This species is known to occur within 3 to 5 miles of the Project Site (eBird 2022, CNDDB 2022). A high degree of ground squirrel activity and numerous ground squirrel burrows were observed immediately adjacent to the Project Site. No signs of owl occupancy were observed; however, due to the presence of suitable burrows, this species has potential to occur in the grasslands adjacent to the Project Site.
Western snowy plover *Charadrius nivosus nivosus*	Federal Threatened CDFW Species of Special Concern	Federal listing applies only to the Pacific coastal population. Year-round resident and winter visitor. Occurs on sandy beaches, salt pond levees, and the shores of large alkali lakes. Nests on the ground, requiring sandy, gravelly or friable soils.	**No Potential**. The Project Site does not contain sandy, gravelly or friable soils required for nesting.
Northern harrier *Circus hudsonius*	CDFW Species of Special Concern	Year-round resident and winter visitor. Found in open habitats including grasslands, prairies, marshes and agricultural areas. Nests on the ground in dense vegetation, typically near water or otherwise moist areas. Preys on small vertebrates.	**Unlikely.** The grassland habitat adjacent to the Project Site does not provide dense ground vegetation necessary to support nesting.

Species	Status	Habitat	Potential to Occur
Western yellow-billed cuckoo *Coccyzus americanus occidentalis*	Federal Threatened California Endangered	Summer resident, breeding in dense riparian forests and jungles, typically with early successional vegetation present. Utilizes densely-foliaged deciduous trees and shrubs. Eats mostly caterpillars. Current breeding distribution within California very restricted.	**No Potential.** The Project Site occurs outside of the current known range for this species.
Yellow rail *Coturnicops noveboracensis*	CDFW Species of Special Concern	Summer resident in eastern Sierra Nevada in Mono County, breeding in shallow freshwater marshes and wet meadows with dense vegetation. Also a rare winter visitor along the coast and other portions of the state. Extremely cryptic.	**No Potential.** The Project Site is outside of the current breeding range for this species.
White-tailed kite *Elanus leucurus*	CDFW Fully Protected	Year-round resident in coastal and valley lowlands with scattered trees and large shrubs, including grasslands, marshes and agricultural areas. Nests in trees, of which the type and setting are highly variable. Preys on small mammals and other vertebrates.	**Moderate Potential.** Trees in the vicinity of the Project Site may provide potential nesting habitat. The adjacent grasslands may provide suitable foraging habitat for this species.
American peregrine falcon *Falco peregrinus anatum*	Federal Delisted California Delisted CDFW Fully Protected	Year-round resident and winter visitor. Occurs in a wide variety of habitats, though often associated with coasts, bays, marshes and other bodies of water. Nests on protected cliffs and also on man-made structures including buildings and bridges. Preys on birds, especially waterbirds. Forages widely.	**No Potential.** The Project Site does not contain protected cliffs or man-made structures suitable for nesting.

Species	Status	Habitat	Potential to Occur
Saltmarsh common yellowthroat *Geothlypis trichas sinuosa*	CDFW Species of Special Concern	Resident of the San Francisco Bay region, in fresh and salt water marshes. Requires thick, continuous cover down to water surface for foraging; tall grasses, tule patches, willows for nesting.	**No Potential.** The Project Site does not contain marsh habitat.
California black rail *Laterallus jamaicensis coturniculus*	California Threatened CDFW Fully Protected	Year-round resident in marshes (saline to freshwater) with dense vegetation within four inches of the ground. Prefers larger, undisturbed marshes that have an extensive upper zone and are close to a major water source. Extremely secretive and cryptic.	**No Potential.** The Project Site does not contain marsh habitat.
California Ridgway's rail *Rallus obsoletus obsoletus*	Federal Endangered California Endangered CDFW Fully Protected	Year-round resident in tidal marshes of the San Francisco Bay estuary. Requires tidal sloughs and intertidal mud flats for foraging, and dense marsh vegetation for nesting and cover. Typical habitat features abundant growth of cordgrass and pickleweed. Feeds primarily on molluscs and crustaceans.	**No Potential.** The Project Site does not contain marsh habitat.
Alameda song sparrow *Melospiza melodia pusillula*	CDFW Species of Special Concern	Year-round resident of salt marshes bordering the south arm of San Francisco Bay. Inhabits primarily pickleweed marshes; nests placed in marsh vegetation, typically shrubs such as gumplant.	**No Potential.** The Project Site does not contain marsh habitat.

Species	Status	Habitat	Potential to Occur
Bank swallow *Riparia riparia*	California Threatened	Summer resident in riparian and other lowland habitats near rivers, lakes and the ocean in northern California. Nests colonially in excavated burrows on vertical cliffs and bank cuts (natural and manmade) with fine-textured soils. Historical nesting range in southern and central areas of California has been eliminated by habitat loss. Currently known to breed in Siskiyou, Shasta, and Lassen Cos., portions of the north coast, and along Sacramento River from Shasta Co. south to Yolo Co.	**No Potential.** The Project Site is outside of the current known breeding range for this species and does not provide suitable nesting habitat.
Black skimmer *Rynchops niger*	CDFW Species of Special Concern	Found primarily in southern California; South San Francisco Bay has a small resident population. Nests colonially on gravel bars, low islets, and sandy beaches	**No Potential.** No gravel bars, low islets, or sandy beaches occur within the Project Site.
Yellow warbler *Setophaga petechia*	CDFW Species of Special Concern	Summer resident throughout much of California. Breeds in riparian vegetation close to water, including streams and wet meadows. Microhabitat used for nesting variable, but dense willow growth is typical. Occurs widely on migration.	**Unlikely.** This species has been documented approximately 1 mile south of the Project Site (eBird 2022). However, no suitable nesting habitat occurs within the Project Site. Additionally, this species is unlikely to nest along the ephemeral drainage adjacent to the Project Site due to the lack of dense willow thickets and the degree of anthropogenic disturbance associated with the neighborhood park.

Species	Status	Habitat	Potential to Occur
California least tern *Sternula antillarum browni*	Federal Endangered California Endangered CDFW Fully Protected	Summer resident along the coast from San Francisco Bay south to northern Baja California; inland breeding also very rarely occurs. Nests colonially on barren or sparsely vegetated areas with sandy or gravelly substrates near water, including beaches, islands, and gravel bars. In San Francisco Bay, has also nested on salt pond margins.	**No Potential.** The Project Site does not provide sandy or gravelly substrates to support nesting.
REPTILES AND AMPHIBIANS			
Northern California legless lizard *Anniella pulchra*	CDFW Species of Special Concern	Found in loose soils or leaf litter with plant cover such as beach dune, sandy washes, stream terraces, chaparral, and pine-oak woodlands. Requires some soil moisture. Occasionally found in suburban gardens. Preys upon invertebrates.	**No Potential.** The Project Site does not contain the soil characteristics or sufficient leaf litter to support this species.
Western pond turtle *Emys marmorata*	CDFW Species of Special Concern	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches with aquatic vegetation. Require basking sites such as partially submerged logs, vegetation mats, or open mud banks, and suitable upland habitat (sandy banks or grassy open fields) for egg-laying.	**No Potential.** The ephemeral drainage adjacent to the Project Site does not provide suitable aquatic habitat for this species.

Species	Status	Habitat	Potential to Occur
Alameda whipsnake *Masticophis lateralis euryxanthus*	Federal Threatened California Threatened	Inhabits chaparral and foothill-hardwood habitats in the eastern Bay Area. Prefers south-facing slopes and ravines with rock outcroppings where shrubs form a vegetative mosaic with oak trees and grasses and small mammal burrows provide basking and refuge.	**Unlikely.** This species is known to occur in open space to the north and northeast, within 2.5 miles of the Project Site (CNDDB 2022). Although this species may disperse into the surrounding grasslands, the Project Site primarily consists of the reservoir facility surrounded by asphalt which would preclude this species from entering the project area.
California tiger salamander - central California DPS *Ambystoma californiense pop. 1*	Federal Threatened California Threatened	Populations in Santa Barbara and Sonoma counties currently listed as endangered; threatened in remainder of range. Inhabits grassland, oak woodland, ruderal and seasonal pool habitats. Adults are fossorial and utilize mammal burrows and other subterranean refugia. Breeding occurs primarily in vernal pools and other seasonal water features.	**Unlikely.** Known breeding populations occur approximately 4 miles east of the Project Site (CNDDB 2022). However, suitable aquatic features for breeding do not occur within or in the immediate vicinity of the Project Site. Given the absence of breeding habitat and distance from potential source populations, it is unlikely that this species would disperse into the Project Site which is covered in asphalt.
Foothill yellow-legged frog *Rana boylii*	California Endangered CDFW Species of Special Concern	Found in or adjacent to rocky streams in a variety of habitats. Prefers partly-shaded, shallow streams and riffles with a rocky substrate; requires at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis. Feeds on both aquatic and terrestrial invertebrates.	**No Potential.** Suitable aquatic habitat is not present within or immediately adjacent to the Project Site. Adjacent drainage does not provide suitable habitat.

Species	Status	Habitat	Potential to Occur
California red-legged frog *Rana draytonii*	Federal Threatened CDFW Species of Special Concern	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11 to 20 weeks of permanent water for larval development. Associated with quiet perennial to intermittent ponds, stream pools and wetlands. Prefers shorelines with extensive vegetation. Disperses through upland habitats after rains.	**Unlikely.** Neither the Project Site nor the adjacent drainage provide suitable aquatic breeding habitat. This species has been documented approximately 0.4 miles to the west; however, this occurrence is from 1999 and the immediate area has since been developed (CNDDB 2022). The nearest potential source population occurs approximately 2.75 miles to the north, which is beyond the known dispersal range for this species (Bulgar et. al 2003). Given the absence of breeding habitat and distance from potential source populations, it is unlikely that this species would disperse into the Project Site.
FISH AND INVERTEBRATES			
Steelhead - central California coast DPS *Oncorhynchus mykiss irideus pop. 8*	Federal Threatened	Occurs from the Russian River south to Soquel Creek and Pajaro River. Also in San Francisco and San Pablo Bay Basins. Adults migrate upstream to spawn in cool, clear, well-oxygenated streams. Juveniles remain in fresh water for 1 or more years before migrating downstream to the ocean.	**No Potential.** The Project Site does not contain suitable aquatic habitat.

Species	Status	Habitat	Potential to Occur
Longfin smelt *Spirinchus thaleichthys*	Federal Candidate California Threatened	Euryhaline, nektonic and anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15 to 30 ppt, but can be found in completely freshwater to almost pure seawater.	**No Potential.** The Project Site does not contain suitable aquatic habitat.
Monarch - California overwintering population *Danaus plexippus pop. 1*	Winter roosts protected by CDFW	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, Monterey cypress), with nectar and water sources nearby.	**No Potential.** Suitable winter roost habitat does not occur within the Project Site.
Vernal pool fairy shrimp *Branchinecta lynchi*	Federal Threatened	Endemic to the grasslands of the Central Valley, central coast mountains, and south coast mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	**No Potential.** No vernal pools or swales are present within the Project Site.
Vernal pool tadpole shrimp *Lepidurus packardi*	Federal Endangered	Inhabits vernal pools and swales in the Sacramento Valley containing clear to highly turbid water. Pools commonly found in grass bottomed swales of unplowed grasslands. Some pools are mud-bottomed and highly turbid.	**No Potential.** No vernal pools or swales are present within the Project Site.

Appendix D – Historic Resources Evaluation

Note: Only the Summary of Findings is included herein in accordance with the confidentiality clause in Assembly Bill 52.

DECOTO RESERVOIR IMPROVEMENTS PROJECT

HISTORICAL RESOURCE EVALUATION REPORT

Southeast of Seven Hills Park in the

Cities of Union City and Fremont, Alameda County, California

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February 2024

Prepared for **WRA, Inc.**

On behalf of the **Alameda County Water District**

NADB Report Citation

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NHPA Agency:	United States Army Corps of Engineers, San Francisco District Office
CEQA Agency:	Alameda County Water District (ACWD)
Local Agency:	Alameda County Water District, 43885 South Grimmer Boulevard, Fremont, CA 94538
Address:	Southeast of Seven Hills Park in the Cities of Union City and Fremont, Alameda County, California

Summary of Findings

Yarbrough Architectural Resources (YAR) prepared this Historical Resource Evaluation Report on behalf of the Alameda County Water District (ACWD), under contract with WRA, Inc., and for the Decoto Reservoir Improvements Project (project). The project is located southeast of Seven Hills Park in the Cities of Union City and Fremont, Alameda County, California. The United States Army Corps of Engineers (Corps or USACE) serves as lead-federal agency for purposes of compliance with Section 106 of the National Historic Preservation Act (NHPA or Section 106) of 1966, as amended, and Alameda County serves as lead-state agency for compliance with the California Environmental Quality Act (CEQA), as amended. See Pacific Legacy's *Technical Memorandum Summarizing the Results of a Cultural Resources Investigation for the Alameda County Water District's Decoto Reservoir Improvement Project, Alameda County, California* for all assessments and compliance recommendations regarding archaeological resources concerning the project (Pacific Legacy 2022).

YAR conducted a recordation and evaluation of the Decoto Reservoir, established an Area of Potential Effect (APE) and contiguous CEQA Study Area based on proposed project actions, conducted a site visit with photographs and notes on December 11, 2023, and developed a historic context, resource identification, and significance evaluation recommendation herein. YAR recorded the 14.55-million-gallon Decoto Reservoir, built in 1964. YAR recommends that the reservoir structure and associated inlet/outlet pipeline and overflow structure as a functional whole are not eligible to the National Register of Historic Places (NRHP) nor to the California Register of Historical Resources (CRHR) under any of the NRHP and CRHR's four historical significance criteria. As a result, the ACWD's Decoto Reservoir is not recommended to be a historic property under procedures for implementing NHPA established under 36 Code of Federal Regulations (CFR) Part 800 nor a historical resource pursuant to CEQA Guidelines under Title 14, Division 6, Chapter 3 of the California Code of Regulations. YAR recommends that no built-environment historic property, as defined in the NHPA [54 U.S.C. § 300308], nor built-environment historical resource, as defined in Section 15064.5 of the CEQA Guidelines, is present within the project's APE and CEQA Study Area. Therefore, YAR recommends a Finding of No Adverse Effect under NHPA regulations and No Impact pursuant to CEQA Guidelines for the Decoto Reservoir Improvements Project.